Neighborhood Hope Scholarships:

Returning Economic Vitality to Low-Income Communities

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EXECUTIVE SUMMARY

The purpose of this report is to explore how Georgia can use geographically-targeted "Neighborhood Hope Scholarships" to reduce concentrated poverty, create jobs, and promote economic vitality in low-income communities.

THE PROBLEM

Most students are assigned to public schools based on where they live. As a consequence, financially-secure families tend to cluster in areas with good public schools. Poor families are concentrated in areas with weaker schools. This geographic sorting actually reinforces differences in the quality of public schools across neighborhoods. Areas with weaker schools also suffer from joblessness, low incomes, low economic activity, low housing values, high crime rates, a prevalence of food deserts and other negative neighborhood characteristics. In the long run, children who grow up in concentrated poverty suffer worse life outcomes than children who grow up in financially-secure neighborhoods.

A HOUSING MODEL TO LEARN FROM

Policy makers have long recognized the link between school quality and neighborhood quality. In fact, they have enacted changes in housing policy specifically to reduce the negative impacts on children growing up in concentrated poverty. For example, in the Gautreaux Housing Program, the Chicago Housing Authority distributed housing vouchers to African Americans living in public housing. Families were randomly assigned to either move to suburban neighborhoods with better public schools or remain in urban neighborhoods. Ultimately, families assigned to less impoverished neighborhoods experienced better life outcomes, and the program became a national housing model.

UNIVERSAL SCHOOL CHOICE IN LOW-INCOME AREAS, AN ANSWER

But considering that millions of children in the US live in low-income communities, the Chicago model falls short of offering relief for even a large fraction of families living in concentrated poverty. While housing policy can move *some* poor families into wealthy neighborhoods, this policy is prohibitively expensive to use universally. In contrast, enticing financially-secure families to remain in low-income neighborhoods is significantly less expensive.

How? By offering educational choice using "Neighborhood Hope Scholarships" available to all families living in low-income communities. With this option, families would be less likely to leave the community once they have children. Businesses seeking to sell goods and services to the revitalizing community would follow - bringing private investment dollars and creating jobs for local residents. Positive neighborhood-effects of school choice programs are now well-documented in academic studies, but until now, no school choice program has been designed specifically to promote economic development and to reduce poverty rates in low-income communities.

It is also worth noting that academic studies show that Neighborhood Hope Scholarships will produce benefits beyond job creation and classroom improvement - including increased social cohesion, reduced neighborhood disorder, and reduction in crime. The core idea behind Neighborhood Hope Scholarships is a simple one; target distressed communities with the broadest and most flexible school choice tool available, and the result will be improved communities, improved education outcomes, and of course, improved lives.

STRUCTURING THE PROGRAM

Geographically-targeted, but not income-based:

When structuring a Neighborhood Hope Scholarship program, it is critical to note that financially secure families will only be retained in low-income areas **if and only if they are included in the program.** Many school choice programs have been designed to include only low-income families. These programs help working-class families access better schools, but this is only one piece of the puzzle. School choice programs will not change the fate of a neighborhood unless they support economic vitality in the neighborhood. However, it is the presence of financially-secure families that kick-starts economic improvements. If financially secure families are excluded from school choice programs, they will continue to flee neighborhoods with bad school assignments. **School choice programs that provide benefits only to poor people will perpetuate the geographic concentration of poor people.** For this reason, we suggest a geographically-based policy rather than one determined by individual family income level.

Ways to define "Low-Income Communities:"

While Neighborhood Hope Scholarships should be targeting low-income neighborhoods, there are several alternatives that policymakers could consider for identifying which neighborhoods qualify. This report recommends and analyzes a potential Georgia program based on the Federal "Low-Income Community" (LIC) definition that is used for designating "Opportunity Zones." Opportunity Zones were created as part of the Tax Cuts and Jobs Act of 2017. These LICs are also used for implementing the federal Community Reinvestment Act, and the New Markets Tax Credit program. Generally speaking, our recommendation is to include each and every

census tract that the federal government has identified as a "Low Income Community" as a Neighborhood Hope Scholarship Zone.

A ROLE FOR GOOD HOUSING POLICY

One concern that the proposed policy will spark can be summarized by the question: "Won't poor families be priced out of their own neighborhoods?" This question is legitimate, and it should actually be welcomed since it stems from the questioner's acknowledgement that the policy will have a strong economic impact on low-income neighborhoods. In fact, there is a straightforward response to this question.

First, we need to distinguish between good *education policy* and good *housing policy*. Good education policy cannot seek to keep high-quality educational options out of poor neighborhoods just to keep rents low. *Education policy* should strive to give every neighborhood the best educational options possible. However, to the extent that increasing economic vitality raises rents for low-income residents, cities will need to turn to *housing policy* solutions to ensure equity in transforming neighborhoods. Fortunately, research suggests that increased economic vitality produces relatively little additional outmigration from most "gentrifying" neighborhoods. However, in neighborhoods where displacement is most likely to occur, The Department of Housing and Urban Development (HUD) has multiple programs designed to address the impact of gentrification on low-income families. Moreover, once Neighborhood Hope Scholarship Zones have been established, housing policy specialists will know exactly where economic improvement and job creation is going to occur, and they can plan accordingly.

CONCLUSION

Neighborhood Hope Scholarship Zones have the potential to transform high-poverty neighborhoods in ways that previous school choice programs have only hinted at. Once implemented, Neighborhood Hope Scholarships will not only improve education alternatives for children in low-income areas, but they will also improve the entire neighborhood ecosystem and quality of life for residents. Neighborhood Hope Scholarships will bring more abundant and higher-paying jobs to low-income families, reduce economic and racial segregation, increase social mobility, reduce crime rates, reduce commuting time and distances for parents, reduce required commuting infrastructure (and commuting-related air pollution, including and CO2 emissions), and improve public health.

