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## Age-Based Property Tax Exemptions in Georgia

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FINANCE

# Age-Based Property Tax Exemptions in Georgia

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Carlianne Patrick  
Per Johnson

Working Paper 19-04



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# The Center for State and Local Finance

WORKING PAPER 19-04

## Age-Based Property Tax Exemptions in Georgia

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**April**  
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## Introduction

Across the United States, many local jurisdictions offer property tax exemptions or similar concessions to older citizens, especially from the school portion of the tax bill. Such exemptions first began to attract the notice of tax professionals in the middle decades of the 20th century (e.g., Chen 1965). Since that time, age-targeted exemptions have become more popular with local jurisdictions, which still vary widely in the extent to which they have embraced them and in the limitations that they place on them. For example, in the Atlanta region, suburban Cobb County simply exempts all people age 62 or above from the Cobb County School District portion of property taxes. In contrast, Fulton County has much more complicated provisions. It exempts \$54,000 of assessed value from Fulton County School System taxes for those age 65 and above, with an income limit of \$30,000, but it also exempts the full value from county taxes for those age 70 and above with a higher income limit — about \$60,000 for a family of two.<sup>1</sup> Other jurisdictions in the region offer no age-based property tax exemptions.

Such exemptions can be controversial. For example, in recent years, Cobb County has made headlines for its generous exemption from the education property tax for seniors at a time when schools' budgets have been severely squeezed.<sup>2</sup> Defenders of the policies argue that housing makes up a larger share of the budget for older households, that many older households paid into the community for many years, and that most presently do not have children in the schools. Critics point out that, on the other hand, most older households do not have mortgages, that they benefit from the increased housing values associated with strong schools and other public services, and that other households with no children in the schools are not exempted.

This report is a step toward informing (but surely not settling!) such debates. It has four objectives. First, we apprise readers of a new resource, the Georgia Property Tax Database, housed at Georgia State University's Fiscal Research Center. The database compiles extremely detailed information on 100 years of Georgia's state and local property tax exemptions, from 1913 to 2013, including but not limited to those that are age-based. Second, we describe the patterns of the data, documenting the kinds of jurisdictions offering age-targeted exemptions and the steady increase in their prevalence and coverage over time. Third, we show how these data can be used to estimate the fiscal impacts of such exemptions on local budgets using static scoring, whereby fiscal impacts are measured by assuming that households' behavior (including the location and size of their residence) is unaffected by the policy. For example, we find that the age-targeted exemptions in the Cobb County School District cost the schools 6 percent of their budget. Finally, we show how the data can be used to estimate the effect of these exemptions on the migratory and location decisions of older households. Such effects are interesting in their own right

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<sup>1</sup> These statistics and (unless otherwise noted) those that follow are as of 2013.

<sup>2</sup> See, e.g., Maureen Downey, "Make 62-year-olds pay school taxes," *Atlanta Journal-Constitution*, May 21, 2013; Janel Davis, "Tax breaks for seniors: Can counties afford them?" *Atlanta Journal-Constitution*, June 2, 2010.

but also can be viewed as part of the dynamic scoring of the fiscal impacts, which allows for the possibility that the incentives they create affect the demographic composition of local jurisdictions, with feedback effects on tax revenues. We find significant effects, with age-targeted tax exemptions leading to higher populations of older homeowners relative both to younger homeowners and to older renters.

## The Georgia Property Tax Database

The Georgia Property Tax Database is a new resource that helps meet growing demand for information about the property tax. It complements other recent developments in local public finance data, such as the Lincoln Institute for Land Policy's recently developed database of state-level property tax laws that includes demographically targeted exemptions (Langley 2015).<sup>3</sup> The Georgia Property Tax Database adds to other data by drilling down to a more local level in one state.<sup>4</sup>

Until now, the only data for Georgia have been those from the Georgia County Ad Valorem Tax Digest Consolidated Summaries ("tax digest" for short). They provide aggregate data on the number of assessed properties and aggregate assessed values by jurisdiction. Millage rates are also available since 1990. However, those data sources give only a partial picture of the property tax landscape in Georgia. In particular, they neither provide data on the variability in homestead exemptions across local jurisdictions nor data on how such exemptions may vary within a jurisdiction by individual characteristics, such as age, disability status, veteran status, and income.

The Georgia Property Tax Database provides these data for the state and for local jurisdictions for a 100-year period, from 1913 to 2013. In practice, the first state-level property tax exemption appeared in 1938, but we verified the absence of other such provisions as far back as 1913. Geographically, the database includes four types of jurisdictions: (i) all 159 counties; all school districts, which we subdivide into (ii) all 159 county-level school districts and (iii) the state's 26 independent school districts; and (iv) 87 select municipalities (with numbers varying slightly by year because of incorporations and mergers). A municipality was included in the database if it had an independent school district after 1990, was one of the 30 most populated cities in Georgia, or was one of the top 100 most populated cities and had no local homestead exemptions.<sup>5</sup> The database provides information on up to eight local property tax rules and eight state rules for each jurisdiction and year. In particular, it provides data, categorized and coded in the database, on the demographic group to whom the property tax provision is targeted (including — in any combination — age, income limits, disability status, veterans, widows of police or fire fighters, etc.), any limitations on the properties (e.g., under 10 acres), and the property tax exemptions or other concessions offered.

