# ANALYZING ELECTORAL TIMING AND OUTCOMES THROUGH GEORGIA'S SPECIAL PURPOSE LOCAL OPTION SALES TAXES [1]

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## ABSTRACT

*A large body of literature has attempted to understand how the timing of popular referenda may impact the electoral outcomes that emerge. This current work adds to that literature by exploring the adoption of both educational and special purpose local option sales taxes (known as (E)SPLOSTs) by counties within the state of Georgia between 1985 and 2009. The study analyzes how much the timing of an election, (whether it is a ballot measure placed during a special, general, or primary election), actually impacts the approval rate of such a measure, the probability that it passes, and overall voter turnout. Our evidence suggests that holding a special election for (E)SPLOST measures significantly increases approval rates and the probability that the measure passes, and decreases voter turnout, especially relative to other types of elections. These results are robust to a number of specifications, and may be suggestive of the importance of agenda control in manipulating the median voter and electoral outcomes broadly.*

## 1. INTRODUCTION

Georgia was one of the first states to grant local authorities the ability to raise revenue through a local option sales tax (LOST), when in 1975 the state legislature passed enabling legislation. Much of this was the result of greater

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agitation and sentiments across both the state and country from citizens against what were perceived to be increasingly burdensome property tax rates. This new form of taxation was meant to help alleviate this mood by acting as a substitute for property tax revenue collected by county governments throughout Georgia.

The success of the LOST in Georgia led the state to pass further legislation allowing for a special purpose local option sales tax (SPLOST) in 1985, followed by an educational special purpose local option sales tax (ESPLOST) in 1996. In fact, Georgia was the first state to adopt this latter form of local finance. Generally, these sales taxes are meant to be used to fund various capital outlay projects within a respective county (in the case of a SPLOST), or for various school district purposes (in the case of the ESPLOST). These methods of public finance have proven highly successful throughout the state, with almost every county having adopted either a SPLOST or ESPLOST at least once since its inception (ACCG 2013; Brunner and Warner 2012).

Although (E)SPLOSTs[2] have generally proven successful when brought before voters, one of the most recent large-scale SPLOST initiatives, the transportation special purpose local option sales tax (TSPLOST), ended in almost complete defeat. This TSPLOST was meant to raise $18 billion over ten years in order to improve road congestion and other infrastructure problems across Georgia (*The Economist* Aug. 4th, 2012). If approved, three quarters of the revenue would have been devoted to projects statewide, while the remaining quarter were to be distributed to counties to be used as they so desired on their own infrastructure and road projects. This referendum went to a vote on July 31, 2012 and was placed on the ballot in conjunction with the state's primary election. Interestingly, 106 of Georgia's 159 counties voted down the measure, and did so by a fairly significant margin.

Overall, this example brings to light an extremely relevant question: to what extent does the timing of a SPLOST or ESPLOST measure placed on a ballot impact the potential for such a measure to pass or fail? In order to address this question, we have compiled data on all (E)SPLOST referenda throughout each of the counties in the state of Georgia between 1985 and 2009 in order to understand what, if any, impact the timing of these elections may have on approval rates, the probability that an (E)SPLOST passes, as well as voter turnout.

As will be discussed, both SPLOSTs and ESPLOSTs must follow the same procedural formula before appearing on a ballot; however the SPLOST may

2. Here and throughout the remainder of this paper the notation "(E)SPLOST" refers to both ESPLOST and SPLOST, while "SPLOST" refers to only a SPLOST and "ESPLOST" refers to only an ESPLOST.

be brought up at the request of a county commission, while an ESPLOST may be brought up at the request of a county school board (ACCG 2013). Further, both can be placed either on a stand-alone special election (again called for by either the county commission or school board), or during a general primary or other general election. Given this, there exists an interesting opportunity for both county commissions and school boards to attempt to agenda set *when* an actual vote will be held regarding either a SPLOST or ESPLOST in a way that may lead to more favorable outcomes, and increase the probability that a measure may pass.

Our current study attempts to explore this possibility. Specifically, we evaluate how the timing of an election impacts the passage rate of both SPLOSTs and ESPLOSTs within the counties throughout the state of Georgia. We do this by analyzing these referenda in order to determine whether those referenda considered during a special election were more likely to pass compared to those considered during a general primary or general election. Overall, we find strong evidence to suggest that (E)SPLOSTs that were placed on a special election ballot were significantly more likely to pass, had much higher voter approval rates, and also saw much lower voter turnout in general.

Further, we find that these results in general hold for primary elections as well (when compared to general elections), though the impact of a primary election is much smaller than a special election. These results also hold if the data is cut to consider only a SPLOST or ESPLOST election; however the results are somewhat less robust for ESPLOST measures. Finally, and most interesting, it appears that both SPLOST and ESPLOST referenda held in conjunction with either a presidential or gubernatorial primary or general election had an even more profound impact on approval rates (significantly decreasing them), the probability of passage (again significantly decreasing it), and voter turnout (significantly increasing it). In general, we find much larger effects for presidential general or primary elections, compared to gubernatorial elections. This is one of the first studies to systematically evaluate the impact that ballot placement has on overall (E)SPLOST outcomes.[3]

3. Several relevant studies have analyzed various aspects of what we attempt to do, but no one has done so in nearly as systematic a way as we have here. For instance, Sanders and Lee (2009) evaluate several determinants of voter turnout for an ESPLOST election across Georgia counties, noting that special elections do seem to decrease the overall turnout rate using election data between 1997 and 2006. Further, Jung (2002) notes the possibility that special elections may increase approval rates for SPLOST measures, but never formally tests this. We greatly distinguish our work from these by first looking at the impact that a special versus general election has on the likelihood of the measure passing along with several other important indicators. Further, we consider *both* SPLOST and ESPLOST referenda using a much larger data range (from between 1985 and 2009), which covers all SPLOST and ESPLOST referenda over this period. Finally, we emphasize the importance of distinguishing between each of the different types of elections, not just special elections. Thus our analysis is much broader in scope.

