



# FISCAL RESEARCH CENTER

## **Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation**

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**ANDREW YOUNG SCHOOL**  
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**MEASURING PREFERENCES  
FOR AND RESPONSES TO  
ALTERNATIVE REVENUE  
SOURCES FOR  
TRANSPORTATION**

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The contents of this report reflect the views of the authors who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Georgia Department of Transportation or of the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

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## I. Introduction

Current revenue sources are proving to be inadequate to fund needed transportation projects and operations. As a consequence, alternative revenue sources, such as the vehicle miles traveled (VMT) tax, parking tax, tolls, and others, are being used or discussed around the United States as potential financing mechanisms for transportation. In considering these alternatives, it is useful to know the public's level of acceptance of alternative revenue options and how various alternative revenue sources might alter transportation behaviors such as mode choice, number of trips, and vehicle miles traveled.

This report discusses the extent of public support for and attitudes towards the various options and what drivers say about how they would respond to the various financing options. We address this by reviewing existing publicly-available surveys and conducting a new survey of Georgia drivers. In section 2, we present a review of publicly-available surveys of public opinion regarding alternative transportation revenue sources, while in section 3 we discuss existing surveys that asked how travelers would respond to changes in certain fees or taxes.

However, the main focus of this report is on the results of a large scientific survey of 2,000 Georgia drivers. The survey explored, in several different ways, the level of support for four alternative revenue sources, namely, an increase in the fuel tax, a VMT tax, a parking tax, and tolls. Section 4 contains the results of these questions. In addition, the survey asked how the respondent would change transportation behavior in the face of alternatives. These questions are discussed in section 5. Conclusions are presented in section 6.

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## II. A Review of Existing Surveys of Public Opinion

This section contains the results of a search of public opinion surveys conducted since 2000 that focus on the level of support for various transportation funding alternatives. Initially, we searched of the Roper Center for Public Opinion Research database for relevant public opinion questions. The Roper Center provides the responses to public opinion questions asked by major polling firms for their various clients such a CNN, New York Times, TIME, etc. The Roper Center database provides the individual questions asked and responses but no breakdown by age, income, etc. In addition to the Roper Center database, we searched the literature for published articles and reports that address public opinion toward alternative transportation funding sources, identifying only a few published studies. The results from these studies for each transportation funding alternative, with key findings and explanations of observed differences, are discussed subsequently.

Several overarching patterns can be identified from all of the surveys. First, it appears that tolls are the most favored alternative for transportation finance. This pattern is even more pronounced when tolls are explicitly compared to taxes in survey questions. Another global finding is that approval is higher when the proposals are specific and respondents are provided explicit information rather than asked general questions concerning their support for a funding source. However, this finding may not hold for more recently-developed alternatives, such as HOT lanes and variable tolling, that are unfamiliar or not very intuitive to respondents. Third, public support is higher for an option, such as HOT lanes, among respondents who are users (potential and current) than those who never expect to be users and when the revenues are linked to specific purposes related to transportation. Finally, many polls find general concern with fairness, and support depends on whether the public perceives an option as more or less fair.

### Fuel Excise Tax

Fuel tax increases are generally not supported by a majority of respondents, with a very few exceptions as noted below. A 2010 national survey of public attitudes towards different federal funding options found that 42 percent of respondents would support a 10 cent increase in the motor fuel tax if the revenues were dedicated to projects that reduce global warming. Thirty-nine percent expressed support for a phased increase of the gas tax

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of 2 cents per year over 5 years, and 32 percent supported an increase when the respondents were told what their annual cost of the tax increase would be (Agrawal and Nixon, 2010). These results are almost double the percentage of respondents who supported a general question about a 10-cent gas tax increase (23 percent)

A 2006 California survey confirms that there is more support for a phased increase of the gas tax. The question asked whether respondents would support a 1 cent per year increase in the state gas tax over 10 years, with 40 percent being in favor of this option (Dill and Weinstein, 2006). Far fewer respondents supported indexing the gas tax to inflation with about 27 percent expressing support when told that 3 percent inflation would result in a half-cent increase in the gas tax.

Other national polls conducted from 2000 to 2010 generally find that only about one-third of respondents are in favor of higher gas taxes, regardless of question wording (Roper Center, 2011). For example, a 2009 survey asked whether individuals were willing to pay a gas tax of 40 cents per gallon, with the revenue dedicated to road improvement. Thirty-eight percent of respondents were strongly against, while only 14 percent were strongly in favor, and another 24 percent were somewhat in favor. Only 27 percent of respondents voiced support for a 15-cent fuel tax increase for road improvement in a 2010 Associated Press survey. Another survey asked whether higher fuel taxes should be used as a way to reduce driving and global warming; only 28 percent supported such an alternative (Stanford University, 2010). A 2007 CNN poll reports that 33 percent would favor an increase in the federal gas tax to fund inspection and repair of the transportation infrastructure.

However, when respondents were asked a more general question about paying more taxes and not specifying that it is the fuel tax, 56 percent responded that they were willing to pay more taxes to improve roads and bridges. Another survey, in 2006, by Fox News, also found 58 percent of respondents supported paying more taxes rather than seeing cuts in funding for roads. Finally, a survey that asked respondents whether they would be willing to pay 9 cents more per day for road and bridge repairs found that 69 percent said they were willing to do so (Tarrance Group, 2003). The same survey asked respondents whether they agreed that “America is facing a transportation crisis,” after which respondents were asked whether they were willing to pay up to 5 cents more in federal fuel taxes to be used for

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transportation improvements. A majority of respondents (57 percent) were willing to pay more taxes, with 38 percent against.

When the survey question asked about specific amount of a tax increase, it appears that there is more support for a tax increase, although the support varied with the proposed fuel tax increase. An ABC poll from 2005 reported that 12 percent were willing to pay 1 to 4 cents per gallon more in taxes to fund transportation, another 11 percent agreed to 5 cents, and 19 percent agreed to more than 5 cents.

Surveys conducted in specific states or metropolitan areas found mixed support for tax increases. In Atlanta, a survey by the Applied Research Center in 2002 found that only one-third of the respondents were willing to support a gas tax increase, and the majority of those supported a 10-cent increase. In the state of Washington, support for a transportation funding measure that included a 9-cent gas tax increase varied from 40 to 64 percent across three different counties. A statewide Washington poll found that 63 percent were willing to support the proposed legislation calling for a gas tax increase conditional on there being a higher priority for public transportation funding. Polls about a ballot measure in Oklahoma in 2005 also showed a significant majority opposing gas tax increases; however, the timing of the measure coincided with rising gas prices.

### **Sales Tax**

Sales taxes appear to be the most favored of all tax options, although even the sales tax option falls short of majority support at the national level. All identified surveys asked about sales tax increases of less than 1 percent; none asked about one percent or higher sales tax increases. A 2010 national survey found that 43 percent of respondents approved of a new half-cent federal sales tax for transportation funding (Agrawal and Nixon, 2010). In California, about the same proportion were in favor of a half-cent increase in the state sales tax (Dill and Weinstein, 2006). Regional surveys identify higher support for sales tax increases, especially when there are specific transportation projects and measures to be financed by the proposed tax increases. In North Carolina, a survey for the Triangle Transportation Authority found that 58 percent of respondents said they were willing to vote for a half-cent increase in the sales tax dedicated to public transportation (Fallon Research, 2010). Two other metropolitan surveys found majority support for sales tax increases, again



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with the funds dedicated to specific transportation projects. A 2010 survey for Metropolitan Denver and Boulder County in Colorado found that 56 percent of respondents were willing to vote in favor of a 0.4 cents sales tax increase with the revenue dedicated to specific identified projects (The Kenney Group, 2010). In Los Angeles, 56 percent of respondents expressed support for a 0.5 cents county sales tax increase to fund projects that were listed and explained in the survey (Fairbank, Maullin and Associates, 2007).

### **Vehicle Miles Traveled (VMT) Tax**

Replacing the gas tax with a mileage tax, i.e., a VMT tax, does not appear to have a lot of support based on the few studies that have examined public opinion of this option. Support increases somewhat when the mileage fee varies with vehicle type and pollution levels. A national survey about increased federal funding options in 2010 found that a mileage tax of one cent per mile was the least popular alternative from the options that they examined, with only 21 percent in favor of such a tax. But 33 percent of the respondents said they would support a mileage tax that varies with the vehicle's pollution level (Agrawal and Nixon, 2010). The results from a 2006 California survey are similar, with only 22 percent supporting a 1-cent per mile tax to replace the gas tax (Dill and Weinstein, 2006). A more recent survey of California residents found that 50 percent of respondents would support a mileage fee that varies with the vehicle's emissions (Agrawal et al., 2009).

Focus group interviews for the Minnesota DOT illuminate some of the reasons behind the lack of support for a mileage fee (Fichtner and Riggleman, 2007). Although most participants considered the mileage fee fair, they thought that it would be expensive to implement and they were concerned with privacy due to the electronic monitoring. Respondents were more supportive of a mileage fee that varies by vehicle weight and type. Many respondents, after hearing why the gas tax has become an inadequate source of revenue, stated that it would be easier to just increase the gas tax rather than implement a new type of tax.

Oregon conducted a pilot VMT program. Oregon found that 91 percent of participants said they would have been willing to keep the on-vehicle equipment in their vehicles and continue paying the mileage fee rather than the gas tax if the system were extended to allow them to buy gasoline at any service station statewide (Whitty, 2007).

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Baker and Goodin (2011) conducted focus group sessions in five cities in Texas regarding different aspects of VMT fees, including the effect on miles traveled, administrative issues, and fairness. Baker and Goodin found that there are barriers to public acceptance of VMT fees. The principal conclusions from the Texas focus group sessions were:

- There is a strong lack of understanding how the transportation system is currently funded and the issues affecting its long-term health.
- There was a strong anti-tax sentiment but it is not universal. Upon receiving information on the fuel tax, information that the majority of participants previously had no knowledge of, many participants indicated that fuel taxes were still too high while others indicated that they were too low.
- Most focus group participants believed that they are essentially driving for free since the fuel tax is effectively hidden.
- All five groups expressed some opposition to mileage fees in general. When pressed, the participants chose the simpler approach, i.e., an odometer reading-based model.
- Privacy, enforcement, and costs of operating a VMT system were concerns of participants.

### **Fees and Tolls**

Based on two surveys conducted in California, it appears that the public is somewhat more supportive of increasing vehicle registration fees relative to the tax alternatives. As with the mileage fee, flat fees are less attractive than variable environmental fees are more attractive rather than flat fees. Specifically, the 2006 California survey reports that 32 percent favored a flat fee increase, while about 44 percent favored a fee increase that varies with the vehicles emissions (Dill and Weinstein, 2006). Support in 2009 increased to 41 percent and 63 percent, respectively (Agrawal et al., 2009).

Tolls overall are the only funding option that usually commands a majority support from respondents, according to a variety of surveys. However, attitudes towards different types of tolls vary significantly. Generally, traditional toll roads and express toll lanes are favored more than the congestion-targeting tolls. The public tends to support tolls for new roads, but strongly opposes tolls on existing roads. This section discusses traditional tolls,

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while the following section discusses express toll lanes, HOT lanes and variable tolls as part of congestion pricing.

Generally, surveys find majority support for traditional tolls, but this is conditional on several factors. First, voters tend to express support for tolls more when they are presented with several options to raise revenue and have to choose among them. Respondents express a preference for tolls over tax increases. Second, voters support tolls only when they are imposed on new roads and the revenue is proposed to pay the cost for building and maintaining the roads. Lastly, stronger positive support for tolls is found when the toll is for a specific project, compared to a toll without a specific project use. Annual surveys between 2001 and 2006 in Orange County, California, consistently found more than 50 percent of respondents support the completion of a local toll road (Zmud and Arce, 2008, 11-7). The same review by Zmud and Arce reported that 55 percent of respondents in Central Florida favored an extension of an existing regional toll road.