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<sup>3</sup> Lincoln's database, named Significant Features of the Property Tax and developed jointly with the George Washington Institute of Public Policy, can be found at [www.lincolnst.edu/subcenters/significant-features-property-tax/](http://www.lincolnst.edu/subcenters/significant-features-property-tax/).

<sup>4</sup> See Sjoquist and Winters (2008) for background on Georgia's property taxes.

<sup>5</sup> The laws for other cities have been gathered, but they have not been coded into the data. They are available from the authors upon request.

The concessions are organized around the following conceptual framework. If there were no exemptions or other concessions, the total ad valorem property tax for a household type  $i$  living in jurisdiction  $j$  would be

$$(1) T_{i,j} = (\tau_j^{MO} + \tau_j^B)\beta_j V.$$

In this expression,  $V$  is the fair market value and  $\beta_j$  is the assessment ratio in jurisdiction  $j$  (usually 0.4 in Georgia, but not always). The total tax rate is  $\tau$ , which can be divided into two rates: a tax rate for maintenance and operations,  $\tau^{MO}$ , and a tax rate for bonds,  $\tau^B$ .

Incorporating various exemptions and other concessions into Equation (1), the ad valorem tax for a household of demographic type  $i$  living in jurisdiction  $j$  becomes

$$(2) T_{i,j} = \theta_{i,j}^{MO} \tau_j^{MO} \left( \phi_{i,j}^{MO} \beta_j V - (\delta_{S,i,j}^{MO} + \delta_{L,i,j}^{MO}) \right) + \theta_{i,j}^B \tau_j^B \left( \phi_{i,j}^B \beta_j V - (\delta_{S,i,j}^B + \delta_{L,i,j}^B) \right),^6$$

with the restriction that  $T_{i,j} \geq 0$ . This expression uses the following notation:

$\theta_{i,j}^{MO}$  and  $\theta_{i,j}^B$  are the proportions (between zero and one) by which the maintenance and operations (M&O) and bond millage rates, respectively, are prorated (0 being a full exemption) for individual  $i$  in jurisdiction  $j$ ;

$\phi_{i,j}^{MO}$  and  $\phi_{i,j}^B$  are the respective proportionate adjustments to the assessment ratio;

$\delta_{S,i,j}^{MO}$  and  $\delta_{S,i,j}^B$  are the respective dollar amounts of the state exemption, which in some cases may differ by jurisdiction and individual; and

$\delta_{L,i,j}^{MO}$  and  $\delta_{L,i,j}^B$  are the respective dollar amounts of an applicable local exemption.

Using these definitions,  $\beta_j V$  is the assessed value and  $\phi_{i,j}^{MO} \beta_j V - (\delta_{S,i,j}^{MO} + \delta_{L,i,j}^{MO})$  is the net assessed value. By some definitions, only the  $\delta$  terms would be considered exemptions, but as a convenient shorthand we refer to the full range of concessions (including  $\theta$  and  $\phi$  as well as  $\delta$ ) as “exemptions.”

Merged with data on millage rates (available 1990-2013), these data allow one to simulate how much property tax an individual household of a given demographic category would pay in property taxes in a given jurisdiction, in a given year, on a property with a specified assessed value (assuming the household takes advantage of all exemptions available). For example, suppose in a particular county that  $\tau_j^B=0$ ; we would need only be concerned with taxes on M&O. Suppose a house has a fair market value of  $V=\$200,000$  and has an assessment ratio  $\beta_j=0.4$ . Suppose all households, regardless of demographic group, receive the state exemption of  $\delta_{S,i,j}^{MO}=\$2,000$ . Suppose also that households under age 65 can take an additional local exemption  $\delta_{L,i,j}^{MO}=\$10,000$  but households over age 65 can *instead take* a proportionate adjustment on their property taxes of  $\theta_{i,j}^{MO}=0.5$ . Finally, suppose that the millage rate is  $\tau_j^{MO}=20$  mills, or

<sup>6</sup> See appendix for information on the age-based home exemption estimate calculator based on this equation.

2 percent. Using Equation (2), a younger taxpayer would pay  $20 \times (0.4 \times \$200,000 - \$2,000 - \$10,000) / 1000 = \$1,360$ . In contrast, an older taxpayer would pay  $0.5 \times 20 \times (0.4 \times \$200,000 - \$2,000) / 1000 = \$780$ .