Overall, this work adds to several important strands of literature. The first is the importance of agenda control on the timing of elections. The seminal work of Niskanen (1971) and Romer and Rosenthal (1978) among others have provided strong theoretical foundations for examining how situations in which certain actors given the ability to bring a measure up for a vote at their discretion may result in an outcome contrary to the wishes of the median voter. More recently, a number of studies have empirically investigated this connection between the ability of certain political actors to determine when a given election may be held, and how that impacts the composition of the electorate and the probability of a certain outcome occurring (Meredith 2009; Berry and Gersen 2010, 2011).

Further, following the work of Niskanen (1971) Georgia's (E)SPLOST only allows for the tax to increase in increments of 1%. Thus, given this situation it may be possible for elected officials to place the electorate on an all-or-nothing demand curve. In so doing, there is greater potential for the agenda setting public agent to obtain its most desired outcome, and to obtain an outcome beyond what is most preferred and optimally desired by the median voter. This is further compounded by the fact that all (E)SPLOST referenda either pass or fail in an up or down vote, meaning all proposed projects and expenditures either pass or fail as a single package (ACCG 2013).

Various studies have considered how the outcomes of local school bond measures and other referenda have been impacted based on when the election is actually held and how this impacts the composition of the median voter (Anzia 2011; Dunne, Reed and Wilbanks 1997; Pecquet, Coates and Yen 1996; Rubinfeld and Thomas 1980; Rubinfeld 1977). It is within this context that we attempt to couch our current work as both Georgia county commissions and county school boards have the exclusive authority to determine when a SPLOST or ESPLOST will be placed on a ballot referendum to then be voted on by the general public. Thus, this potential may significantly influence when and how an (E)SPLOST passes, and potentially the extent to which this alters the composition of the median voter.

Further, this work also adds to a large body of literature which has developed to explore both SPLOSTs and ESPLOSTs generally, and also within Georgia. Several studies have analyzed the various determinants as to why a municipal or county government might adopt a local option sales tax (Burge and Piper 2012; Pajari 1984; Sjoquist, Smith and Walker 2007; Sanders and Lee 2009; Zhao 2005). In relation to the adoption of such a tax in Georgia, Zhao (2005) finds that relatively higher property tax burdens along with the increased ability of a county to tax export led to a greater propensity of a given county to adopt a local option tax. In assessing local option sales taxes in Oklahoma, Burge and Piper (2012) found that both horizontal and vertical spillovers play an important role in their adoption. Finally, numerous studies have

examined the fiscal disparities that may or have emerged as a result of the implementation of an (E)SPLOST (Brunner and Warner 2012; Rubinstein and Freeman 2003; Zhao and Han 2008). Broadly, these works do find evidence that (E)SPLOSTs may in fact lead to greater inequalities across a wide spectrum of both fiscal and socioeconomic variables and outcomes.

The remainder of the paper is structured as follows. Section 2 provides a brief history and description of Georgia's SPLOST and ESPLOST along with the procedural means and methods by which they may be brought up and voted on by the general electorate. Section 3 provides a description of the data as well as the models to be employed in order to test the impact that placement of these measures during different elections may have on the overall probability that the given measure passes. Section 4 presents the results and interpretation of those results, and section 5 concludes.

## 2. BACKGROUND TO GEORGIA'S SPLOST AND ESPLOST[4]

Special purpose local option sales taxes have increasingly become a popular means by which state governments and legislatures have granted authority for junior level jurisdictions to raise revenue and taxes through various means other than just a property tax (Burge and Piper 2012). The state of Georgia has been no exception to this fact, and has in many ways been a leader in the development of this method of public finance. Spurred by the "tax revolts" of the 1970s that swept through many states, and also a desire to maintain relatively low property tax rates, the state legislature passed legislation in 1985 that allowed a county government, after majority approval of a county's citizens to implement a 1% sales tax meant to fund various capital outlay projects deemed necessary. This legislation was followed by other legislation passed in 1996 that allowed county school boards to do the same.

Both of these means of funding school and other county projects have proved extremely successful, as Table 1 shows. As can be seen, between 1985 and 2009 there have been 769 SPLOST initiatives and 440 ESPLOST initiatives. Further, as can be seen by year, the passage rate has been relatively high, with a low for SPLOSTs of 8 in 2009 and a high of 40 in 2000, and for ESPLOSTs of between 9 in 1998 and 99 in 1997.

Most interesting are the procedural means by which both SPLOSTs and ESPLOSTs make their way onto a ballot to be considered by the voters of a given county. Under both methods of taxation the procedure is nearly identi-

4. This section draws heavily on two sources for background information about both Georgia's SPLOST and ESPLOST legislation. For information on Georgia's SPLOST we refer to the Association County Commissioners of Georgia (2013) study and for the ESPLOST we turn to Brunner and Warner (2012).

cal. It is largely for this reason that we have opted to analyze both SPLOST and ESPLOST elections simultaneously within this work. The only real distinction of substance between a SPLOST and ESPLOST is that a SPLOST can only be brought up by a county's respective commission, while an ESPLOST can only be brought up by a county's respective school board.