A statewide survey in Utah provides additional insight about how people's support for toll roads depends on specific aspects of the proposal specified in the question that they are asked. The 2006 poll found that 55 percent of Utah residents were willing to pay tolls if the toll would ensure that roads can be built faster, specifically within the next three years rather than the next 20 years (Zmud and Arce, 2008, 17).

More general questions about tolls have received somewhat lower support, although some of the surveys do report support near 50 percent. A North Carolina statewide poll in 2000 found that 52 percent of respondents supported tolls as a way of financing new construction (Zmud and Arce, 2008, 11). A California survey in 2006 found that 44 percent supported tolls as an alternative to higher taxes as a means for financing new road construction (Dill and Weinstein, 2006). When potential users of toll roads in central Texas were surveyed in 2005 about their general attitudes towards tolls, only 45 percent believed that tolls are needed. However, 51 percent approved of the toll roads under construction in the area at that time (Zmud and Arce, 2008, 16).

Podgorski and Kockelman (2006) conducted a study for the Texas DOT in 2006 with a focus on opinions towards tolling issues. They found that a large percentage of respondents (70 percent or more) believed that they should not pay tolls for existing roads, that revenues should be used within the region where they were generated, and that tolls should be reduced

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after construction expenses have been repaid (p. 894). The study found that residents outside of metropolitan areas were more supportive of tolling existing roads, but were also more concerned about equity, i.e., how tolling would differentially affect certain groups such as lower income households. More people were in favor of tolling existing roads when they were provided information about the cost of maintaining roads versus the average cost of driving a car. Older individuals, new residents, and those who were using toll roads regularly were more likely to support tolls for new and existing roads.

### *Congestion Pricing*

Express toll lanes are lanes alongside existing highways that drivers can access for a fee if they prefer to avoid traffic in the regular lanes. The toll can be a flat amount or can vary by time of day or with the level of traffic in the express lanes. The toll might apply to all drivers or only to low occupancy vehicles. In the latter case, the lanes are referred to as high-occupancy toll (HOT) lanes. Toll collection is usually by electronic sensors.

Generally, express toll lanes are supported because they do not reduce the existing lanes, however variable tolls to manage congestion in those lanes is less strongly supported. A series of surveys of Orange and Los Angeles counties found that approval of the toll lanes increased once the toll lane was opened and used. When the lanes were still under construction, 40 percent supported variable tolls. After opening in 1996, support increased to 50 percent to 70 percent. The highest support came from users of the toll lanes, with support ranging from 60 percent to 80 percent. A follow-up survey in 1999 found that higher income individuals expressed greater support for the variable tolls and toll financing in general (Zmud and Arce, 2008, 18-9). A statewide poll in Minnesota also found fairly strong support for tolls on new lanes, with 69 percent of respondents in favor of having the option to use a toll lane (Zmud and Arce, 2008, 20). A 2006 survey of Denver residents living close to toll roads found that 78 percent considered express lanes a good way to manage congestion.

As in the above discussion of express toll lanes, support for HOT lanes is highest among users and when the actual lanes are already operating. A series of surveys and focus groups in San Diego during the late 1990s found that support among the general public is close to two-thirds of respondents, with support among users at 80 percent or more. Also, respondents generally approve using some of the toll revenues for public transit

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improvements (Zmud and Arce, 2008, 21-3). Another local California survey in 2003 found that support for HOT lanes increased after voters were provided more information about the project, increasing from 58 percent to 67 percent. The survey identified three key factors that led to higher support of the HOT lanes—no cost to carpools, electronic tolling, and revenues used for both construction and public transportation (Zmud and Arce, 2008, 24). Concerns with HOT lanes expressed in surveys have focused on their ability to resolve congestion issues.

A focus group study in Denver revealed that people wanted the public discussion of the HOT lane proposal to focus on how the funds were going to be used. Respondents who approved of HOT lanes believed that they would be beneficial in reducing congestion in the other lanes (Zmud and Arce, 2008, 24). The Minnesota DOT conducted a series of surveys between 2004 and 2006 that found high support for HOT lanes, even among carpools. Support was lowest among public transit users.

Reasons for opposition were revealed in several surveys. Surveys in Atlanta in 2006 showed split opinions about HOT lanes, with people who opposed them believing that HOT lanes would not resolve congestion problems in the area, and that HOT lanes are not fair to specific groups such as lower income households (Zmud and Arce, 2008, 27). Another exception to the general support for HOT lanes was revealed in a survey of residents of Salt Lake County, Utah; in that survey respondents expressed strong opposition to HOT lanes. Sixty-one percent were against the toll lanes and individual accounts indicated that respondents were concerned with fairness.

The attitudes of New York metro residents were studied in several different surveys and focus groups in 2003, with the results indicating strong opposition to congestion tolls (Zmud and Arce, 2008, 14). Respondents did not believe that the variable tolls have addressed congestion problems in the area and considered the discounts for off-peak travel insignificant in changing travel behavior. Residents in Southern California were equally strongly opposed to congestion tolls on existing roadways, with 58 percent against a variable fee of 5 to 10 cents per mile, depending on traffic conditions. However, opposition decreases somewhat if part of the revenue from the toll roads is used to reduce other taxes, with opposition falling to 46 percent under that condition (Harrington et al., 2001).

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### Additional Comments

As noted, there is a general lack of support for road use fees. Some authors have attempted to explain this general opposition. Frey (2003) suggests that there are four major reasons why people tend to oppose road pricing schemes. First, Frey argues that people consider prices as being associated with private goods but do not understand that road pricing is a way of allocating scarcity, i.e., limited road capacity. Instead, they view road pricing as a reduction in income. Second, Frey suggests that people have an aversion to using prices to allocate scarce resources. He cites a survey he undertook in which 76 percent of the respondents said that “first come, first serve” was the fairest way to allocate a scarce good, while only 27 percent said that prices were the fairest way. Third, Frey suggests that there is a general aversion to government intervention and taxes. Fourth, people express concern over the winners and losers of road pricing. A common expression of this view is the statement that “the rich just pay” and thus are affected very little, while those with little choice lose.

Surveys in European countries reflect the same limited support for increases in fuel taxes or road pricing as found in the U.S. Jones (2003) and Schade (2003) find low levels of support for road pricing schemes. Jones cites a survey conducted in London that asked what the respondent thought was the single most effective way of reducing London’s traffic level. Over 50 percent mentioned public transit, while only 5 percent suggested a road user charge in central London (i.e., cordon pricing). Schade reports on the extent to which various approaches to congestion relief are acceptable. He reports that 96 percent find improved public transportation acceptable, while less than 15 percent say that increasing parking costs, cordon pricing, congestion pricing, or distance base pricing are acceptable.

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## III. Literature Measuring Behavioral Responses

In this section we turn to the evidence of the behavioral responses to transportation taxes and fees. Economic theory suggests that 1) increases in fuel taxes will lead to a reduction in fuel consumption, which could be the result of driving less, using more fuel efficient cars, or shifting to alternative modes (car pool or transit), 2) road pricing will have the same effect as an increase in fuel prices but, in addition, shift some use to time periods when the road charge is less, and 3) increases in parking cost will reduce the likelihood that a commuter will drive or drive solo.

There are two general ways of exploring the effect of increases in taxes and fees on the behavior of individuals. One method is to ask them how they would respond and the other is to measure how individuals' behavior actually changed. We consider the first method.

There is a good deal of skepticism regarding the use of surveys to measure the likely effect on behavior from some change. How people say they will respond to a hypothetical price or tax change may differ from what they will do when confronted with the actual situation. Nonetheless, we provide a review of the few surveys that have been conducted that attempt to elicit how individuals will respond to increases in fuel taxes and tolls.

Although we were not able to identify surveys that ask how people would change their driving behavior in response to higher gas taxes, surveys related to gas prices can provide an indication of the possible effect of higher taxes on driving. A 2006 national poll found that 48 percent of respondents claimed they were driving less as a result of higher gas prices. Among those with incomes lower than \$50,000, it was 59 percent (Saad, 2006). Also, a majority of respondents said that they were going to consider hybrid models when replacing the car they currently owned. Another national survey in 2007 asked at what prices people would start using public transit instead of their cars. Fifty-six percent of respondents said that they would use public transit if gas prices were \$4 or more, and another 19 percent said they would switch if prices were between \$5 and \$8 (Roper Center, 2011).

A focus group study in Miami-Dade County in 2005 asked area residents how they would use the express lanes at different prices, specifically, \$1, \$2, \$3, and \$5 more per trip than they currently pay in tolls. The majority of respondents said that their use of the lanes would decrease to only a few trips at \$3 and \$5 (Zmud and Arce, 2008, 21).

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Baldassare, Ryan and Katz (1998) conducted a phone survey of solo drivers in Orange County, California about the likelihood that they would shift from being solo drivers if certain fees were imposed: a parking fee at the person's workplace, a smog fee based on amount driven and the amount their car pollutes, and a congestion fee for driving on a busy road during rush hour. Just over 50 percent of the respondents said that they would not change from being a solo driver if the various fees were imposed. On the other hand, 20 percent said they would change in response to a parking fee, 17 percent said they would change if a smog fee was imposed, and 16 percent responded positively to a congestion fee. The survey did not provide any dollar magnitude for the fees. The percentage who would change their behavior was smaller for drivers with more education, who had higher income, who were older, and who had longer commutes.

Albert and Mahalel (2006) report the results of a survey of employees of Technion-Israel Institute of Technology about the likely response of drivers to a parking fee and to a campus congestion toll during rush hour. Interviewees were asked to choose between paying the fee or alternative means of avoiding the fee. For example, for the parking fee the alternatives were to use the shuttle service (or public transit) or to park outside the campus. Fifty-four percent of the respondents said they would choose an alternative in order to avoid the parking fee, while 72 percent said they would choose an alternative in order to avoid the congestion fee. These responses are much larger than estimates based on actual behavior.

Parking policy is an effective way to influence transportation behavior. A study by Newmark and Shiftan (2007) examined the stated willingness of shoppers to pay for surface parking at four major suburban shopping centers in Prague. They also examined the factors that affect the change in behavior from the parking fees. Their analysis suggests that income, engine size, and number of passengers in the car are positively correlated with the willingness to pay for parking. The authors also find that grocery shoppers and older consumers were less willingness to pay for parking at these malls. Overall, their findings suggest that people are willing to pay for parking at suburban malls, but the demand curve is logarithmic, with people being unlikely to change behavior at all when parking fees are low.

Another group of researchers investigated behavioral responses to different parking fees in downtown Beijing during morning peak hours (Li, et al, 2008). Using stated preference surveys, they obtained a sample of 572 responses. Using a multinomial logit



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model they estimate a demand elasticity of -1.4. They conclude that increasing parking fees in downtown Beijing can affect the volume of automobile traffic entering and exiting the central district. Higher parking fees also induce different modes of travel (public transportation to the central district), but extremely high parking fees may restrain traffic flow excessively, which could lead to negative economic impacts (Li, et al, 2008).

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### **IV. Georgia Drivers' Preferences for Alternative Revenue Sources for Transportation<sup>1</sup>**

To determine public opinion about potential alternatives for generating transportation revenue in Georgia, a survey of 2,000 adult Georgia drivers was conducted in August 2011. The survey described the need for additional revenues to address 1) increased costs for road repair and maintenance caused by Georgia's growing population and 2) calls to develop Georgia's road system and improve public transportation to relieve congestion and improve economic growth.

The survey was conducted in conjunction with Booth Research Services, Inc. The survey presented respondents with five different means by which additional transportation revenues might be raised. They were asked the degree to which they would support or be willing to pay for each.