The Georgia Property Tax Database is housed at Georgia State University's Fiscal Research Center. For documentation and information about obtaining the data, see [frc.gsu.edu/data-collections](http://frc.gsu.edu/data-collections).

## Patterns in Age-Specific Exemptions

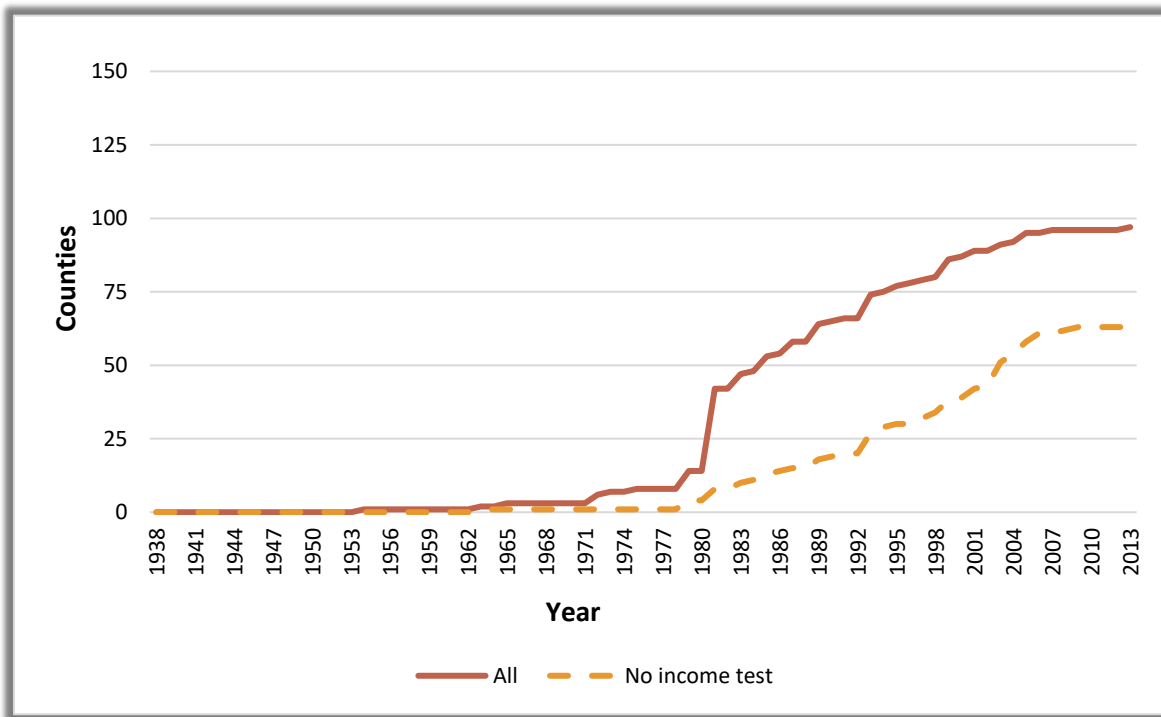
All different types of local jurisdictions in Georgia offer age-specific property tax exemptions. Table 1 shows snapshots, for each decade from 1970 to 2010, of the percentage of each jurisdiction type with some sort of age-specific property tax exemption, including the state's 159 county and county-level school districts, the 87 cities in our sample, and the state's 26 city-level school districts. Two patterns are clear in the data. First, school districts are more likely than counties or municipalities to offer age-targeted exemptions. For example, in 2010, 54.7 percent of county school districts offered such exemptions, compared to 41.5 percent of counties, and 61.5 percent of city school districts did so, compared to 36.9 percent of cities.

**Table 1. Percent of Jurisdictions with Age-Specific Property Exemptions, by Jurisdiction Type and Year**

JURISDICTION TYPE	1970	1980	1990	2000	2010
Counties	0	3.1	19.5	35.9	41.5
County School Districts	0.6	6.3	33.3	46.5	54.7
Cities	3.6	15.7	19.6	31.3	36.9
City School Districts	3.9	19.2	37	53.9	61.5

The second pattern emerging from Table 1 is that over time all jurisdiction types have become increasingly more likely to offer age-targeted exemptions. They were quite rare in 1970 and, despite rapidly increasing over the next two decades, still roughly doubled from 1990 to 2010. To better understand these trends over time, Figure 1 plots the number of counties (taken as a geographic not a political unit) in which some local jurisdiction (either the county itself or its school district or a major city within the county) has an age-targeted exemption.