**Table 1. Summary of SPLOST and ESPLOST Vote Results (1985-2009)**

| | SPLOST | | ESPLOST | | Total | |
|---|---|---|---|---|---|---|
| | pass | fail | pass | fail | pass | fail |
| 1985 | 11 | 2 | 0 | 0 | 11 | 2 |
| 1986 | 21 | 15 | 0 | 0 | 21 | 15 |
| 1987 | 34 | 6 | 0 | 0 | 34 | 6 |
| 1988 | 17 | 5 | 0 | 0 | 17 | 5 |
| 1989 | 29 | 6 | 0 | 0 | 29 | 6 |
| 1990 | 26 | 12 | 0 | 0 | 26 | 12 |
| 1991 | 27 | 2 | 0 | 0 | 27 | 2 |
| 1992 | 34 | 8 | 0 | 0 | 34 | 8 |
| 1993 | 34 | 2 | 0 | 0 | 34 | 2 |
| 1994 | 31 | 3 | 0 | 0 | 31 | 3 |
| 1995 | 34 | 2 | 0 | 0 | 34 | 2 |
| 1996 | 22 | 6 | 0 | 0 | 22 | 6 |
| 1997 | 18 | 4 | 99 | 7 | 117 | 11 |
| 1998 | 15 | 3 | 9 | 2 | 24 | 5 |
| 1999 | 26 | 1 | 15 | 1 | 41 | 2 |
| 2000 | 40 | 4 | 11 | 2 | 51 | 6 |
| 2001 | 30 | 3 | 54 | 2 | 84 | 5 |
| 2002 | 29 | 2 | 36 | 2 | 65 | 4 |
| 2003 | 35 | 2 | 19 | 0 | 54 | 2 |
| 2004 | 29 | 3 | 11 | 0 | 40 | 3 |
| 2005 | 41 | 3 | 30 | 1 | 71 | 4 |
| 2006 | 28 | 1 | 51 | 0 | 79 | 1 |
| 2007 | 22 | 3 | 41 | 1 | 63 | 4 |
| 2008 | 28 | 0 | 18 | 1 | 46 | 1 |
| 2009 | 8 | 2 | 25 | 2 | 33 | 4 |
| Total | 669 | 100 | 419 | 21 | 1088 | 121 |

Note: Legislation was approved allowing for the passage of an ESPLOST in 1996, and the first referenda were approved in 1997.

Each SPLOST raises the sales tax rate within the given county by 1%, with a maximum allowable rate increase of 2%, while an ESPLOST may not increase that rate above 1%. Both are mutually exclusive of each other, meaning that if a county reaches its 2% maximum SPLOST, a county school board may still pass a 1% ESPLOST. Although initial legislation made all tax increases sunset after a maximum of 4 years, subsequent amendments increased this to 5 years with certain exceptions allowing this to be extended for a period of 6

years. Any (E)SPLOST upon nearing its expiration, may be reinstituted through another referendum passed through the same procedural process as noted above.

Finally, the ballot language for any (E)SPLOST must include the period of time under which it will exist, the specific purpose and projects for which it will be used, and also the dollar amount to be raised over the period under which it exists. Obviously, one of the most interesting aspects to the entire process through which an (E)SPLOST is to be initiated is when the actual measure will be voted on. As noted, this is entirely at the discretion of either the county commission or school board. Thus, it sets up the potential opportunity for those bodies to place an (E)SPLOST on a ballot at a time that may best ensure its passage.

Although we have no anecdotal evidence to suggest that either county or school board officials actively place these ballot measures on special elections, we hope to empirically investigate how much ballot placement on a special versus primary or general election actually impacts various electoral outcomes that may emerge. Further, in order to help corroborate that local government officials may at least be aware of the potential for ballot placement of these measures to have a significant impact on their success or failure, it is important to note that over the sample there were 880 special elections and 325 general or primary elections in which an (E)SPLOST was also placed on the ballot.

Presumably, it is over these special elections when voter turnout declines, and leads to a situation in which only those voters who have a much more direct and vested interest in the outcome are motivated to go and vote. This follows directly from Riker and Ordeshook's (1968) seminal work regarding the desire of individuals to actually vote based on the relative costs and benefits they face from doing so. In regard to an (E)SPLOST, when placed on a general or primary election, presumably many more voters may show up in order to vote for candidates to elected office at both the state and federal level, than would show up simply to vote for an (E)SPLOST during a special election. Thus we would expect that the composition of the median voter would be drastically altered depending on the election type, and with it the actual outcomes that we would expect to see emerge. The following sections attempt to understand to what extent such an outcome may actually impact the passage rate of a given (E)SPLOST.

## 3. DATA DESCRIPTION AND MODEL SPECIFICATION

In order to better test how placing an (E)SPLOST measure on a ballot at various points in time and during different elections may impact the approval rates, the probability that a measure actually passes, and voter turnout, this

study has compiled an extensive dataset of all county (E)SPLOST election results between 1997 and 2009, and also of all county SPLOST election results over the period 1985 and 2009. These results were compiled from the Georgia Secretary of State's Archives. We also consider whether these ballot measures were held during a stand-alone special election, or whether they were tied to either a general election or primary election during a given year.