The specific taxes and fees tested were an increase in the state per-gallon gas tax, replacing the per-gallon gas tax with a per-mile tax (or Vehicle Miles Traveled (VMT) tax), a new employee-parking lot tax, expansion of toll roads, and expansion of managed lanes. For all except toll roads, two or three price or tax levels were tested. In addition to measuring the support for the gasoline tax increase or substitution of a VMT tax, likely behavioral impact was measured to gauge potential increases or reductions in transportation modes. Standard socio-demographic data were also collected.

Two different approaches were used to determine preferences. In the first, direct questioning about an option allowed the respondent to consider the option in isolation. It also allowed follow-up questions about how the respondent would likely react behaviorally. The second method required respondents to choose more and less appealing options from among the set of options, generating relative preferences across types and costs.

Respondents were asked to provide their opinions under the assumption that at least one of the revenue options would be implemented. The various alternatives were presented as hypothetical and only in general terms. All were presented as providing funds only for transportation needs. Thus, the survey results represent the public's general preferences but

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<sup>1</sup> This section benefited from the assistance of Michael Ellers.

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do not necessarily indicate actual support if options were presented on a ballot or with greater detail.

## Survey Design and Administration

### *Revenue-Generation Options*

The survey tested public support for five alternatives to raise revenues for transportation:

- An increase in the state gas tax;
- A new state mileage tax (VMT);
- A new tax on employee parking;
- New toll roads;
- Variable rate managed lanes.

A toll road refers to a road for which the driver pays a fixed toll, although the toll may vary by distance or time of day. For a managed lane the driver pays a toll that varies with the level of congestion, with the objective of maintaining free flow in the lane. Georgia 400 is an example of a toll road, while I-85 has a managed lane.

The options were examined through two types of questions. The first type were direct questions about the option. Focusing on each alternative in isolation allowed follow-up questions such as how the respondent would react behaviorally to that option. Only the first four options were included in the direct questions.

The second type of question was a choice task in which respondents saw random sets of all combinations of alternatives (i.e., type of tax at various tax rates). Specifically, a respondent saw eight sets of four randomly-generated options. For each set, respondents were asked which option was most appealing and which was least appealing, followed by whether all of the choices were appealing, none of them were appealing or only some of them were appealing. This set of questions allowed the determination of relative preferences among the set of options.

To help the respondents understand both the method of raising revenues and the implications for them personally, descriptions included who would be taxed and how, along with specific costs for three of the five options (all except toll roads and managed lanes).

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Respondents saw one of three possible costs for the gas tax increase and for the VMT tax, and one of two different costs for employee parking.

Following is a more detailed description of each option presented.

- ***Gas Tax Increase***

An increase in the state per-gallon gas tax was described both as 1) a per-gallon increase, and 2) an annual cost for a person who “drives a car that gets 20 miles per gallon (MPG) for 10,000 miles per year”). Each person saw one of the following three variations of the gas tax:

- A 10 cent per gallon increase in the gas tax for “\$50 more per year in gas taxes, for a total of \$135;”
- A 15 cent per gallon increase in the gas tax for “\$75 more in gas taxes, for a total of \$160;”
- A 25 cent per gallon increase in the gas tax for “\$125 more in gas taxes for a total of \$210.”

Respondents were asked whether they would strongly support, somewhat support, somewhat oppose or strongly oppose the option. In addition, they were asked how their own driving behavior might change if this option were implemented and how difficult such a change would be.

- ***Vehicle Miles Traveled (VMT) Tax***

The VMT was described as a replacement for the current gas tax without describing the mechanism by which miles would be determined. Respondents were asked to imagine that, instead of paying a state gas tax, they could pay at the gas pump a tax based solely on the number of miles the vehicle was driven in Georgia since it was last refueled. Respondents were told that “everyone who drives 10,000 miles a year in Georgia would pay the same tax, regardless of the fuel efficiency of the vehicle they drove.”

Importantly, the estimated cost increase for a respondent was held constant across the gas and VMT tax. If the respondent was randomly selected to see the 15 cent per gallon increase in the state gas tax, they saw the 1.60 cents per mile VMT tax, which was equivalent to the estimated annual increase of \$160. Thus, corresponding to the gas tax increase they had previously seen, the respondent saw one of the following three variations of the VMT tax:

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- A 1.35 cent per mile tax, meaning “a person who drives a car 10,000 miles per year will pay \$135 in taxes;”
- A 1.60 cent per mile tax, meaning “a person who drives a car 10,000 miles per year will pay \$160 in taxes;”
- A 2.10 cent per mile tax, meaning “a person who drives a car 10,000 miles per year will pay \$210 in taxes.”

Respondents were asked whether they would strongly support, somewhat support, somewhat oppose or strongly oppose the option. In addition, they were asked how their own driving behavior might change if this option was implemented and how difficult such a change would be.

- ***Employee Parking Fee or Tax***

This option described a new statewide fee for employee-parking lots. The option was described as an increase for those currently paying to park or a new fee for those who did not. Respondents saw one of the following variations of the parking fee:

- \$2 per month; and
- \$4 per month.

Respondents were asked whether they would strongly support, somewhat support, somewhat oppose or strongly oppose the option.

- ***New Roads Built as Toll Roads***

For this option, respondents were asked about building roads sooner as a toll road rather than waiting for public funds to be available for a non-toll road. Respondents were asked whether they would strongly support, somewhat support, somewhat oppose or strongly oppose the option. No specific toll amount was specified.

- ***Variable Rate Managed Lane***

In this alternative, solo drivers could use the high-occupancy managed lane by paying a variable toll “determined by the number of cars that can use the managed lane and keep it flowing at a constant 45 miles per hour or faster.” If drivers chose to pay the posted toll, “they simply move into the lane at designated spots” with tolls deducted electronically from their Peach Pass account.

Because the managed lane toll is variable, rather than fixed as with the other options, respondents were asked what they were willing to pay rather than their degree of support.

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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Specifically, they were asked how much they would pay under a given scenario in which they had adequate time to make their trip but a managed lane option was available that would save them 35 minutes for a 10-mile trip. The respondent saw one of the following variations, which manipulated both the type of trip (i.e., regular commute or important appointment) and estimated time of the trip in regular traffic lanes (i.e., 45 or 60 minutes) while keeping the total miles and the time savings constant.

- Regular commute will take 45 minutes; that is, you can make 10-mile trip in 10 minutes.
- Regular commute will take 60 minutes; that is, you can make 10-mile trip in 25 minutes.
- Trip for important appointment will take 45 minutes; that is, you can make 10-mile trip in 10 minutes.
- Trip for important appointment will take 60 minutes; that is, you can make 10-mile trip in 25 minutes.

After providing the amount they were willing to pay, a respondent saw one of two follow-up questions, asking them how likely they would pay that much more than the price they had just indicated they would be willing to pay:

- \$1 more; or
- \$2 more.

### *Method*

An online survey was conducted among 2,000 adult, Georgia drivers. An online survey provides advantages over other methods such as phone or intercept surveys in terms of:

- Lower cost;
- Faster data collection;
- More representative sampling (reaching more young respondents and fewer respondents older than 65).

In addition, online surveys allow for completion of complex tasks, such as ranking or choice methods, than does using a phone survey. It also allowed for random assignment of respondents to each option and customization of questions to the respondents' previous answer.

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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The complete survey is found in Appendix C.

### *Sampling*

The survey used the Survey Sampling International (SSI) consumer panel for internet research. These panel members are interested in survey research and have agreed to participate in SSI surveys for which they are qualified (according to the Survey Spot method). Respondents earn points as an incentive for completing surveys, which they may redeem for cash or merchandise in the future.

All respondents were qualified as adult (18+) residents of Georgia who drive at least one mile on a typical work day. To account for differences in both population densities and transportation needs, samples were drawn from three Georgia areas based on zip code of residence as follows:

- 1,000 in the Atlanta DMA (a map of the included counties is in Appendix A);
- 500 in other Georgia DMAs, including Albany, Augusta, Columbus, Macon and Savannah;
- 500 in all other Georgia areas excluding the above groups.

A sample size of 2,000 provided an overall maximum sampling error of  $\pm 2.2$  percent at the 95 percent confidence level. Maximum sampling errors for the geographic breakouts were:

- 1,000 yields a maximum sampling error of  $\pm 3.1$  percent at a 95 percent confidence level;
- 500 yields a maximum sampling error of  $\pm 4.4$  percent at a 95 percent confidence level.

### *Timing*

All surveys were completed between August 10, 2011 and August 21, 2011 under the supervision of Booth Research Services, in accordance with normally applicable professional and ethical standards.

## **Survey Respondents**

Following a description of the survey respondents, the overall support or preferences for the tax options are provided in subsequent sections.

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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Table 1 compares the 2,000 survey respondents to the Georgia adult population, according to the 2010 U.S. Census Bureau. As noted, the percentage of all Georgia adults (18+ years of age) that live in the Atlanta DMA is slightly higher than represented in the survey. In the survey sample, more people identified their race as “white” and fewer as “Black, African-American” than in the Census. The sample also included more people with some college or with college degrees than in the Georgia population. In terms of income, there were fewer respondents in households with incomes of \$100,000 or more per year and more middle income respondents.

In terms of driving behavior,

- 57 percent typically drive alone to work or school (see Figure B1 in the Appendix B);
- 63 percent drive 25 miles or less on a typical weekday (see Figure B2 in the Appendix B);
- Only 6.7 percent of respondents currently pay for parking at work;
- 36 percent drive a car getting 18-22 MPG and 27 percent drive one getting 23-27 MPG (see Figure B3 in the Appendix B);
- 36 percent drive a 2004-2008 model car while 26 percent drive a 2000-2003 model (see Figure B4 in the Appendix B).

### Support or Appeal for the Alternative Revenue Sources

#### *Direct Questioning about Revenue Options*

As described previously, respondents were first asked about each of the revenue options separately.

- ***Gasoline Tax Increase, Vehicle Miles Traveled, Employee-Parking Lot Fee, Toll Roads***

For the first four revenue options, respondents were asked their degree of support or opposition. (For managed lanes, they were asked the toll they were willing to pay; this is discussed below.)

Table 2 provides the summary results for these direct questions about each option. (NOTE: Within a revenue option, a given respondent saw only one of the hypothetical costs. Thus, it is more appropriate to compare across options than necessarily within.)



## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

**TABLE 1. COMPARISON OF SURVEY RESPONDENTS WITH THOSE OF THE ADULT POPULATION OF GEORGIA<sup>1</sup>**

Socio-Demographic Category	Survey Respondents	Georgia Adults (18+) <sup>1</sup>
Georgia		
Atlanta DMA	50%	56%
Other Georgia DMAs	25%	23%
All Other Georgia	25%	21%
Gender		
Male	37%	49%
Female	63%	51%
Race		
White	76%	60%
Black	18%	30%
Other (Including Hispanic)	6%	10%
Education		
Less than high school graduate	2%	16%
High school graduate	24%	29%
Some college	36%	28%
College graduate	24%	18%
Some graduate school	4%	NA
Graduate degree	10%	10%
Employment Status		
Employed	52%	57%
Not Employed/Student/Homemaker/Retired	48%	43%
Annual Household Income		
Less than \$25,000	22%	27%
\$25,000 to \$34,999	16%	11%
\$35,000 to \$49,999	19%	15%
\$50,000 to \$74,999	22%	18%
\$75,000 to \$99,999	12%	12%
\$100,000 or more	9%	18%
Age		
18 to 24 years	10%	13%
25 to 34 years	19%	19%
35 to 44 years	18%	19%
45 to 54 years	21%	19%
55 years and Older	31%	29%

Notes: Some percentages do not sum to 100 due to rounding.

<sup>1</sup> Source: 2010 U.S. Census Bureau.

All census data are for adults 18 years and older except for household income, which is for all Georgia households, and employment data, which is for the civilian non-institutional population 18 to 64 years of age.

○ Significantly higher than the other group (column) at 95% confidence level.

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

**TABLE 2. SUPPORT AND OPPOSITION LEVELS FOR FOUR REVENUE OPTIONS**  
(Percentages are the sum of those who said they “strongly” or “somewhat” support/oppose each option.)