**Figure 1. Counties with Some Local Jurisdiction Having Some Age-Specific Property Exemption, by Year**



The solid line shows all such exemptions, including those with income limits. The line shows a first small bump up in 1954 when Waycross School District offered the first tax exemption, then a more substantial increase in the early- to mid-1970s as a number of jurisdictions in the Atlanta area began offering such exemptions, including Cobb County School District, Atlanta and the Atlanta Public Schools, Fulton County and Fulton County Schools, Decatur, and DeKalb County Schools. The line then rapidly increases in the early 1980s as a number of counties throughout the state joined in, and it continues to increase steadily for the remaining period. The dashed line shows only those exemptions with no income limits. This line displays a slower but still steady increase, as some jurisdictions with no age-targeted exemptions create new ones with no income limits and some who “entered” the graph earlier in the solid line with income limits later eliminate those limits.

Figure 2 plots the percentage of the state’s population living in a jurisdiction with an age-targeted exemption, again differentiating between exemptions with and without income limits. The figure only plots data for the 1970-2013 period, the only years for which we could obtain reliable local-level population data. The overall pattern is similar to Figure 1, with rapid increases in the mid-1970s and early 1980s in the population covered by some kind of age-targeted exemption, but with the increase slower and steadier if we limit exemptions to those with no income limit.

**Figure 2. Percent of Georgia's Population Living in a Jurisdiction with Some Age-Specific Property Exemption, by Year**

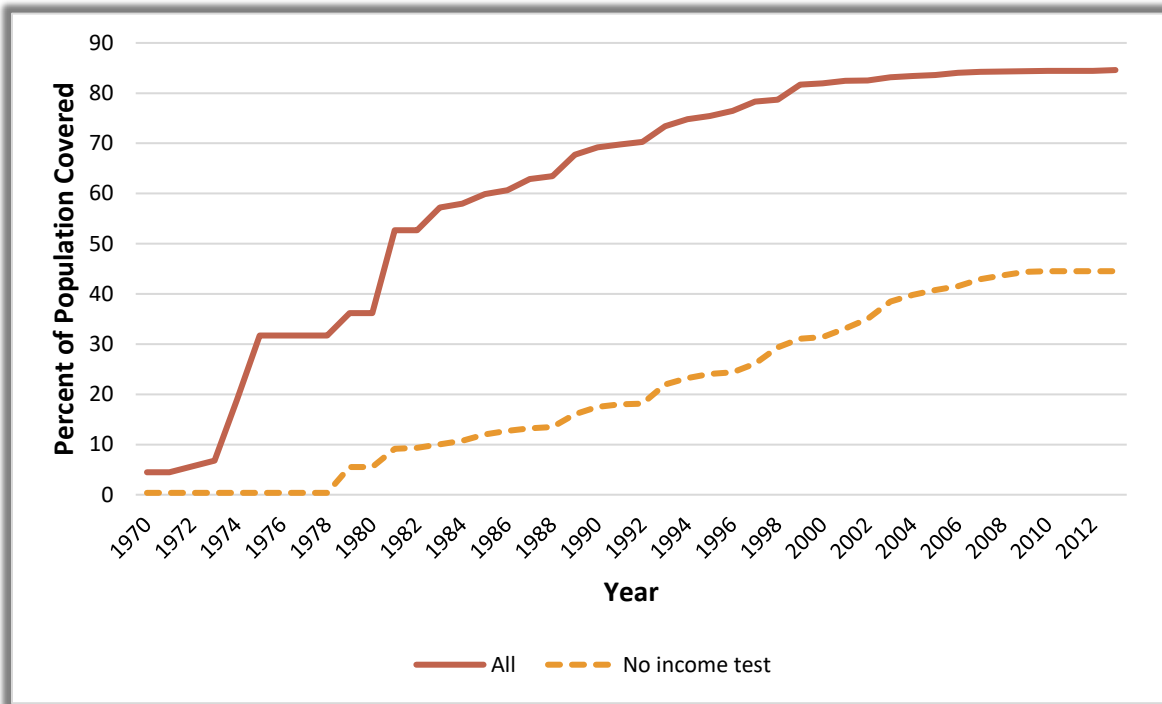
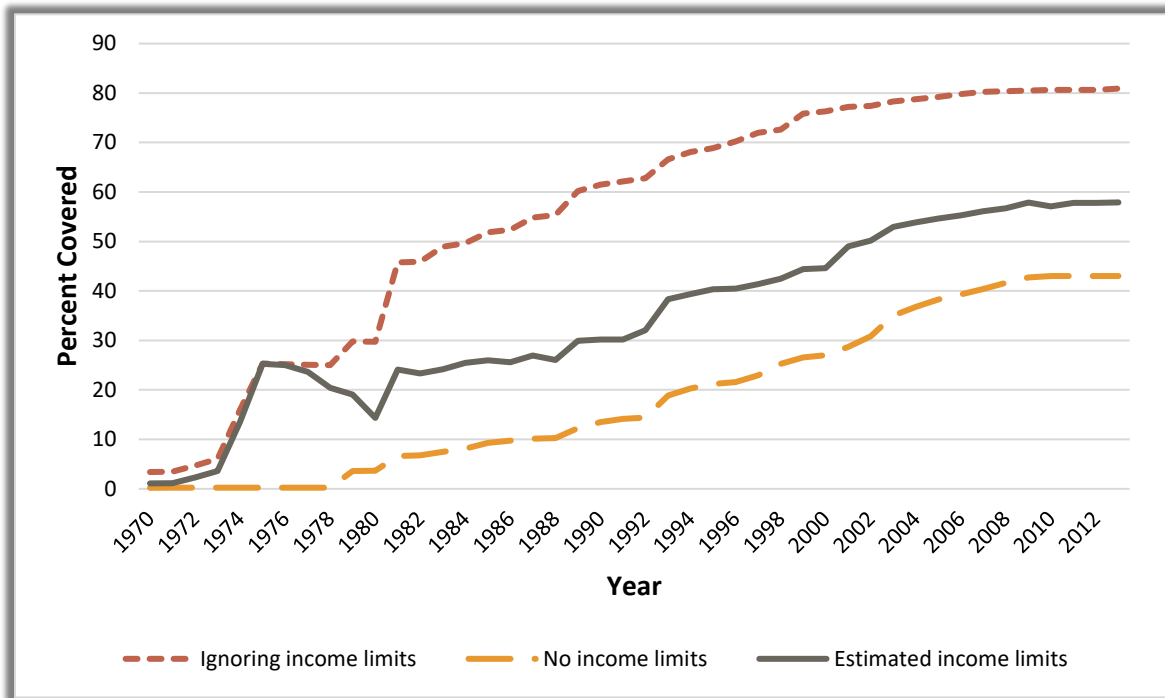