First we consider how each of these elections actually impacts the passage rate of an (E)SPLOST, by considering how much such an election impacts the percentage of yes votes. Again, following Romer and Rosenthall (1978), a successful agenda setter will be in a position whereby he or she may be able to manipulate an election in a way that capitalizes on voter rational ignorance, and thus change the composition of the median voter in a way that would increase the number of "yes" votes. Thus, we would expect that if this were the case, then the approval rates should be higher during a special relative to other types of elections. In this framework, Moe (2006) found school employees were disproportionately represented during special school elections relative to the general voting public, which drastically increased the percentage of yes votes in such an election. In order to do this we employ the following model:

$$approval\ rate_{it} = \alpha_0 + \pi_1 primary_{it} + \pi_2 special_{it} + X_{it}\beta + E_{it}\gamma + a_i + u_{it} \quad (1)$$

where $approval\ rate_{it}$ is the percent of votes cast in favor of the proposal and $primary_{it}$ and $special_{it}$ are dummy variables indicating whether the election is a primary or special election. The omitted category is general elections. If holding a special election (relative to a general or primary election) increases the percentage of votes cast in favor of the proposal, then $\pi_2$ should be positive and larger in magnitude than $\pi_1$. If placing an (E)SPLOST on the ballot of a primary election (relative to a general election) increases the probability of its passage, then $\pi_1$ should also be positive. Given the theoretical considerations discussed, we would expect these results to hold true.

The vector $X_{it}$ includes county characteristics such as population, unemployment, income per capita, and whether or not the economy was in recession. We expect that, all else equal, higher levels of unemployment may lead to lower approval rates. While an argument can be made for a positive relationship between income per capita and approval rates, previous research suggests that counties with higher income levels are actually less likely to approve proposed referenda[5]. We expect that the recession indicator will be negative, although its effect is likely highly correlated with income per capita and unemployment. The vector $E_{it}$ includes county characteristics specifically related to education, such as general fund revenues per full time equivalent and number of teachers in grades K-12 within a county. These variables are in-

5. See Sanders and Lee (2009).

cluded under the ESPLOST elections specification. We expect that counties with more K-12 educators will be more likely to approve ballot measures that are aimed specifically at education improvements. The variable $a_i$ represents a county fixed effect, and $u_{it}$ represents the time-varying error. We estimate equation (1) using both fixed effects and random effects, in addition to using pooled OLS, in which case $a_i$ and $u_{it}$ are combined into a composite error.

In addition to and for robustness we examine whether or not the percentage of votes in favor of an (E)SPLOST is directly impacted by the type of election in which it makes its way onto the ballot. Thus, we also consider the probability that an (E)SPLOST will pass given the type of election in which it appears on the ballot. This model takes the following form:

$$pass_{it} = \alpha_0 + \pi_1 primary_{it} + \pi_2 special_{it} + X_{it}\beta + E_{it}\gamma + a_i + u_{it}, \quad (2)$$

where $pass_{it}$ is equal to 1 if the ESPLOST passes. The other variables in the equation are analogous to the controls in equation (1). As in equation (1), we expect that both $\pi_1$ and $\pi_2$ should be positive and that $\pi_2$ should be larger in magnitude than $\pi_1$.

Finally, in order to determine the channel through which the election timing may affect the probability of vote passage, we examine voter turnout numbers as a function of election type. Theoretically, we would expect that voter turnout would be lower during a special election relative to either a general or primary election. This follows directly from Riker and Ordeshook's (1968) rational voter model. Within their framework, as the number of issues on a ballot increases, so too does the expected payoff from voting for a given individual. Thus, holding an (E)SPLOST election during a special referenda rather than a general or primary election decreases the expected payout to a given voter, and therefore leads to a lower turnout. This is especially compounded as these are purely local election, which tend to see relatively low voter turnout in general.

Empirically, various studies have found this relationship to hold. For instance, Filer and Kenny (1980) found voter turnout to be lower in New York State when bond referenda were held during special elections. Pecquet, Coates and Yen (1996) found the same relationship during school tax special elections in Louisiana. Various other studies have found similar empirical results across various governmental units (Berry and Gersen 2010; Boyd 1989; Hajnal, Lewis and Louch 2002; Hajnal and Lewis 2003). The empirical specification employed is shown in the following equation:

$$voter\ turnout_{it} = \alpha_0 + \pi_1 primary_{it} + \pi_2 special_{it} + X_{it}\beta + E_{it}\gamma + a_i + u_{it} \quad (3)$$

where $voter\ turnout_{it}$ is the total number of voters casting votes in a given election in a county divided by the total number of registered voters in that county. We expect that, in a special election, many voters who choose to participate will be particularly interested in the passage of an (E)SPLOST, yielding a lower number of overall voter turnout. In primary elections, and especially in general elections, voter participation is not being driven as strongly by preferences for the (E)SPLOST. Thus we expect to see higher voter turnout percentages and, subsequently, lower passage rates of the proposals. Therefore, both $\pi_1$ and $\pi_2$ should be negative, and $\pi_2$ should be larger in magnitude than $\pi_1$.

We further break down type of election by considering whether the (E)SPLOST was held during a presidential or gubernatorial primary or general election. In the state of Georgia gubernatorial elections are held in even numbered years immediately preceding a presidential election. Further, gubernatorial primaries are, in general, held in July of that year, while the presidential primary is, in general, held in March of the presidential election year.

Aldrich (1993) suggests that voter turnout in local elections should be higher when those elections are held in conjunction with either national or statewide elections. Hajnal and Lewis (2003) and Wood (2002) find empirical support for this conclusion. Thus we would expect that an (E)SPLOST on the ballot in conjunction with a presidential primary or general election will see much lower approval rates, a lower probability of success, and also much higher voter turnout as compared to a special election. Further, the magnitude of this effect during a presidential primary or general election should be much larger as compared to a similar measure placed on either a gubernatorial general or primary election.