Revenue Option	Support (%)	Oppose (%)	Don't know (%)
10¢ gas tax increase	31%	66%	3%
15¢ gas tax increase	23%	74%	3%
25¢ gas tax increase	21%	75%	3%
1.35¢ VMT (mileage tax)	33%	60%	7%
1.60¢ VMT (mileage tax)	39%	55%	6%
2.10¢ VMT (mileage tax)	36%	57%	7%
\$2 per month parking fee	45%	45%	10%
\$4 per month parking fee	39%	50%	12%
Toll roads	51%	42%	7%

Notes: Managed lanes were not addressed in this form. Some row percentages do not sum to 100 due to rounding.

In interpreting the preferences from direct questioning, one must keep in mind that state gasoline taxes are currently in place and increasing these taxes was the first option presented. Thus, it is a known and easy to imagine option while the other options are more hypothetical.

Respondents reported greatest levels of support for toll roads (51 percent) and employee-parking lot fees (45 percent for \$2 and 39 percent for \$4), options that may provide drivers more choice and fixed fee per use. There was greater support for VMT (range from 33 percent to 39 percent) than for gasoline taxes (21 percent to 31 percent). The greater support for VMT may be attributed to the fact that VMTs tax only road use (i.e., miles driven) whereas gasoline taxes are based on road use and fuel efficiency, facts presented to respondents.

Table 3 shows the level of support by different socio-demographic groups. There are consistent and significant differences in support for a particular option across education, income and age groups. The highest educated, highest income and oldest groups tended to be more supportive of more measures. Men tended to be more supportive of all measures than women, with significantly higher support for some higher cost measures. Interestingly, there was little difference based on miles driven in a typical day.

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

**TABLE 3. SUPPORT FOR THE REVENUE OPTIONS FOR DIFFERENT SOCIO-DEMOGRAPHIC GROUPS**

(Percentages are the sum of those who said they “strongly” or “somewhat” support each option.)

Socio-Demographic Category	-----Revenue Options Tested-----					
	10¢ Gas tax incr.	15¢ Gas tax incr.	25¢ Gas tax incr.	1.35¢/ mile VMT	1.60¢/ mile VMT	2.10¢/ mile VMT
All Respondents	31.0%	23.0%	21.0%	33.0%	39.0%	36.0%
Georgia						
Atlanta	35.7%	23.9%	23.1%	38.5%	40.1%	37.3%
Other Georgia DMAs	24.4%	23.5%	23.5%	25.6%	39.2%	38.8%
Other Georgia	28.2%	19.6%	16.6%	27.6%	35.1%	29.0%
Gender						
Male	33.1%	31.5%	32.4%	35.1%	42.7%	40.5%
Female	30.2%	18.1%	14.7%	31.6%	36.5%	32.6%
Miles Driven						
15 or less	29.7%	21.5%	23.1%	36.1%	39.9%	40.8%
16-25	34.2%	19.0%	24.5%	30.8%	41.6%	32.9%
26 or more	31.1%	26.2%	17.4%	30.7%	35.5%	31.1%
Education						
High school or less	24.0%	19.6%	18.9%	26.3%	29.9%	29.0%
Some college	26.2%	18.5%	14.3%	31.6%	38.2%	37.0%
College graduate +	40.6%	29.3%	29.8%	38.3%	45.9%	38.7%
Employment status						
Employed	36.8%	24.7%	21.1%	32.4%	41.6%	32.3%
Not employed	24.8%	20.5%	21.6%	33.4%	35.3%	38.9%
Annual household income						
Less than \$50,000	24.7%	19.6%	19.5%	31.7%	33.2%	37.8%
\$50,000 to \$99,999	38.8%	23.2%	20.7%	35.8%	42.3%	32.9%
\$100,000 or more	38.2%	43.6%	36.2%	28.9%	63.6%	31.0%
Age						
18 to 34 years	28.7%	22.3%	21.5%	37.3%	35.0%	40.1%
35 to 54 years	28.3%	19.0%	15.7%	26.0%	39.8%	29.5%
55 years and older	37.6%	28.5%	27.9%	37.1%	40.9%	39.2%

Note: ○ Significantly higher at 95% confidence level than at least one other group on that characteristic within that revenue option. (Example: For the 10¢ gas tax increases, the percentage strongly or somewhat supporting is higher among those in Atlanta than at least one other region.)

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

**TABLE 3 (CONTINUED). SUPPORT FOR THE REVENUE OPTIONS FOR DIFFERENT SOCIO-DEMOGRAPHIC GROUPS**

(Percentages are the sum of those who said they “strongly” or “somewhat” support/oppose each option.)

Socio-Demographic Category	-----Revenue Options Tested-----		
	\$2 Employee Parking	\$4 Employee Parking	Toll Roads
All Respondents	45.0%	39.0%	51.0%
Georgia			
Atlanta	45.7%	38.3%	51.1%
Other Georgia DMAs	43.4%	37.6%	52.6%
Other Georgia	45.8%	40.1%	51.1%
Gender			
Male	44.3%	40.4%	55.9%
Female	45.6%	37.6%	48.9%
Miles Driven			
15 or less	49.6%	37.5%	51.2%
16-25	41.4%	43.0%	54.7%
26 or more	42.0%	37.2%	49.9%
Education			
High school or less	39.3%	34.3%	45.5%
Some college	45.3%	40.6%	51.0%
College graduate +	49.1%	39.8%	56.0%
Employment status			
Employed	46.1%	35.5%	52.1%
Not employed	44.1%	42.0%	50.7%
Annual household income			
Less than \$50,000	41.8%	38.2%	47.5%
\$50,000 to \$99,999	51.8%	39.2%	55.9%
\$100,000 or more	41.5%	38.9%	59.3%
Age			
18 to 34 years	43.1%	40.8%	48.0%
35 to 54 years	45.5%	36.3%	48.8%
55 years and older	46.6%	39.6%	58.1%

Note: ○ Significantly higher at 95% confidence level than at least one other group on that characteristic within that revenue option. (Example: For toll roads, the percentage strongly or somewhat supporting is higher among men than women.)

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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- *Variable-Rate Managed Lanes*

Because the fees on tolls for a managed lane are variable, rather than fixed, respondents were asked how much they would be willing to pay rather than their degree of support. As described previously, the survey asked the toll amount that the respondent would be willing to pay to save 35 minutes on one of four scenarios: a regular commute or important appointment, each with two different trip lengths in regular traffic (45 minutes or 60 minutes).

The respondent provided an actual dollar value, and some respondents provided extreme answers that suggest a possible misunderstanding of the question (i.e., a monthly or annual, rather than per trip, rate). Specifically, three to four percent gave answers of \$40 or more (i.e., more than four times the estimated \$9.00 maximum for a 10-mile drive based on rates for the new I-85 managed lanes in North Atlanta) and as high as \$999.<sup>2</sup> To account for the distortion created by a small number of extreme values, medians and trimmed means (i.e., eliminating those answering \$40 or more) are reported below. Table 4 shows that half of respondents would be willing to pay \$3.00 or less for a 35-minute savings, regardless of scenario.

**TABLE 4. TOLL WILLING TO PAY TO SAVE 35 MINUTES**

	Overall	----Regular Commute----		--Important Appointment--	
		10 miles/ 10 minutes	10 miles/ 25 minutes	10 miles/ 10 minutes	10 miles/ 25 minutes
Median	\$3.00	\$3.00	\$2.00	\$3.00	\$3.00
Trimmed Mean	\$5.85	\$6.18	\$6.03	\$5.45	\$5.73

The only significant difference in the willingness to pay by socio-demographics was for age. For the four scenarios, younger respondents (18-34) were willing to pay a higher average (trimmed mean) fee (\$7.11-\$8.21) compared to 35-54 year olds (\$5.31-\$6.63). Those who were 55 years or older were willing to pay the least (\$3.12-\$4.59). Thus, on average, there is about a \$1.50 decline in toll they were willing to pay between each of the groups as age increased.

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<sup>2</sup> The maximum toll on the I-85 managed lanes is 90 cents per mile. The actual toll is determined by a computer algorithm that weights various factors. After the lanes opened, SRTA made various modifications to the algorithm that resulted in lower actual tolls per mile. However, the maximum toll remains at 90 cents per mile.

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

After indicating the toll they would be willing to pay, respondents were asked how willing they would be to pay either \$1 or \$2 more. As shown in Table 5, 40 percent or more were willing to pay an additional \$1 for all scenarios. Respondents were more willing to pay \$1 more for the longer trip when it was an important appointment than a regular commute.

**TABLE 5. PERCENTAGE WHO WERE WILLING TO PAY \$X MORE**  
(Percentages are the sum of those who said they “definitely” or “probably” would pay more)

	Overall	----Regular Commute----		--Important Appointment--	
		10 miles/ 10 minutes	10 miles/ 25 minutes	10 miles/ 10 minutes	10 miles/ 25 minutes
\$1 more	44.3%	43.5%	40.0%	44.1%	50.2%
\$2 more	31.0%	37.2%	30.1%	30.3%	26.6%

Note: ○ Significantly higher than at least one other group in the same row at 95% confidence level.

The percentage willing to pay \$2 more was lower (31 percent). Here, respondents were more willing to pay \$2 more for a shorter, regular commute than a longer trip for an important appointment.

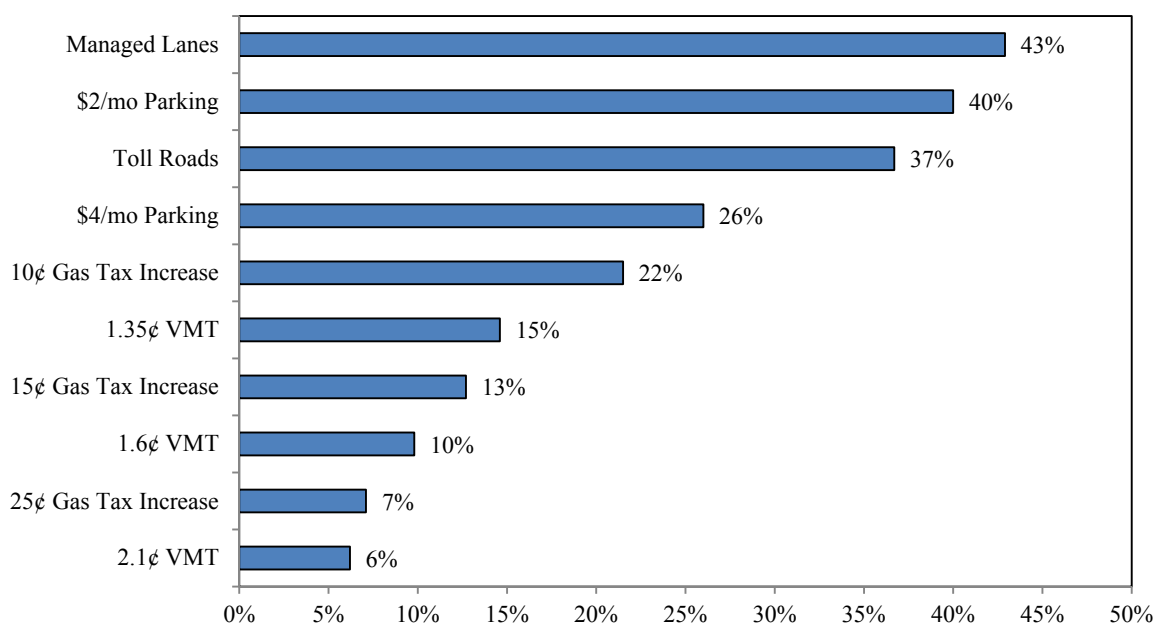
### *Choice Task*

As described previously, the choice task showed each respondent 10 revenue-generating alternatives. That is, they saw three cost combinations for gasoline and VMT taxes and two employee-parking lot fees, as well as the options of variable-rate managed lanes and toll roads. Because comparing 10 options to each other was considered too demanding, a respondent was presented instead with eight different combinations of four randomly-selected revenue options from the set of 10. They then indicated which option was most and least appealing. The resulting data show the appeal of a given option among the set as a whole as well as based on cost differences. (Note that a given list could include the same option (i.e., gas tax increase) but with different tax levels.)