Figure 3 similarly shows the percentage of older (age 65 or over) homeowners who qualify for an age-targeted property tax exemption, by year. Whereas the previous figures focus on the prevalence of such tax laws, Figure 3 is based on a combination of the laws themselves plus the spatial pattern of where older homeowners live. If more older homeowners move to (or refrain from leaving) jurisdictions with age-targeted tax exemptions, it would not affect the patterns seen in Figure 2 but would increase the levels shown in Figure 3.

**Figure 3. Percent of Older Homeowners Who Qualify for an Age-Targeted Tax Exemption, by Year**



The line at the top with short dashes shows the levels if we ignore income limits (as if all older households met the income test). The line at the bottom with long dashes shows the levels if we restrict the laws to those without income limits (effectively assuming no older households meet any income tests where they exist). The two lines roughly follow the pattern of the respective lines in Figure 2. The difference between the two lines highlights the importance of understanding the income limitations — the kind of detailed data provided in the Georgia Property Tax Database.

The truth lies somewhere between these two extreme assumptions. The solid line in the middle of Figure 3 shows our best estimate of the percentage of older homeowners who qualify given the income limits in their jurisdiction. It is based on the actual number of homeowners age 65 and over in each jurisdiction, in each year, with the assumption that their income distribution matches the statewide distribution of income among homeowners 65 and over.<sup>7</sup> The solid line shows a rapid increase in the percentage of older homeowners who qualify in the early- to mid-1970s and then, interestingly, a marked fall during the late 1970s, as inflation eroded away unindexed nominal income limitations.<sup>8</sup> After a catch-up period in the early 1980s, the general trend is increasing and once again falls between the two other lines.

<sup>7</sup> Unfortunately, data are not available at the county level on income by age and tenure.

<sup>8</sup> For example, an annual income limit set in 1970 at \$2,500 annually would have allowed most older households to claim the exemption. By 1980, inflation meant that those nominal dollars did not go as far as they used to, and most older households by then had higher incomes. If the limit was still stuck at \$2,500 (unindexed for inflation), fewer households would fall under that limit.

## Effect of Age-Targeted Property Tax Exemptions on Tax Revenues

In this section, we show how the Georgia Property Tax Database can be combined with information from the tax digest to estimate the first-order effects of age-targeted property tax exemptions on local budgets. As an illustration, we show the impact on Cobb County School District, which as mentioned previously has one of the most generous exemptions in the state.

The consolidation sheet for the Cobb County School District indicates that there were 39,100 residential properties that fell under local tax code L3 in 2010, with an aggregate assessed value of \$3,308,522,667.<sup>9</sup> According to the Georgia Property Tax Database, in Cobb County L3 implies a 100 percent exemption from school taxes for citizens age 62 or over. Using the syntax of Equation (2), for code L3,  $\theta_{i,j}^{MO} = \theta_{i,j}^B = 0$  for  $i = \text{Age} \geq 62$  and  $j = \text{Cobb County School District}$ . Thus, the entire \$3,308,522,667 is lost from the tax base. Also according to the Georgia Property Tax Database, all other households get a standard exemption of \$10,000 from their assessed value for their taxes to the Cobb County School District. In the absence of the 100 percent exemption, residents age 62 and over would get the \$10,000 exemption. Thus, to determine how Cobb's age-based exemption affects tax revenue, we must account for the \$10,000 exemption each household would receive in lieu of the 100 percent exemption. To do so, we multiply the 39,100 properties by \$10,000 to get the aggregate value lost from the tax base absent the age-targeted exemptions, which is \$391,000,000.<sup>10</sup> Subtracting the two, \$2,917,522,667 is lost from the tax base as a result of the age-targeted exemptions. Applying Cobb County School District's 2010 millage rate of 18.9 to this figure, we find that the annual lost tax revenue is \$55,141,178.