Finally, we also disentangle those (E)SPLOST referenda we have available to us and consider the impact that each of the above specifications has on either an ESPLOST or a SPLOST referendum individually. Table 2 provides all of the summary statistics for each of the variables employed as discussed above. A full table of these variables, their names, sources of information, and a full description can be found in Appendix I.

**Table 2. Summary Statistics**

| | Obs | Mean | Std Dev | Min | Max |
|---|---|---|---|---|---|
| general election | 1208 | 0.1457 | 0.3529 | 0 | 1 |
| general presidential election | 1208 | 0.0637 | 0.2444 | 0 | 1 |
| general gubernatorial election | 1208 | 0.0820 | 0.2744 | 0 | 1 |
| primary election | 1208 | 0.1233 | 0.3290 | 0 | 1 |
| primary presidential election | 1208 | 0.0563 | 0.2306 | 0 | 1 |
| primary gubernatorial election | 1208 | 0.0348 | 0.1833 | 0 | 1 |
| special election | 1208 | 0.7285 | 0.4449 | 0 | 1 |
| ESPLOST | 1208 | 0.3692 | 0.4828 | 0 | 1 |
| approval rate | 1208 | 0.7054 | 0.1512 | 0.1971 | 0.9821 |
| pass | 1208 | 0.8990 | 0.3014 | 0 | 1 |
| total votes | 1208 | 5479.27 | 15816.24 | 100 | 239529 |
| registered voters | 1208 | 23548.37 | 50202.22 | 1256 | 554225 |
| voter turnout | 1208 | 0.2293 | 0.1504 | 0.0171 | 0.8358 |
| population* | 1207 | 50135.01 | 99987.06 | 1774 | 888694 |
| recession | 1208 | 0.1482 | 0.3554 | 0 | 1 |
| unemployment | 1208 | 5.75 | 2.34 | 1.20 | 20.80 |
| income per capita (in thousands) | 1208 | 20.86 | 6.51 | 7.84 | 54.37 |
| total educators | 846 | 686.56 | 1335.71 | 13 | 11215 |
| education revenue | 816 | 6484.15 | 1379.50 | 3868 | 13097 |

*Note: In all regressions, population is measured in ten thousands.

## 4. RESULTS AND INTERPRETATION

### *4.1 Initial Results*

Overall, the results are quite telling as to how much the placement of a given (E)SPLOST on a special, primary, or general election ballot may have on the various measures as discussed above. Table 3 provides the effect that each election type has on the overall voter approval rate for each (E)SPLOST under analysis.

Here, columns 1 and 2 provide the pooled OLS regression estimates, columns 3 and 4 list the random effects estimates, while columns 5 and 6 give the fixed effects estimates. Our main variables of interest are the election type, which here are both primary and special elections. The omitted category is general elections, so that the coefficients for both primary and special elections are relative to the results for a general election. We include controls for countywide population, whether or not the economy was in recession, the average county unemployment rate, and finally per capita income[6]. We also want to allow for changes in approval rates across time. We do this in two ways. We first include a simple linear control for the year (centered around 1997), shown in columns 1, 3, and 5. To allow for increased flexibility across time, we include dummy variables for each year in columns 2, 4, and 6.

6. Income per capita is measured in thousands of dollars.

**Table 3. Effect of Election Type on Approval Rate**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Pooled | Pooled | RE | RE | FE | FE |
| primary election | 0.0423*** | 0.0394*** | 0.0430*** | 0.0391*** | 0.0437*** | 0.0387** |
| | (0.0134) | (0.0150) | (0.0142) | (0.0149) | (0.0147) | (0.0155) |
| special election | 0.124*** | 0.110*** | 0.122*** | 0.111*** | 0.120*** | 0.112*** |
| | (0.0101) | (0.0152) | (0.0106) | (0.0142) | (0.0111) | (0.0147) |
| year | 0.00978*** | | 0.00952*** | | 0.00798*** | |
| | (0.00170) | | (0.00135) | | (0.00186) | |
| population | -0.00165** | -0.00173** | -0.00159** | -0.00167*** | -0.00101 | -0.00157 |
| | (0.000784) | (0.000748) | (0.000653) | (0.000639) | (0.00176) | (0.00175) |
| recession | 0.00805 | 0.0205 | 0.00880 | 0.0153 | 0.00955 | 0.00956 |
| | (0.0108) | (0.0339) | (0.0104) | (0.0287) | (0.0106) | (0.0295) |
| unemployment | -0.00500** | 9.41e-05 | -0.00555*** | -0.000694 | -0.00655*** | -0.00266 |
| | (0.00194) | (0.00241) | (0.00178) | (0.00220) | (0.00198) | (0.00260) |
| income per cap | -0.00453** | -0.00331 | -0.00387** | -0.00287* | -0.00188 | -0.000997 |
| | (0.00223) | (0.00221) | (0.00159) | (0.00159) | (0.00225) | (0.00226) |
| Year Dummies | no | yes | no | yes | no | yes |
| Observations | 1,207 | 1,207 | 1,207 | 1,207 | 1,207 | 1,207 |
| R-squared | 0.232 | 0.270 | | | 0.242 | 0.284 |
| N (counties) | | | 157 | 157 | 157 | 157 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Overall, these findings do seem to indicate that by placing an (E)SPLOST in a special election, it does indeed increase the approval rate for the measure and although an (E)SPLOST placed on the ballot during a primary election also sees an increase in the overall approval rate, the magnitude is much smaller as compared to a special election.