Figure 1 shows the percentage of respondents who found each of the 10 revenue options appealing, ordered from highest to lowest appeal. Not surprisingly, none of the options received a majority share of appeal. These are increases in driving-related costs without any foreseeable benefit for the individual driver during a time of economic uncertainty and higher fuel costs.

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

**FIGURE 1. RELATIVE APPEAL OF DIFFERENT REVENUE OPTIONS**  
(% Who Found Each Option Appealing)



Three options had appeal to about 40 percent of respondents: variable rate managed lanes (43 percent), \$2 per month employee parking fee (40 percent) and building toll roads (37 percent). The three least appealing were all “pay at the pump” options—the 1.6 cent vehicle mileage tax (VMT) (appealing to 10 percent), the 25 cent per gallon increase in the gasoline tax (7 percent) and the 2.1 cent vehicle mileage tax (VMT) (6 percent). These were the highest priced options.

As expected, lower cost options were consistently more appealing than higher cost options of the same type. The four more appealing options in the choice task included the three most supported options in the direct questioning (i.e., toll roads and employee-parking lot fees). Like tolls roads, variable rate managed lanes may be more appealing because drivers have a choice as to whether to incur the additional costs and they are able to quantify the value they receive.

In this tradeoff task, respondents consistently preferred the gasoline tax option to the VMT option at the same cost. In the direct question, they preferred the VMT to the gasoline tax. The gasoline tax increase was the first alternative presented in the direct questioning, which occurred at a time when the national retail average for a gallon of gas was \$3.60 or

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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higher,<sup>3</sup> thus any increase in gasoline prices were likely to be viewed negatively. When the VMT was presented as an alternative, it may have been viewed initially as a fairer alternative – one which taxed drivers only on their miles driven rather than mileage plus fuel efficiency. In the choice task, respondent saw all possible options at all possible costs, encouraging them to scrutinize the tradeoffs with each. The gasoline tax was a known alternative while the full implications of a VMT tax were not known, such as the means by which miles driven would be assessed. Given the uncertainty of the VMT tax implementation, drivers may have preferred the known option.

- *Comparison of Choice Task Results Across Respondent Groups*

Table 6 shows the level of appeal of the 10 options for various groups of respondents. Specifically, the top row repeats the overall appeal for the 10 options, followed by the appeal within each respondent group.

Appeal did not vary significantly by geographic regions, miles driven, employment, or age. Some significant differences existed within gender, education, and annual household income groups (as indicated by the circles). Men were generally more supportive than women of the gasoline tax increases and the two lower VMT rates. Those with higher education and income were more likely to support toll roads, managed lanes, and an employee-parking lot fee.

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<sup>3</sup>[http://www.bts.gov/publications/key\\_transportation\\_indicators/august\\_2011/html/highway\\_retail\\_gasoline\\_price\\_table.html](http://www.bts.gov/publications/key_transportation_indicators/august_2011/html/highway_retail_gasoline_price_table.html).



## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

**TABLE 6. APPEAL OF THE REVENUE OPTIONS FOR DIFFERENT SOCIO-DEMOGRAPHIC GROUPS**  
(% Who Found Option Appealing)

Socio-Demographic Category	-----Revenue Options Tested-----					
	10¢ Gas tax incr.	15¢ Gas tax incr.	25¢ Gas tax incr.	1.35¢/ mile VMT	1.60¢/ mile VMT	2.10¢/ mile VMT
All Respondents	22%	13%	7%	15%	10%	6%
Georgia						
Atlanta	21%	13%	8%	15%	10%	7%
Other Georgia DMAs	24%	14%	7%	15%	10%	7%
Other Georgia	20%	10%	6%	14%	9%	5%
Gender						
Male	25%	16%	9%	18%	12%	8%
Female	19%	11%	6%	13%	8%	5%
Miles Driven						
15 or less	21%	11%	6%	16%	10%	6%
16-25	22%	14%	7%	15%	11%	7%
26 or more	22%	14%	6%	13%	10%	6%
Education						
High school or less	21%	13%	7%	13%	9%	6%
Some college	21%	13%	7%	14%	9%	5%
College graduate +	22%	12%	7%	16%	11%	7%
Employment status						
Employed	22%	12%	7%	15%	10%	7%
Not employed	21%	14%	8%	14%	9%	6%
Annual household income						
Less than \$50,000	22%	13%	7%	15%	11%	7%
\$50,000 to \$99,999	19%	10%	6%	13%	8%	5%
\$100,000 or more	23%	16%	9%	14%	10%	6%
Age						
18 to 34 years	22%	15%	8%	18%	13%	8%
35 to 54 years	21%	11%	6%	13%	9%	6%
55 years and older	22%	12%	4%	12%	8%	4%

Note: ○ Significantly higher at 95% confidence level than at least one other group on that characteristic within that revenue option. (Example: For the 10¢ gas tax increases, the percentage strongly or somewhat supporting is higher among males than females.)

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

**TABLE 6 (CONTINUED). APPEAL OF THE REVENUE OPTIONS FOR DIFFERENT SOCIO-DEMOGRAPHIC GROUPS**  
(% Who Found Option Appealing)

<b>Socio-Demographic Category</b>	-----Revenue Options Tested-----			
	<b>\$2 Employee Parking</b>	<b>\$4 Employee Parking</b>	<b>Toll Roads</b>	<b>Managed Lanes</b>
All Respondents	40%	26%	37%	43%
Georgia				
Atlanta	40%	25%	37%	45%
Other Georgia DMAs	37%	26%	37%	42%
Other Georgia	42%	28%	37%	40%
Gender				
Male	40%	27%	38%	41%
Female	40%	26%	36%	44%
Miles Driven				
15 or less	41%	26%	37%	41%
16-25	36%	24%	38%	42%
26 or more	42%	27%	36%	46%
Education				
High school or less	37%	24%	32%	36%
Some college	39%	26%	35%	43%
College graduate +	43%	27%	41%	49%
Employment status				
Employed	41%	26%	37%	45%
Not employed	39%	26%	36%	40%
Annual household income				
Less than \$50,000	39%	26%	35%	40%
\$50,000 to \$99,999	45%	27%	37%	43%
\$100,000 or more	39%	26%	41%	51%
Age				
18 to 34 years	42%	26%	38%	45%
35 to 54 years	38%	26%	34%	41%
55 years and older	39%	26%	38%	43%

Notes: ○ Significantly higher at 95% confidence level than at least one other group on that characteristic within that revenue option. (Example: For the \$2 employee parking fee, the percentage strongly or somewhat supporting is higher among college graduates than at least one other education level.)

### Summary

A survey of 2,000 Georgia drivers provided their preferences among five revenue-generating alternatives for transportation. Using both direct questioning about each option as well as a choice task among all 10 alternatives, drivers indicated greater support for toll roads, statewide employee-parking lot fees and managed lanes as compared to an increase in the gasoline tax or implementation of a VMT tax. (This preference for tolls rather than

## **Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation**

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gasoline tax and VMT is consistent with other surveys reviewed in chapter 3.) Toll roads and managed lanes provide greater choice and a known benefit for a given cost. Importantly, their support of this option does not indicate intent to use the alternative, just their preference as a means for raising transportation revenues. Employee-parking lot fees are a flat fee and, as presented, represent a much lower annual cost alternative than the gasoline or VMT taxes. Given that more than 93 percent do not currently pay anything to park at work, the fees may seem relatively small or they may assume their employer will pay the fees.

Solo use of managed lanes was the more appealing option in the choice task (43 percent). Half of respondents were willing to pay at most \$3, regardless of trip type or length of trip in regular traffic. However, some were willing to pay more, as indicated by willingness to pay an average toll (trimmed mean) of \$5.85 across all trip types. Given no difference in their willingness to pay across scenarios, this suggests that the choice to pay the toll may be more of a function of an individual's time value than trip characteristics. Forty percent were likely to be willing to pay \$1 more and 31 percent were likely to be willing to pay \$2 more than the toll they had stated.

The gasoline tax increase was the least supported alternative in initial questioning yet preferred over the equivalent-cost VMT tax in a tradeoff task. A likely explanation is that the gasoline tax is currently in place and therefore known to drivers whereas the VMT tax and how it would be implemented is more uncertain. However, the rankings indicate that drivers consistently chose the lower cost alternatives whether a gasoline or VMT tax.

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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### V. How Georgia Drivers Would Respond to Alternative Revenue Sources for Transportation

In addition to stated preferences for gasoline tax increases and the VMT tax, respondents were asked how they would respond if each of the following alternatives were implemented.

- ***Gasoline Tax Increase***

Asked how much an increase in the gasoline tax would affect their behavior, 61 percent said it would dramatically (28 percent) or moderately (33 percent) affect their behavior. Thirty-six percent (36 percent) said such a change would be very or extremely difficult to make. When asked how much it would affect their behavior, 74 percent said they would drive a little less (33 percent) or much less (41 percent).

Some respondents would consider a change in their method of transportation either a little more or much more:

- 40 percent would carpool or ride share;
- 32 percent would walk, bike or cycle;
- 23 percent would replace their car sooner; and
- 19 percent would take public transportation.

When asked how their support might change if the gas tax increase was phased in over five years, 39 percent said it would somewhat or significantly increase their support while 40 percent said it would make no difference.

- ***Vehicle Miles Traveled (VMT)***

Respondents were asked how much a change from a gasoline tax to a VMT would affect their behavior. Forty-nine percent (49 percent) said it would dramatically (22 percent) or moderately (27 percent) affect their behavior.

When asked how it would affect their transportation choices, 67 percent said they would drive a little less (31 percent) or much less (36 percent).

Some respondents would consider a change in their transportation method either a little more or much more:

- 36 percent would carpool or ride share;
- 32 percent would walk, bike or cycle;
- 21 percent would replace their car sooner; and

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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- 19 percent would take public transportation.

If the gasoline tax was increased, over 60 percent of respondents said they would drive a little or a lot less. This percentage was lower (39 percent) for a VMT tax, perhaps because the fuel efficiency of their vehicle would be less of a factor or it would only affect miles driven in Georgia. Over one-third said they would car pool or ride share a little or a lot more while 19 percent said they'd take public transportation more often. Importantly, over one-third indicated that it would be extremely or very difficult for them to make such changes.

The degree of support or appeal of the revenue alternatives did not vary across the three geographic areas even though the areas varied in population density and transportation needs. The number of miles driven in a typical weekday also did not affect support or appeal. Some demographic trends were observed. Particularly in direct questioning, there tended to be greater support across the alternatives among men, the more highly educated and those with higher income.

## **Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation**

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### **VI. Conclusions**

A review of existing U.S. public opinion surveys highlights several overarching patterns of public opinion. First, it appears that tolls are the most favored alternative for transportation finance. This pattern is even more pronounced when tolls are explicitly compared to taxes in survey questions. Across the various surveys, fuel taxes are supported generally by only about 25 percent, although some surveys report 45 percent support. A second global finding is that public support is higher when the revenues are linked to specific purposes related to transportation; that is, support is greater when the proposed uses for such taxes are specific and respondents are provided additional information versus when they are asked general questions concerning their support for a funding source. This implies that context in which the tax revenue will be used is important in gauging public support for a transportation funding alternative. Some more recently-developed revenue alternatives, such as HOT lanes, variable toll, managed lanes, and a VMT tax, are less familiar and not very intuitive and that may impact the response to general questions about such revenue options. Third, respondents who are users (potential and current) of an option such as HOT lanes are more likely to support a particular option than non-users. Finally, many polls find a general concern with fairness, and degree of support depends on whether the public perceives an option as fair or unfair.