To put this \$55 million figure in perspective, if the age-targeted tax exemption was removed, if the population and housing values did not respond to such a policy change, and if all other revenues remained the same, Cobb County School District's annual revenue would increase 6.6 percent. Alternatively, if the budget were to remain constant and the age-targeted exemptions were redistributed among homeowners using a revenue-neutral tax cut, the average tax bill of a household in the Cobb County School District would decline by \$290 per year.

One question is whether older households who are eligible for these tax breaks do in fact take them. Our analysis suggests that they do. Based on the 2010 U.S. Census, we estimate that there are 40,800

<sup>9</sup> Dividing the aggregate assessed value of \$3,308,522,667 by 39,100 properties gives a per-property average assessed value of \$84,617. Dividing by the assessment ratio of 0.4 gives an average fair market value of \$211,542. This figure is quite close to that of the 2010 U.S. American Community Survey for Cobb County of \$222,467, which is based on self-reported assessments rather than tax assessors' assessments.

<sup>10</sup> This calculation assumes that each owner-occupied (not real estate owned) home in Cobb County has a fair market value of at least \$25,000 (or \$10,000 divided by the 0.4 assessment ratio). This is a reasonable assumption for this county.

homeowners aged 62 or higher in the Cobb County School District.<sup>11</sup> By this estimate, 96 percent of eligible households get their exemption. However, we acknowledge some uncertainty in this number and would consider 90-100 percent to be a reasonable range for this figure. If these other households claimed the exemption, and if their assessed values are similar to those who do claim it, then the above costs would increase by up to 10 percent, with a best estimate of 4 percent.

## Analyzing Migration

In this section, we use the Georgia Property Tax Database to analyze the effect of age-targeted property tax exemptions on the demographic composition of local jurisdictions. Intuitively, tax incentives targeted at older homeowners might attract such residents more than other residents. In previous work, Conway and Rork (2012) found that state-level income tax breaks targeted to older residents had little effect on the interstate migration of older households. Similarly, Conway and Rork (2006) found little effect of state taxes on estates, inheritances, and gifts. On the other hand, Shan (2010) found that higher property taxes do increase the housing mobility of older households, causing them to downsize or move to lower-tax communities, with state-provided property tax relief programs diminishing that mobility. Whether similar policies at the local level would specifically attract older households is an open question.

To research this question, we exploit, statistically, a special feature of the age-targeted tax exemptions: They should affect (at least directly) only the targeted age group and only homeowners. We use what is known as a “quadruple-difference” research design. Over a given time period, we look at the changes in a county’s population when the county modifies its tax policy relative to other “control” counties that do not change their policies over the same time period. This is known as a difference-in-difference strategy. We then look at how those difference-in-differences differ by older versus younger households (for a triple-difference) and how those triple-differences differ by older owners versus older renters. This strategy has the advantage of relying on very weak statistical assumptions — much weaker than most ordinary linear regressions. Most statistical analyses are vulnerable to the possibility that there are unobserved factors correlated with the treatment (here, age-targeted tax policies): the old problem of confounding correlation and causation. In contrast, our strategy allows for the possibility that there are unobserved factors correlated with age-targeted tax policies and that those factors affect populations generally, or even particular age groups differently, or even owners differently — so long as those factors do not affect older owners differently than either older renters or younger owners in a way that is correlated with the timing of changes in exemptions within specific counties.

To estimate such a model, we construct a treatment variable that begins simply by assigning each jurisdiction-year a 0 if it did not have an age-targeted tax exemption and a 1 if it has an age-targeted

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<sup>11</sup> The Census reports 32,161 householders age 65 or higher in Cobb County. It reports 19,332 people age 62-64 and 59,972 people age 65 or higher. Thus, 32 percent of the people in Cobb County age 62 or higher are actually 62-64. Adjusting the figure for homeowners age 65 or higher by this ratio gives 42,500 homeowners age 62 or higher. Additionally, 3.9 percent of homeowners age 65 or higher in Cobb County actually reside in the city of Marietta, which has its own independent school district. Adjusting our figure by this proportion gives us our estimate of 40,800 in the school district.