Next we consider the results from equation (2) found in Table 4. Given that the dependent variable "pass" is binary, we estimate equation (2) using a logit model[7] and report marginal effects. As in Table 3, it appears that considering an (E)SPLOST during either a primary or special election considerably increases its probability of passage, relative to considering it during a general election. However, these results do not appear to be quite as robust as those found in Table 3. (One of the reasons for this is that there is much more variation in approval rate across and within counties than there is in whether or not the measure passes.) Here, the sign coefficients are always as predicted. However, the variable becomes statistically insignificant when the year dummy is added to the pooled OLS and random effects models, and also in when the linear time trend is included in the fixed effects model. Further, the primary

7. See Zhao (2005) for a discussion of the use of the logit model compared to a linear probability model in this context.

election variable becomes statistically insignificant when the year dummy is added to the random effects model and in both fixed effect specifications.

**Table 4. Effect of Election Type on Probability of Passage**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Pooled | Pooled | RE | RE | FE | FE |
| primary election | 0.0329** | 0.0307 | 0.0274* | 0.00877 | 0.136 | 0.0863 |
| | (0.0163) | (0.0188) | (0.0143) | (3.760) | (0.138) | (0.468) |
| special election | 0.0757*** | 0.0459 | 0.0627*** | 0.0210 | 0.138 | 0.198* |
| | (0.0222) | (0.0316) | (0.0219) | (8.820) | (0.142) | (0.118) |
| year | 0.0114*** | | 0.00985*** | | 0.0281** | |
| | (0.00259) | | (0.00226) | | (0.0139) | |
| population | -0.000738 | -0.00143* | -0.000660 | -0.000374 | 0.00459 | 0.0117 |
| | (0.000824) | (0.000766) | (0.000789) | (0.159) | (0.0104) | (0.0369) |
| recession | 0.00838 | 0.0507** | 0.00772 | 0.00800 | 0.0357 | 0.00798 |
| | (0.0208) | (0.0242) | (0.0170) | (3.426) | (0.0743) | (0.222) |
| unemployment | -0.00492* | -0.00170 | -0.00492* | -0.00165 | -0.0274 | -0.0582 |
| | (0.00294) | (0.00331) | (0.00274) | (0.705) | (0.0228) | (0.169) |
| income per cap | -0.00547* | -0.00180 | -0.00469* | -0.00210 | -0.0118* | -0.0119 |
| | (0.00292) | (0.00299) | (0.00247) | (0.896) | (0.00621) | (0.0416) |
| Year Dummies | no | yes | no | yes | no | yes |
| Observations | 1,207 | 1,207 | 1,207 | 1,207 | 594 | 594 |
| N (counties) | | | 157 | 157 | 74 | 74 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

One problem with running the fixed effects model with the "pass" dummy on the left-hand side is that the estimates are based on variation in passage within a county across time. There are many counties in which an (E)SPLOST either always passes or always fails, and all observations from these counties are automatically dropped from the estimation. Because of this, nearly half of the observations are dropped when using fixed effects, which may at least partially explain these results. Next, we consider the impact of each election type on overall voter turnout in Table 5.

Here again these results should be interpreted relative to the general election benchmark. All of the election results are negative, as predicted, and statistically significant. Specifically, for the pooled OLS analysis a special election will reduce voter by about 31 percentage points, while a primary election will reduce voter turnout between 19 and 22 percentage points. Both the random effects and fixed effects estimates show general reductions in voter turnout as well.

Overall, these results suggest important implications for both ESPLOST and SPLOST referenda. In general a special election will lead to a much larger

percentage of yes votes as compared to primary elections, and especially as compared to general elections. Further, and as a corollary, this also translates into a much higher probability that an (E)SPLOST will pass during a special election, with a primary election also increasing that probability as compared to a general election. Finally, this also led to a much larger voter turnout rate during a special election than any of the other two types of elections.[8]

**Table 5. Effect of Election Type on Voter Turnout**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Pooled | Pooled | RE | RE | FE | FE |
| primary election | -0.192*** | -0.215*** | -0.188*** | -0.211*** | -0.183*** | -0.207*** |
| | (0.0161) | (0.0155) | (0.0103) | (0.0101) | (0.0107) | (0.0105) |
| special election | -0.312*** | -0.305*** | -0.309*** | -0.304*** | -0.305*** | -0.304*** |
| | (0.0139) | (0.0138) | (0.00767) | (0.00962) | (0.00804) | (0.0100) |
| year | -0.00588*** | | -0.00547*** | | -0.00457*** | |
| | (0.00139) | | (0.000950) | | (0.00135) | |
| population | -0.000556 | -0.000704 | -0.000472 | -0.000644 | 0.00190 | 0.00135 |
| | (0.000678) | (0.000593) | (0.000448) | (0.000418) | (0.00128) | (0.00119) |
| recession | 0.0104 | -0.0419** | 0.0125* | -0.0351* | 0.0148* | -0.0264 |
| | (0.00832) | (0.0170) | (0.00753) | (0.0194) | (0.00771) | (0.0200) |
| unemployment | 0.00230 | 0.00125 | 0.00140 | -0.000223 | 0.000414 | -0.00218 |
| | (0.00151) | (0.00184) | (0.00127) | (0.00147) | (0.00144) | (0.00177) |
| income per cap | 0.00263 | 0.00283** | 0.00196* | 0.00207** | 0.000335 | 0.000517 |
| | (0.00168) | (0.00141) | (0.00111) | (0.00105) | (0.00163) | (0.00154) |
| Year Dummies | no | yes | no | yes | no | yes |
| Observations | 1,207 | 1,207 | 1,207 | 1,207 | 1,207 | 1,207 |
| R-squared | 0.609 | 0.671 | | | 0.627 | 0.690 |
| N (counties) | | | 157 | 157 | 157 | 157 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

As can be seen, every result for the main variables of interest are highly statistically significant with the sign coefficient resulting in what we had originally predicted. Under the pooled OLS analysis the results suggest that, relative to a general election, a special election increases the approval rate for a given (E)SPLOST from anywhere between 11 and 12.4 percentage points, while a primary election increases the approval rate from between 3.9 and 4.2 percentage points. These results are consistent for the random and fixed effects estimates.