We were able to identify only a few surveys that asked how individuals would respond to increases in transportation taxes and fees such as fuel taxes, toll, and parking fees. Generally, respondents expressed the view that their responses would be sizable. For example, 56 percent of the respondents in one survey stated they would use public transit if gas prices reached \$4 per gallon, while in another survey 20 percent of respondents said they would car pool in response to a parking fee.

To explore the issues of the level of public support for various transportation funding options and the likely response of drivers to increases in transportation taxes or fees in Georgia, we conducted a survey of 2,000 Georgia drivers. The survey considered five alternative revenue sources: an increase in the state per-gallon gas tax, replacing the per-gallon gas tax with a per-mile tax (VMT), a new employee-parking lot tax, expansion of managed lanes, and expansion of toll roads. Respondents were asked about their level of support for each option in isolation and were asked to pick the more and less appealing

## **Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation**

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options from among the list of options. The various alternatives were presented as hypothetical options and only in general terms. Thus, the survey results represent the public's general preferences but do not necessarily indicate actual support if options were presented on a ballot or with greater detail.

The results are consistent with the findings of the other opinion surveys from other states. In particular, there is little support for an increase in fuel taxes. VMT taxes actually polled stronger, but with more undecided respondents. Support for parking fees was somewhat higher, but with a sizable percentage of respondents undecided. Toll roads were marginally supported. The principal implication is that before any of the proposed revenue options could be adopted, a substantial campaign would be necessary to overcome current opposition. The level of support for any revenue options did not vary much across the state.

Respondents to the survey suggested that they would substantially alter their transportation behavior in response to an increase in any of the taxes or tolls. For example, 61 percent said that an increase in fuel taxes would moderately or dramatically alter their behavior. Forty percent said they would carpool. These results imply that increases in these taxes or fees would have a substantial effect on the extent to which people drive, affecting the revenues that would be derived from such increases. The stated responses are consistent with other surveys, but much higher than found in these other studies.

The survey asked respondents what is the most they would be willing to pay in tolls to reduce trip time by 35 minutes for a 10 mile trip. This would be the reduction in time from driving 10 miles at about 13 miles per hour versus 60 miles per hour. Thirty-five percent of the respondents said they would pay no more than \$1.00 to save 35 minutes, while 53 percent would pay no more than \$3.00. A \$3.00 toll is 30 cents per mile, and implies a value of time of \$5.14 per hour. However, 30 percent were willing to pay a toll of at least \$10.00, or \$1.00 per mile. This suggests that if a highway is very congested, a large percentage of the drivers would shift to a managed lane even if the toll was \$1.00 per mile.

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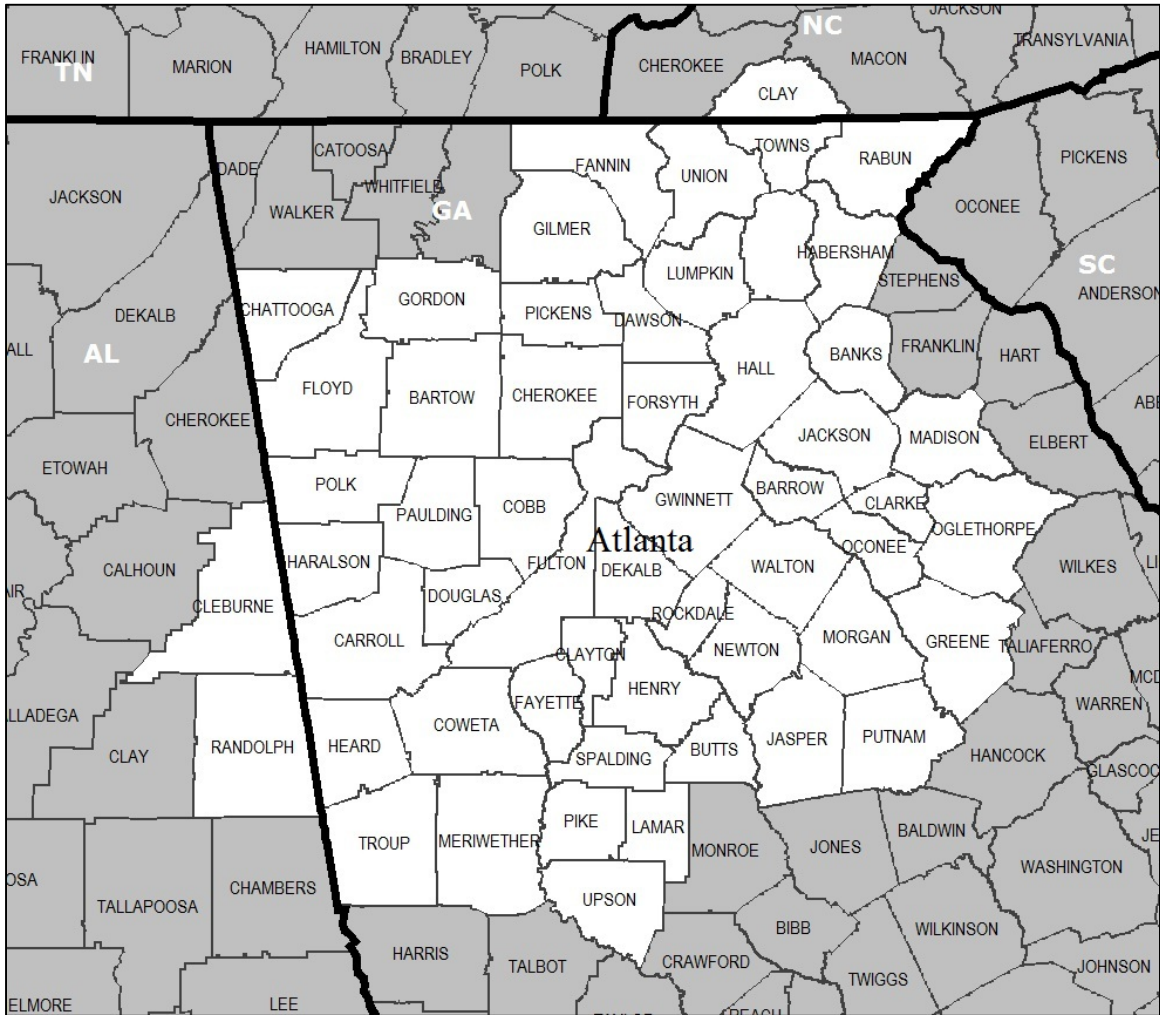
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# Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

## APPENDIX A Atlanta DMA Counties (in white)<sup>a</sup>

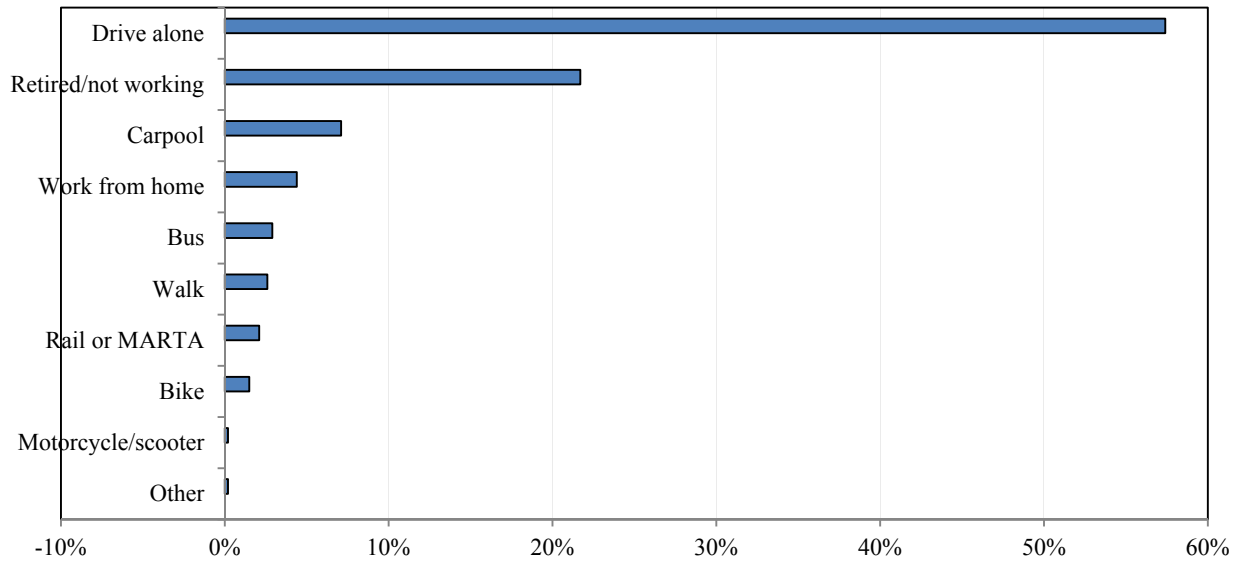


<sup>a</sup> Residents of Alabama and North Carolina counties in Atlanta DMA were excluded from the survey sample.

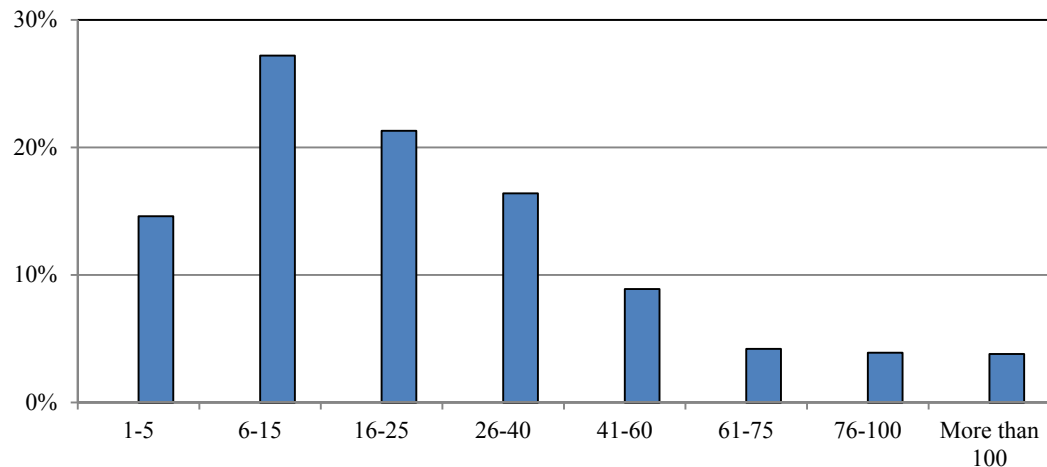
# Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

## APPENDIX B Driving Behavior of Respondents: Frequency Distributions

**FIGURE B1. ON A TYPICAL DAY, HOW DO YOU GET TO YOUR WORKPLACE OR SCHOOL?**



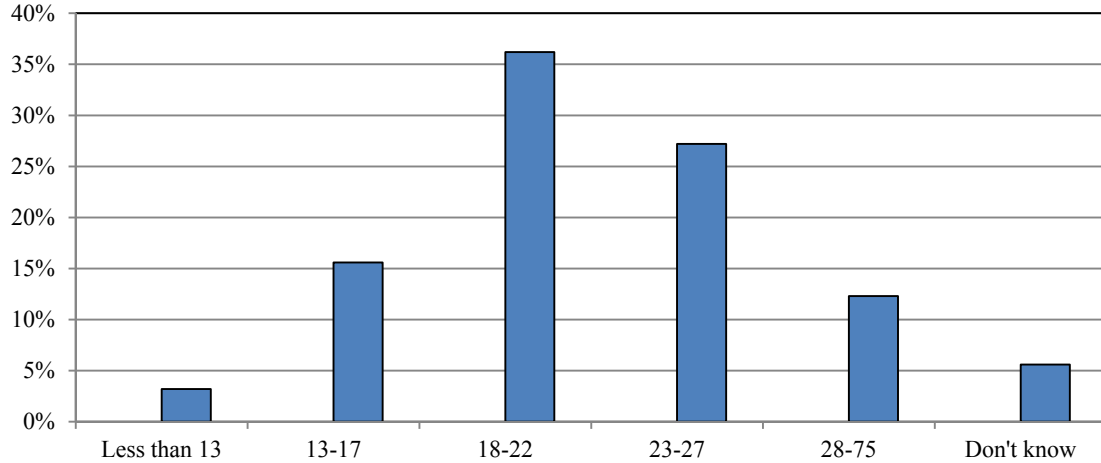
**FIGURE B2. MILES DRIVEN ON TYPICAL WEEKDAY**