exemption with no income limit. If it has an age-targeted tax exemption with an income limit, we assign the treatment variable a value between 0 and 1 based on the proportion of the population above age 65 who we estimate meet the limit. We then weight the unincorporated portions of the county, cities, and independent school districts by their populations in any given year to construct a county-wide average. Thus, for example, if a county does not have an age-targeted tax exemption but a city with 25 percent of the county's population has one with no income limit, our treatment variable would be coded as 0.25. If, instead, the city had an income limit on its exemption and 80 percent of the older population qualifies, then we would adjust the treatment variable by 0.8, for  $0.8 * 0.25 = 0.20$ . This approach does not account for how generous different jurisdictions' exemptions are, but it has the advantage of calculating the average effect of the exemption with the average level of generosity. Finally, we determine the average treatment over each year of a decade and look at the effect on demographics using each decennial census from 1970 to 2010.<sup>12</sup> The outcome variable is logged population, by age group (above or below age 65) and by housing tenure (owner or renter).

The results are shown in Table 2. The table presents four model specifications. Model I includes only the variables needed to identify the quadruple differences described above. Model II adds as controls county fixed effects (to capture the general features of a county over time) and year effects (to capture the general features of the state in any year). Model III adds controls for the potentially heterogeneous effects of a law on a particular county (independent of the demographic group) and likewise in a particular decade. Finally, Model IV, the most general, also controls for county-level demographic trends. The first row shows the estimated quadruple-difference effect. We find an estimated effect of 56.3 percent, which is very precisely estimated statistically and very robust to different specifications. Thus, if a county adopted an age-targeted tax exemption for which the full population age 65 and over qualifies, after a 10-year period we would expect the population of older homeowners to increase 56.3 percent, relative to the effect on other demographic groups. Equivalently, if a county had such an exemption and eliminated it, its population of older homeowners would be 36.1 percent lower, relative to other demographic groups. Note that these models do *not* predict that the population of 65+ homeowners would increase by 56.3 percent, but rather that they would increase 56.3 percent more than the population of homeowners under age 65.

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<sup>12</sup> For 2010, we use the 2008-12 American Community Survey.

**Table 2. Treatment Effects of Law on Older Homeowners Relative to Other Demographic groups**

	MODEL I	MODEL II	MODEL III	MODEL IV
Treatment Effect: Law X Older X Owner	56.3%***	56.3%***	56.3%***	56.3%***
Law	✓	✓	✓	✓
Law X Older	✓	✓	✓	✓
Law X Owner	✓	✓	✓	✓
Older Dummy	✓	✓	✓	✓
Owner Dummy	✓	✓	✓	✓
Older X Owner	✓	✓	✓	✓
Year Effects		✓	✓	✓
County Fixed Effects		✓	✓	✓
Law X Year			✓	✓
Law X County			✓	✓
County X Older				✓
Year X Older				✓
County X Owner				✓
Year X Owner				✓
R2	0.51	0.94	0.95	0.98
N	3,180	3,180	3,180	3,180

\*\*\*Significant at the 1 percent level

Such effects are part of the long-run dynamic effect of age-targeted tax exemptions. Our analysis suggests there are 6,641 more older homeowners in Cobb County relative to other demographic groups as a result of the age-targeted exemption. If these homes were occupied by other demographic groups paying taxes and if their assessed value remained similar to the average value of homes occupied by older households, the county schools' tax revenue would be about \$9.4 million higher.

These values are already embedded in the static scoring in the previous section, where we estimated an overall effect of \$55 million. Under the counterfactual scenario in which Cobb County (or any other county) removes its age-targeted tax exemption, all households would pay the same tax (for houses with the same fair market value), so the demographic composition would not matter. In the actual scenario, the number of households in Cobb County meeting the age-targeted exemption have already adjusted to the policy. However, this analysis does suggest that about 17 percent of the total effect is due to long-run demographic adjustments. Further analysis could similarly look at the effect on housing values.

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## Conclusion

As we have documented in this report, age-targeted property tax exemptions have become increasingly common throughout the state of Georgia in all types of jurisdictions, but particularly among school districts. These exemptions can have a substantial effect on tax revenues. For example, Cobb County School District's generous tax exemption amounts to 6.6 percent of the district's annual budget, equivalent to an annual subsidy of \$290 from each younger homeowner in the county. Moreover, these exemptions can have a substantial effect on the demographic composition of an area. We find that without an age-targeted tax exemption, the number of older homeowners in a county would be 36 percent lower in the long run, relative to younger homeowners and/or older renters.

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## Appendix: Age-Based Homestead Exemption Estimate Calculator

To accompany this report, the authors<sup>13</sup> created a revenue assessment calculator for Georgia counties and school districts interested in estimating how new or expanded age-based homestead exemptions will affect property tax revenue. This tool, based on Equation 2 on page 3, helps counties and school districts understand the fiscal effects that such exemptions could have on their governments.