8. For robustness we also replicated all of the specifications from tables 3 through 5, but by breaking up each specification between either a SPLOST *or* ESPLOST referenda instead of combining them together. Overall, while the results are somewhat weaker due to greater time invariance, they were still generally robust to the results reported above. Though not reported here for the sake of space, those results are available upon request.

Thus, there is a certain potential for local government and school board officials, if they desire to see an (E)SPLOST pass, to attempt to place those measures in a special or standalone election. This greatly increases the chance of success, potentially through the channel of the impact on the median voter, as evidenced from the election's impact on voter turnout. Although we do not have any actual anecdotal evidence to corroborate this, given the extent to which (E)SPLOST measures appear on the ballot during a special election, this is at least suggestive of its understood importance in such an election's potential to increase passage rates.

*4.2 Exploring the type of general or primary election*

One final method we consider in this analysis is to break up both general and primary elections into whether or not a SPLOST, ESPLOST, or both were held during either a presidential or gubernatorial general or primary election. We present these results in Table 6.

For the sake of space, in this table we only report the results for our main variables of interest. However, each column corresponds to those indicated above. We first present the full sample, including both SPLOST and ESPLOST referenda, then we consider only ESPLOST referenda, and finally only SPLOST referenda. In order to more easily compare between the two types of general and primary elections, we set special elections to be the omitted category in this case. Table 6 presents the results for approval rates.[9]

The findings indicate that each type of election (whether it be a presidential or gubernatorial primary or general election) led to much lower approval ratings for both a SPLOST and ESPLOST. Most interesting, is the fact that presidential general elections consistently generated lower approval ratings for both SPLOST and ESPLOST ballot measures than did gubernatorial general elections. This is important to note, given the composition of voters and the median voter in general that may change according to each election presented. Finally, most of the results are statistically significant, regardless of the specification employed.

The only general differences that emerge are for the SPLOST and ESPLOST results when presented separately. Here under the fixed effects estimates the results are generally statistically insignificant. However, this may

9. We have also assessed the results using our other main variables of interest—the probability of passage and voter turnout. Although the results from the logit analysis were somewhat weaker than those found in Table 6, they—along with the results for voter turnout—were similar to our findings for approval ratings presented here. Again, due to space constraints we have opted not to report these results, but they are available upon request.

again be due to the loss of observations resulting from a lack of variation than anything else.

**Table 6. Effect of Election Type (with Presidential and Gubernatorial Elections) on Approval Rate**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Pooled | Pooled | RE | RE | FE | FE |
| Full Sample | | | | | | |
| Presidential (General) | -0.140*** | -0.0890*** | -0.137*** | -0.0926*** | -0.134*** | -0.0941*** |
| | (0.0118) | (0.0181) | (0.0153) | (0.0199) | (0.0160) | (0.0206) |
| Gubernatorial (General) | -0.105*** | -0.0974*** | -0.104*** | -0.0948*** | -0.104*** | -0.0933*** |
| | (0.0134) | (0.0190) | (0.0137) | (0.0177) | (0.0142) | (0.0182) |
| Presidential (Primary) | -0.0725*** | -0.0136 | -0.0692*** | -0.0144 | -0.0668*** | -0.0152 |
| | (0.0145) | (0.0192) | (0.0161) | (0.0202) | (0.0166) | (0.0209) |
| Gubernatorial (Primary) | -0.0789*** | -0.0960*** | -0.0755*** | -0.0927*** | -0.0727*** | -0.0887*** |
| | (0.0173) | (0.0213) | (0.0202) | (0.0225) | (0.0208) | (0.0232) |
| ESPLOST Only | | | | | | |
| Presidential (General) | -0.170*** | -0.135*** | -0.162*** | -0.131*** | -0.138*** | -0.119** |
| | (0.0270) | (0.0317) | (0.0410) | (0.0447) | (0.0465) | (0.0495) |
| Gubernatorial (General) | -0.118*** | -0.113*** | -0.120*** | -0.115*** | -0.122*** | -0.120*** |
| | (0.0140) | (0.0224) | (0.0265) | (0.0299) | (0.0312) | (0.0360) |
| Presidential (Primary) | -0.128*** | -0.0541 | -0.125*** | -0.0504 | -0.123*** | -0.0508 |
| | (0.0368) | (0.0476) | (0.0353) | (0.0442) | (0.0403) | (0.0509) |
| Gubernatorial (Primary) | -0.0673* | -0.0925** | -0.0760** | -0.102*** | -0.0908** | -0.118*** |
| | (0.0348) | (0.0375) | (0.0368) | (0.0373) | (0.0419) | (0.0430) |
| SPLOST Only | | | | | | |
| Presidential (General) | -0.122*** | -0.0649*** | -0.115*** | -0.0645*** | -0.106*** | -0.0658*** |
| | (0.0134) | (0.0203) | (0.0173) | (0.0234) | (0.0185) | (0.0250) |
| Gubernatorial (General) | -0.0877*** | -0.0722*** | -0.0791*** | -0.0618*** | -0.0723*** | -0.0508** |
| | (0.0170) | (0.0246) | (0.0170) | (0.0230) | (0.0183) | (0.0244) |
| Presidential (Primary) | -0.0455*** | 0.00945 | -0.0382** | 0.0144 | -0.0312 | 0.0155 |
| | (0.0159) | (0.0206) | (0.0188) | (0.0241) | (0.0200) | (0.0259) |
| Gubernatorial (Primary) | -0.0692*** | -0.0779*** | -0.0571** | -0.0721** | -0.0446* | -0.0635** |
| | (0.0207) | (0.0288) | (0.0245) | (0.0290) | (0.0257) | (0.0305) |
| Year Dummies | no | yes | no | yes | no | yes |