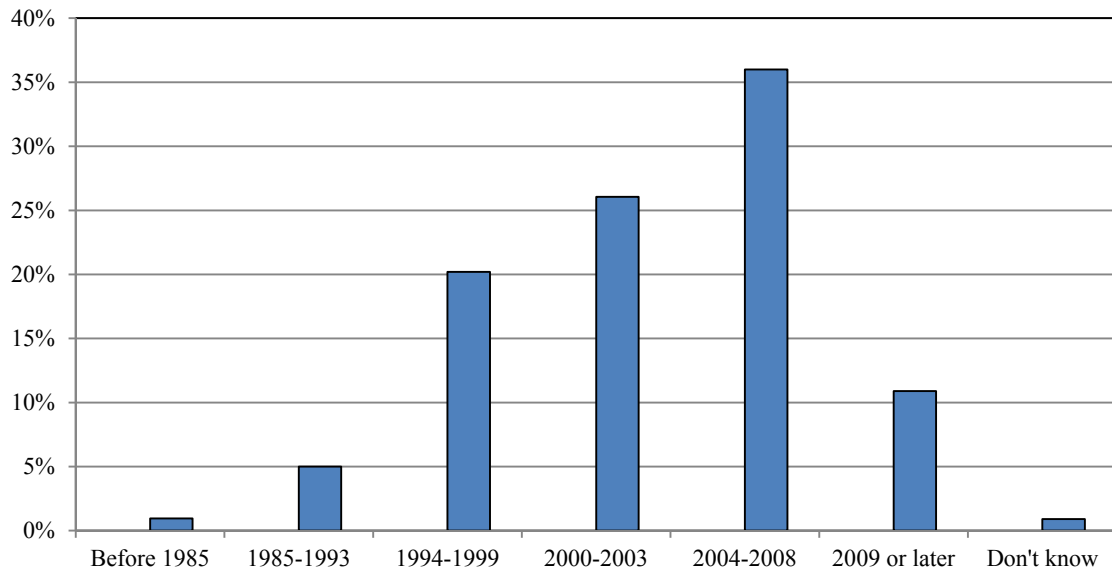
## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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**FIGURE B3. MILES PER GALLON OF VEHICLE YOU DRIVE MOST**



**FIGURE B4. WHAT IS THE MODEL YEAR OF THE VEHICLE YOU DRIVE MOST OFTEN?**



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## APPENDIX C: QUESTIONNAIRE

Respondents prescreened for 18 years or older and current driver

**2. On a typical weekday, about how many miles do you personally drive? If your job is driving, do NOT include miles you drive on the job.**

Don't drive --> Terminate

1-5 miles

6-15 miles

16-25 miles

26-40 miles

41-60 miles

61-75 miles

76-100 miles

More than 100 miles

We, as faculty at Georgia State University, are interested in your opinions about ways in which states try to address their transportation needs.

Georgia's population continues to grow causing more wear-and-tear on roads and bridges. This means more costs for maintenance and repairs.

There are also calls for Georgia to develop its road system and improve public transportation to relieve congestion and improve economic growth.

Meeting the demands within existing budgets is often challenging. Like many states, Georgia may, in the future, implement ways to fund transportation needs.

If implemented, this means that the costs to some, or all, Georgia drivers could increase. And we know such increases may not be desirable.

However, it is important to understand how Georgia citizens, like you, feel about the alternative methods to increase funding for transportation. That is the purpose of this survey.

We will present you with hypothetical situations and ask your opinion about them. In forming your opinion, we ask you to imagine that at least one of these alternatives might be implemented.

Imagining that, we are asking your preferences about the funding alternatives themselves.

Right now, the primary source of state transportation funds is a gas tax. The price at the pump of each gallon of gas includes a per gallon gas tax.

The total amount of tax paid by an individual depends on the number of miles driven and the car's miles per gallon (MPG).

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(This paragraph is paired with 3rd paragraph after Q9. 1/4 of respondents see both or neither; 1/4 see one but not the other) Georgia's gas tax is the 8th lowest in the nation. That is, 42 states have higher gas taxes than Georgia.

**3. (Randomly assigned to 1/3 of respondents) One option that states have is to increase the state gas tax by 10 cents per gallon. This means a person who drives a car that gets 20 miles per gallon (MPG) for 10,000 miles per year will pay \$50 more per year in gas taxes, for a total of \$135.**

**The actual amount a person would pay would depend on the number of miles they drive and the miles per gallon their car gets.**

**Would you ...**

- |  |  |
|--|--|
| <input type="checkbox"/> Strongly support the increase | <input type="checkbox"/> Somewhat support the increase |
| <input type="checkbox"/> Somewhat oppose the increase  | <input type="checkbox"/> Strongly oppose the increase  |
| <input type="checkbox"/> No opinion                    |  |

**4. (Randomly assigned to 1/3 of respondents) One option that states have is to increase the state gas tax by 15 cents per gallon. This means a person who drives a car that gets 20 miles per gallon (MPG) for 10,000 miles per year will pay \$75 more in gas taxes, for a total of \$160.**

**The actual amount a person would pay depends on the number of miles they drive and the miles per gallon their car gets.**

**Would you ...**

- |  |  |
|--|--|
| <input type="checkbox"/> Strongly support the increase | <input type="checkbox"/> Somewhat support the increase |
| <input type="checkbox"/> Somewhat oppose the increase  | <input type="checkbox"/> Strongly oppose the increase  |
| <input type="checkbox"/> No opinion                    |  |

**5. (Randomly assigned to 1/3 of respondents) One option that states have is to increase the state gas tax by 25 cents per gallon. This means a person who drives a car that gets 20 miles per gallon (MPG) for 10,000 miles per year will pay \$125 more in gas taxes for a total of \$210.**

**The actual amount a person would pay depends on the number of miles they drive and the miles per gallon their car gets.**

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**Would you ...**

- Strongly support the increase       Somewhat support the increase  
 Somewhat oppose the increase       Strongly oppose the increase  
 No opinion

**6. If the gas tax was increased as described, how much would it affect your own behavior as a driver?**

- Not at all       Slightly       Moderately       Dramatically

**7. (If answer slightly, moderately, or dramatically to above) How would the change affect your driving behavior? Would you ...**

	Much less	A little less	About same	A little more	Much more
Drive	_____	_____	_____	_____	_____
Take public transportation	_____	_____	_____	_____	_____
Car pool or share rides	_____	_____	_____	_____	_____
Walk, bike or cycle	_____	_____	_____	_____	_____
Replace your car sooner	_____	_____	_____	_____	_____

**8. How difficult would it be for you to change your driving behavior?**

- Extremely difficult       Very difficult       Somewhat difficult  
 Not very difficult       Not at all difficult

**9. Rather than implement a gas tax increase all at once, an increase could be phased in over time. If the tax were gradually increased over five years, how would this affect your support?**

**Would it ...**



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Significantly increase your support       Somewhat increase your support

Slightly increase your support       Would make no difference

(Screen 1 Intro Q10-12) The amount a person pays in gas taxes is determined both by the number of miles they drive and the miles per gallon their car gets.

Some people choose to drive more fuel efficient vehicles while other people choose to drive less fuel efficient vehicles.

(Seen only by some respondents - This paragraph paired with paragraph before Q1. informs respondent of potential inequities for lower income citizens in current gas tax system.) For others, the car they drive is based on what they can afford to buy rather than its gas mileage. Many lower income drivers pay more gas taxes because they are unable to afford newer, more fuel efficient vehicles. Instead they buy older, used vehicles that get lower fuel mileage because they cost less.

(Screen 2 Intro Q10-12) One idea is to eliminate the state gas tax altogether and replace it with a tax based only on the number of miles you drive. In other words, this matches taxes to actual road usage. This is called a Vehicle Miles Traveled (VMT) tax.

(Screen 3 Intro Q10-12) Imagine that the current state gas tax was eliminated and replaced by a tax that was based only on the number of miles the car was driven in Georgia.

Imagine that it was possible to pay this tax at the gas pump just like the current gas tax. So when a driver refueled their car, the total cost would include the cost of the gas plus tax based on how many miles the car had been driven in Georgia since the last gas purchase.

In this proposal, everyone who drives 10,000 miles a year in Georgia would pay the same tax, regardless of the fuel efficiency of the vehicle they drove.

### **10. (Assigned to same respondents as Q1)**

**To create the same revenue for transportation, the new miles-based tax would be 1.35 cents per mile. This means a person who drives a car 10,000 miles per year will pay \$135 in taxes.**

**Would you ...**

Strongly support this change in how the gas tax is determined

Somewhat support this change in how the gas tax is determined

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Somewhat oppose this change in how the gas tax is determined

Strongly oppose this change in how the gas tax is determined

No opinion

### 11. (Assigned to same respondents as Q2)

**To create the same revenue for transportation, the new miles-based tax would be 1.6 cents per mile. This means a person who drives a car 10,000 miles per year will pay \$160 in taxes.**

**Would you ...**

Strongly support this change in how the gas tax is determined

Somewhat support this change in how the gas tax is determined

Somewhat oppose this change in how the gas tax is determined

Strongly oppose this change in how the gas tax is determined

No opinion

### 12. (Assigned to same respondents as Q3)

**To create the same revenue for transportation, the new miles-based tax would be 2.1 cents per mile. This means a person who drives a car 10,000 miles per year will pay \$210 in taxes.**

**Would you ...**

Strongly support this change in how the gas tax is determined

Somewhat support this change in how the gas tax is determined

Somewhat oppose this change in how the gas tax is determined

Strongly oppose this change in how the gas tax is determined

No opinion

### 13. If the gas tax was replaced by such a tax, how much would it affect your own behavior as a driver?

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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Not at all     
  Slightly     
  Moderately     
  Dramatically

**14. (If answer slightly, moderately, or dramatically to above) How would the change affect your driving behavior? Would you ...**

	Much less	A little less	About same	A little more	Much more
Drive	_____	_____	_____	_____	_____
Take public transportation	_____	_____	_____	_____	_____
Car pool or share rides	_____	_____	_____	_____	_____
Walk, bike or cycle	_____	_____	_____	_____	_____
Replace your car sooner	_____	_____	_____	_____	_____

**15. (Randomly assigned to 1/2 of respondents) Another proposed option is to add or increase fees on employee parking in lots at work statewide. The option would increase the cost of current employee parking by \$2 per month statewide.**

**If an employee currently pays \$50 a month to park, the new fee would be \$52. If employees do not currently pay to park, a new \$2 monthly fee would be charged.**

**Would you ...**

Strongly support the increase     
  Somewhat support the increase  
 Somewhat oppose the increase     
  Strongly oppose the increase  
 No opinion

**16. (Randomly assigned to 1/2 of respondents) Another proposed option is to increase fees on employee parking in lots at work statewide. The option would increase the cost of current employee parking by \$4 per month statewide.**

**If an employee currently pays \$50 a month to park, the new fee would be \$54. If employees do not currently pay to park, a new \$4 monthly fee would be charged.**

**Would you ...**

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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\_\_\_ Strongly support the increase

\_\_\_ Somewhat support the increase

\_\_\_ Somewhat oppose the increase

\_\_\_ Strongly oppose the increase

\_\_\_ No opinion

Toll roads already exist in some parts of Georgia. For example, Georgia 400 in Atlanta is a toll road.