The calculator can be accessed at:

[cslf.gsu.edu/files/2018/06/Age-Based-Homestead-Exemption-Estimate-Calculator\\_20180601.xlsx](https://cslf.gsu.edu/files/2018/06/Age-Based-Homestead-Exemption-Estimate-Calculator_20180601.xlsx)

### HOW TO USE THE CALCULATOR

The interested county or school district enters unique variables specific to its jurisdiction and proposed homestead exemption in columns N, O, P, and Q as described below. An example calculation is included in the tool to assist the user.

- **Column K:** The Millage Rate is set by the local jurisdiction. Millage rates for all local governments in Georgia can be found on the Georgia Department of Revenue’s Property Tax Millage Rates website. All estimates require a specified homestead exemption.
- **Column L:** The Homestead Exemption Level is represented by delta ( $\delta$ ) in the homestead exemption calculation explained on page 3. This is the specific dollar amount of the proposed exemption. If the proposed homestead exemption is not in the form of a level, then leave this column blank.
- **Column M:** The Homestead Exemption Ratio of Assessed Value is represented by phi ( $\Phi$ ) in the homestead calculation. This form of homestead exemption is a proportional adjustment to the assessment ratio. If the proposed homestead exemption is not in the form of a ratio of the homestead’s assessed value, then leave this column blank.
- **Column N:** The Homestead Exemption Ratio of Tax Bill is represented by theta ( $\theta$ ) in the homestead calculation. This ratio, which ranges from 0 to 1, is the proportion by which the maintenance and operations (M&O) and bond millage rates are prorated (“0” is a full exemption for an individual homesteader). If the proposed homestead exemption is not in the form of a ratio of the homesteader’s tax bill, then enter “1” in this column.

### LIMITATIONS

This calculator is a composite of data collected from the following public sources:

- U.S. Census Bureau, American Community Survey (ACS), Tables B25007 and B25079, 2015 5-Year Survey<sup>14</sup>

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<sup>13</sup> Spencer Banzhaf and Per Johnson

<sup>14</sup> U.S. Census Bureau. 2018. American Fact Finder web interface.

- Georgia Department of Revenue, 2015 Tax Digest<sup>15</sup>

Where data for specific counties or school districts were unavailable to complete the aggregate value columns from the ACS 2015 5-Year Survey (e.g., Columns H, I, and J), the ACS 2016, 2014, 2013, 2012, and 2011 5-Year Surveys were reviewed to compile data to the greatest extent practical. Data that may have been available prior to 2011 were not considered. As a result, some data from different years may be used for some calculations; in a few situations, no available data could be found (“Unknown”). If data were not available from the ACS 2015 5-Year Survey, it is noted in the spreadsheet with color coding. The 2015 Tax Digest for Georgia was the most current and complete tax digest available from the Georgia Department of Revenue at the time of development. Local governments or school districts are free to enter more current and accurate data into the Underlying Fiscal Data columns if available.

Using the available data, this tool makes the following calculations:

- The Percent of Owner-Occupied Households (column E) is our attempt to estimate the number of parcels that would qualify as homesteads. This percentage reflects the share of Owner-Occupied Households (column D) to Total Households (column C) within the ACS 2015 5-Year Survey. This percentage is then applied to the Total Residential Assessed Value (Column F), provided from the 2015 Tax Digest, to estimate the share of total residential assessed value that would be subject to a homestead exemption.
- The Percent of Senior Owner-Occupied Household Aggregate Value (column J) is a ratio of Aggregate Value of Owner-Occupied Households for those 65 years and older (column I) to the total Aggregate Value of Owner-Occupied Households (column H), as provided from the ACS 2015 5-Year Survey. As noted above, the ACS 2015 5-Year Survey did not include data for all counties or school districts. Therefore, the ACS 5-Year Survey for 2011-16 were also reviewed to develop this percentage.

The Estimated Revenue Impact (columns O and P) reflect Equation 2 on page 3. The “Low Estimate” (column O) attempts to adjust the Total Residential Assessed Value (column F) with the Percent of Owner-Occupied Households to Total Households (column E). The “High Estimate” (column P), however, does not apply this estimated percentage (column E) to the Total Residential Assessed Value (column F) in the event that it underestimates the number of parcels that would be considered homesteads.

Finally, this calculator does not account for preexisting general or age-based homestead exemptions that may be present within each local jurisdiction and which may therefore further reduce the net estimated revenue effect.

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<sup>15</sup> Carl Vinson Institute of Government, University of Georgia. 2018. Department of Revenue Tax Digest Data. GeorgiaDATA website.

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## About the Authors

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**Spencer Banzhaf** is a professor of economics at Georgia State University's Andrew Young School of Policy Studies. He also is a research associate at the National Bureau of Economic Research and a senior fellow at the Property and Environment Research Center. His research focuses on environmental policy analysis, especially related to the urban environment and the interactions among local environmental amenities, local real estate markets, and the demographic composition of cities. He received his doctorate from Duke University.

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