Robust standard errors in parentheses; all regression also include controls for year, population, recession, and unemployment; ESPLOST regressions include controls for number of educators and education revenue; *** p<0.01, ** p<0.05, * p<0.1

Overall, these results are, generally, highly statistically significant. From all of the results presented above, it would appear that depending on the timing of a given election, there is a distinct change that seems to emerge in the median voter. Potentially, those with the greatest vested interest may be more willing to first come out and vote during a special election and second vote in favor of an (E)SPLOST measure during such election. Further, there is a significant potential for local elected officials, who may desire either a SPLOST

or ESPLOST to agenda set the timing of such election in a manner that is most favorable and conducive to its passage.

## 5. CONCLUSION

Georgia was one of the first states to grant local and municipal authorities the power to levy local option sales taxes for revenue raising purposes. After much early success, the state further granted both special purpose local option sales taxes, and educational special purpose local options sales taxes, passed in 1985 and 1996 respectively. These forms of local public finance have also proven highly successful.

What is interesting to note regarding both these SPLOST and ESPLOST measures is the method and manner through which each may be adopted within a given county and how and when they make their way onto local ballots. Each may be placed on a given ballot at the discretion of either the county board (in the case of a SPLOST) or at the request of a county school board (in the case of an ESPLOST). Further, each may be placed during a special election, a primary (either gubernatorial or presidential) election, or a general election (again either gubernatorial or presidential).

It is this variation in ballot placement that this study has attempted to explore. Specifically, we ask what impact the placement of an (E)SPLOST ballot measure during a special election has on electoral outcomes, relative to its placement in a general or primary election. Our analysis provides strong evidence to suggest both that approval rates for an (E)SPLOST increase significantly when it is placed on a special or primary election ballot (relative to a general election) and that the probability of the measure passing also increases along those same margins. Further, our evidence suggests that the type of election can also have a significant impact on overall voter turnout, with special and primary elections seeing much lower turnout relative to a general election, and special elections having even lower voter turnout than primary elections.

We have attempted in this study to speak to these issues and how agenda setting may impact the outcomes that emerge and the composition of the median voter. However, there is still room for additional research into this area. First, we have confined our analysis to only one state. Although this helped control for a number of unobservable differences that could arise across states or other jurisdictions, our findings are too limited to make a more generalizable statement. Second, further study warrants more systematic analysis of the agenda setting power that local officials within the state of Georgia, and further, within any other jurisdiction have regarding tax choice, tax policy, and also the implementation of certain ballot measures in order to achieve an outcome most desired by the given agenda setter. In the context of our study this may require much more qualitative work than we have currently presented.

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**Appendix I. Data Description and List of Variables with Sources**

| Variable | Description | Source |
|---|---|---|
| General Election | Indicator variable represented as "1" if an (E)SPLOST was held during a November general election and "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| General Presidential Election | Indicator variable represented as "1" if an (E)SPLOST was held during a November presidential general election and "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| General Gubernatorial Election | Indicator variable represented as "1" if an (E)SPLOST was held during a November gubernatorial general election and "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| Primary Election | Indicator variable represented as "1" if an (E)SPLOST was held during a general primary election and "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| Primary Presidential Election | Indicator variable represented as "1" if an (E)SPLOST was held during a presidential preference primary election and "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| Primary Gubernatorial Election | Indicator variable represented as "1" if an (E)SPLOST was held during a July gubernatorial primary election and "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| Special Election | Indicator variable represented as "1" if an (E)SPLOST was held during a special election and "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| ESPLOST | Indicator variable represented by a "1" if the ballot measure was an ESPLOST and "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| Approval Rate | Percentage of "Yes" votes for a SPLOST or ESPLOST | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| Pass | Indicator variable represented by "1" if the (E)SPLOST was approved and a "0" otherwise | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| Total Votes | Total number of votes cast for each ballot measure | Georgia Secretary of State nad the Georgia State Archives (http://www.sos.georgia.gov/) |
| Registered Voters | Total number of registered voters within a given county | The Georgia County Guide -- Various Years |
| Population | Total population for each county | United State Census Bureau (http://www.census.gov/popest/) |
| Recession | Indicator variable represented as "1" if the U.S. economy was in recession as defined by the NBER and "0" otherwise | National Bureau of Economic Research (http://www.nber.org/cycles.html) |
| Unemployment | Average monthly unemployment rate by county | BLS Local Area Unemployment Statistics (http://www.bls.gov.lau/) |
| Income per Capita (In Thousands) | Per capita income by county | The Georgia County Guide -- Various Years |
| Total Educators | Total number of administrators, support staff, and K-12 teachers employed within a given county | The Georgia County Guide -- Various Years |
| Education Revenue | General fund revenues per full time equivalent per county | The Georgia County Guide -- Various Years |

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