A toll road (or tollway, turnpike, toll highway or an express toll route) is a privately or publicly built road for which each driver pays a specific toll or fee to use the road.

Building a toll road may allow certain highways to be built sooner. If public funds are unavailable for the whole project, tolls may provide the extra funding.

Users pay the toll in cash or use a pre-paid electronic pass attached to their windshield.

### **17. If a new road could be built sooner as a toll road rather than waiting to build a non-toll road, would you ...**

\_\_\_ Strongly support using tolls

\_\_\_ Somewhat support using tolls

\_\_\_ Somewhat oppose using tolls

\_\_\_ Strongly oppose using tolls

\_\_\_ No opinion

(Screen 1 Intro Q17-20) Express Lanes already exist in some parts of Georgia. These lanes are free for carpools and buses. In the Fall of 2011, some express lanes will be opened to solo drivers who choose to pay a toll for a faster, more reliable trip when they want it. These lanes are in addition to the existing general purpose traffic lanes.

The toll to use the express lanes varies with the amount of traffic. The toll is set to keep the traffic in these lanes moving consistently at 45 miles per hour or faster. This means drivers have more reliable trip times.

(Screen 2 Intro Q17-20) How Do Express Lanes Work?

The toll to use the express lane to a particular destination is clearly displayed on signs overhead.

Before using an express lane, a driver would first register for a PeachPass, a prepaid account (\$20 minimum), and place the PeachPass electronic card on their windshield.

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If a driver decides to pay the toll to use the lane, they simply move into the lane at designated spots. The PeachPass sticker is detected electronically and the toll is automatically deducted from their account.

The actual toll price will be determined by the number of cars that can use the Express Lane and keep it flowing at a constant 45 miles per hour or faster.

**18. (Randomly assigned to 1/4 of respondents) Imagine you are driving as part of your regular commute and you have a 10-mile drive on the interstate. With the current congestion, you see it's going to take you 45 minutes. You have time to get there without being late.**

**Imagine you have a PeachPass and can move into an Express Lane and drive the 10 miles in only 10 minutes.**

**What is the most you would pay in total to save the 35 minutes in traffic?**

**\$ \_\_\_\_\_**

**19. (Randomly assigned to 1/4 of respondents) Imagine you are driving as part of your regular commute and you have a 10-mile drive on the interstate. With the current congestion, you see it's going to take you 60 minutes. You have time to get there without being late.**

**Imagine you have a PeachPass and can move into an Express Lane and drive the 10 miles in only 25 minutes.**

**What is the most you would pay in total to save the 35 minutes in traffic?**

**\$ \_\_\_\_\_**

**20. (Randomly assigned to 1/4 of respondents) Imagine you are driving to an important appointment and you have a 10-mile drive on the interstate. With the current congestion, you see it's going to take you 45 minutes. You have time to get there without being late.**

**Imagine you have a PeachPass and can move into an Express Lane and drive the 10 miles in only 10 minutes.**

**What is the most you would pay in total to save the 35 minutes in traffic?**

**\$ \_\_\_\_\_**

**21. (Randomly assigned to 1/4 of respondents) Imagine you are driving to an important appointment and you have a 10-mile drive on the interstate. With the current congestion, you see it's going to take you 60 minutes. You have time to get there without being late.**

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Imagine you have a PeachPass and can move into an Express Lane and drive the 10 miles in only 25 minutes

What is the most you would pay in total to save the 35 minutes in traffic?

\$ \_\_\_\_\_

**22. (Randomly assigned to 1/2 of respondents) Suppose the toll was actually \$(answer to previous question + \$1). How likely would you be to pay the toll to use the Express Lane?**

Definitely would       Probably would       Might or might not

Probably would not       Definitely would not

**23. (Randomly assigned to 1/2 of respondents) Suppose the toll was actually \$(answer to previous question + \$2). How likely would you be to pay the toll to use the Express Lane?**

Definitely would       Probably would       Might or might not

Probably would not       Definitely would not

**24. All of the options we've shown you mean more costs to some or all Georgians. We want to understand better how you would make these decisions by asking you to evaluate a series of tradeoff scenarios.**

**(Max Diff Exercise – New Screen)**

**24\_1a. Considering only these four options, which is the Most Appealing, and which is the Least Appealing?**

	Most appealing	Least Appealing
Option 1	1	2
Option 2	1	2
Option 3	1	2
Option 4	1	2

**24\_1b. Are all of these options appealing, none of them appealing, or are only some of them appealing?**

All are appealing       None are appealing       Some are appealing

(Max Diff exercise will randomly choose four of the following to show on each screen. Each respondent will see all Options a-j at least once.)

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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### 24 Options

- Increase the state gas tax by 10 cents per gallon
- Increase the state gas tax by 15 cents per gallon
- Increase the state gas tax by 25 cents per gallon
- Replace the current per-gallon gas tax with a 1.35 cents per mile tax
- Replace the current per-gallon gas tax with a 1.60 cents per mile tax
- Replace the current per-gallon gas tax with a 2.10 cents per mile tax
- Add employee parking fee of \$2 per month
- Add employee parking fee of \$4 per month
- Build toll roads when public funds are not available
- Create special express lanes where you pay for each mile used

The following questions are about your own driving patterns.

### 26. On a typical day, how do you get to your workplace or school?

- Drive alone
- Bike
- Carpool
- Rail or MARTA train
- Walk
- Work from home
- Bus
- Retired/not currently working

Other (please explain)

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### 27. (Skip if not working or work from home) Do you currently pay to park at work?

- Yes
- No
- Don't Know

### 28. On average, how many miles per gallon (MPG) does the car you drive most often get?

## Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation

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Less than 13 mpg       13 - 17 mpg       18 - 22 mpg  
 23 - 27 mpg       28 - 75 mpg       Don't know

**29. What is the model year of the vehicle you drive most often?**

Before 1985       1985-1993       1994-1999  
 2000-2003       2004-2008       2009 or later  
 Don't know

The final questions are about you and your household. Your answers are strictly confidential and will be combined with those of other respondents for statistical analysis purposes.

**1. Which of the following describes your age?**

Under 18 --> (Not allowed to participate in survey)  
 18-24       25-34       35-44       45-54  
 55-64       65 or older

**30. What is your home zip code?**

\_\_\_\_\_

**31. What is your highest level of education?**

Less than high school       Completed high school  
 Some college       Completed college  
 Some graduate school       Completed graduate school

**32. Which of the following describes your current employment status?**

Employed full time       Employed part time  
 Retired       Student  
 Not currently employed



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Other (please explain)

\_\_\_\_\_

**33. How many licensed drivers currently reside in your home?**

1       2       3       4       5 or more

**34. Which of the following describes your total household income?**

Less than \$24,999       \$25,000 to \$34,999

\$35,000 to \$49,999       \$50,000 to \$74,999

\$75,000 to \$99,999       \$100,000 to \$149,999

\$150,000 or more

**35. What is your gender?**

Male       Female

**36. What race or ethnicity do you consider yourself? (Select as many as apply)**

White/Caucasian (not Hispanic/Latino background)

Hispanic, Latino, Mexican-American

Asian, Pacific Islander, East Indian

Black, African American

Native American

Multi-racial

Other (please specify)

\_\_\_\_\_

**37. As you know, many people are so busy these days they can't find time to register to vote, or they move around so often they don't get a chance to re-register. Are you now registered to vote in your precinct, or haven't you been able to register for one reason or another?**

Currently registered to vote       Not currently registered

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## About the Authors

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## About The Fiscal Research Center

The Fiscal Research Center provides nonpartisan research, technical assistance, and education in the evaluation and design of state and local fiscal and economic policy, including both tax and expenditure issues. The Center's mission is to promote development of sound policy and public understanding of issues of concern to state and local governments.

The Fiscal Research Center (FRC) was established in 1995 in order to provide a stronger research foundation for setting fiscal policy for state and local governments and for better-informed decision making. The FRC, one of several prominent policy research centers and academic departments housed in the School of Policy Studies, has a full-time staff and affiliated faculty from throughout Georgia State University and elsewhere who lead the research efforts in many organized projects.

The FRC maintains a position of neutrality on public policy issues in order to safeguard the academic freedom of authors. Thus, interpretations or conclusions in FRC publications should be understood to be solely those of the author(s).

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<sup>1</sup>PMAP: Public Management and Policy. <sup>2</sup>DPO: Domestic Programs. <sup>3</sup>ISP: International Studies Program.

<sup>4</sup>Andrew Young School of Policy Studies.

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### RECENT PUBLICATIONS

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*Measuring Preferences for and Responses to Alternative Revenue Sources for Transportation* (Pam Scholder Ellen, David L. Sjoquist, and Rayna Stoycheva). This report contains a survey of published public opinion polls and the results of a new Georgia poll regarding citizens' attitude towards alternative transportation revenue sources. FRC Report 244 (June 2012)

*The Incentive Effect of Tax-Benefit System Facing Low-Income Families in Georgia* (Chelsea Coleman, Mark Rider, and Kendon Darlington). This report examines the incentives created by the state and federal tax system and the phase-in and phase-out of means tested benefit programs on low income households in Georgia....FRC Report 243 (April 2012)

*An Analysis of Reducing the Corporate Income Tax Rate* (David L. Sjoquist and Laura Wheeler). This brief discusses the likely revenue and incentive effects associated with various options for modifying the current corporate income tax structure. FRC Brief 242 (April 2012)

*Georgia's Corporate Income Tax: A Description and Reform Options* (David L. Sjoquist and Laura Wheeler) This report describes the existing corporate income tax structure and discusses the likely revenue and incentive effects associated with various options for modifying the current corporate income tax structure. FRC Report 241 (April 2012)

*An Analysis of Options for Reforming Georgia's Income Tax: Simplicity, Equity, and Adequacy* (Robert Buschman and David L. Sjoquist) This report develops a framework for analysis of individual income tax reform proposals, and analyzes recent reform packages and some simple alternatives. FRC Report 240 (February 2012)

*An Inventory of Transportation Funding Options* (David L. Sjoquist). This report provides a discussion of the advantages and disadvantages of various options for funding transportation. FRC Report 239 (February 2012)

*Federal Tax Burden and Tax Breaks for Georgia Residents* (Andrew Hanson and Zach Hawley). This report examines the federal taxes paid and the tax breaks received by Georgia residents, it also places these in context of other U.S. states. FRC Report 238 (January 2012)

*Georgia's Taxes: A Summary of Major State and Local Government Taxes, 18th Edition* (Carolyn Bourdeaux and Richard Hawkins). A handbook on taxation that provides a quick overview of all state and local taxes in Georgia. FRC Annual Publication A(18) (January 2012)

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***Consumer's Share of Georgia's General Sales Tax (Tamoya A. L. Christie).*** This fiscal brief provides an estimate of the proportion of Georgia's general sales tax paid by consumers. [FRC Brief 234](#) (May 2011)

***New Business Survival in Georgia: Exploring the Determinants of Survival Using Regional Level Data (Tamoya A. L. Christie).*** This report provides estimates of the effect of various factors on the survival of new business in Georgia. [FRC Report 233](#) (April 2011)

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***Estimated Change in Tax Liability of Tax Reform Council's Proposals (David L. Sjoquist, Sally Wallace, Laura Wheeler, Ken Heaghney, Peter Bluestone and Andrew V. Stephenson).*** This policy brief provides estimates of the change in the tax burden for the several recommendations of the 2010 Special Council on Tax Reform and Fairness for Georgians. [FRC Brief 229](#) (March 2011)

***Sales Tax Holidays and Revenue Effects in Georgia (Robert Buschman).*** This report/brief explores the economic effects of sales tax holidays, including an empirical analysis of the state revenue effects of Georgia's sales tax holidays. [FRC Report/Brief 228](#) (March 2011)

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