In short, the sooner Neighborhood Hope Scholarships are on the ground, the sooner hope will return to Georgia's low-income communities.

Table of Contents

I.	Introduction	5
II.	Methods for Designating Economic	
	Development Zones	11
III.	Recommended ED Zone Methodology	14
IV.	Avoiding the Problems of Gentrification	15
V.	Methodologies Used in this Analysis	19
VI.	Atlanta Region CBSA	21
VII.	Other Georgia CBSAs	28
VIII.	Appendix: Projected Increases in Private School	
	Enrollement	43

INTRODUCTION

The purpose of this report is to explore how Georgia can use geographically-targeted Neighborhood Hope Scholarships to reduce concentrated poverty, create jobs, and promote economic vitality in designated Economic Development Zones (ED Zones). Before we examine the details of how this program could be structured, this report will first present the nature of the problem at hand.

THE PROBLEM

In Georgia, students are typically assigned to a public school based on where they live. Over time, using residence as a primary factor in school assignment has caused families to consider expected assignments when selecting a home. In short, school assignments based on where students live eventually change where students live, leading to geographic sorting (or "voting with your feet"). This phenomenon causes school quality, family income, economic activity, housing values, and local crime rates to be jointly determined.

Since economically secure families often leave areas with bad schools, these areas tend to suffer from low incomes, low economic activity, low housing values, high crime rates, and a prevalence of food deserts. Children who grow up in concentrated poverty are directly impacted by these problems, but they also experience long-term consequences - lower IQs, adult joblessness, lower earning potential in future careers, long-term health effects, and the list goes on and on.

Many people observe these problems and incorrectly attribute the plight of poor schools in low-income neighborhoods to bad school district leadership, but if leadership was the issue, some high-poverty districts would have already solved it. Further, it is not reasonable to believe all low-income districts have poor leadership. Instead, this systemic condition is the result of school assignments being based on where families live.

HOUSING POLICY MODELS

Recognizing the link between school quality and neighborhood quality, it is easy to find places where housing authorities' interest in education has influenced policy. The Gautreaux Housing Program is a good example of this influence. As part of a racial discrimination lawsuit settlement, the Chicago Housing Authority distributed Section 8 housing vouchers to African Americans in Chicago public housing. Some families were randomly assigned to suburban neighborhoods while others remained in poor urban neighborhoods. Ultimately, families assigned to the suburbs of Chicago experienced significantly better life outcomes. The program's success helped launch a national model referred to as the "Moving to Opportunity" (MTO) experimental program that used housing vouchers to relocate children out of poor areas and into wealthier ones.

Research on MTO also confirms life-long positive effects on children and families in the program.¹

Recently, the US Department of Housing and Urban Development (HUD) issued a new regulation designed in a similar way, moving low-income urban children and families into suburban areas with higher concentrations of wealthier neighbors. However, even the architects of this program admit that full implementation of this new regulation seems both economically and socially challenging. There are 18 million children living in census tracts where the poverty rate is greater than 20%. Moving and housing these children and families in wealthier areas would take an enormous investment. Moreover, history suggests that wealthy neighborhoods will use strategies such as zoning to try to block such efforts.²

But both the Gautreaux Housing Program and the MTO program promoted and tested a key policy idea. Although it is costly to relocate poor families into high-income areas, poor families have better life outcomes when they live in economically integrated communities.

A BETTER ANSWER - NEIGHBORHOOD HOPE SCHOLARSHIPS

While federal housing policy seeks to move poor families into wealthy neighborhoods, a properly structured neighborhood-based scholarship program would retain wealthier families in poorer neighborhoods and accomplish the same goal, economically integrated communities. By addressing a core community need with a full array of school-choice options, policymakers would: 1) positively impact children who receive these scholarships and 2) benefit all residents in the low-income community by promoting economic development in the neighborhood.³

This policy would accomplish the same goal and benefit all community members, but at a much lower cost than relocating poor people into high-income neighborhoods. Moving poor families into wealthy neighborhoods is costly, and the cost falls entirely on taxpayers. Publicly-funded scholarships that are funded at a level that is equivalent to the funding level for a public school child will be fiscally neutral. Scholarships funded

¹ Chetty, Raj, Nathaniel Hendren, and Lawrence F. Katz. "The effects of exposure to better neighborhoods on children: New evidence from the Moving to Opportunity experiment." *The American Economic Review* 106.4 (2016): 855-902.

² Elahe Izadi, "George Lucas wants to build affordable housing on his land because 'we've got enough millionaires'," The Washington Post, April 17, 2015.

https://www.washingtonpost.com/news/morning-mix/wp/2015/04/17/george-lucas-wants-to-build-affordable-housing-on-his-land-because-weve-got-enough-millionaires/?utm_term=.fda02b79985d

³ It is established that residents of low-income communities face a "spatial mismatch" in employment opportunities in the sense that low-skill jobs tend to be most available in communities where higher income families are located simply because that is where most customer dollars are located. (Ihlanfeldt, K., & Sjoquist, D. (1990). Job Accessibility and Racial Differences in Youth Employment Rates. The American Economic Review, 80(1), 267-276. Retrieved from www.jstor.org/stable/2006748)

at less than the cost of sending a child to public schools will actually save taxpayers money.

Families who use these scholarships will financially benefit too, because rents and home prices are lower in low-income areas. Families who remain in (or move to) a low-income neighborhood will save money on housing.

As for community benefits that will arise when scholarships are offered in low-income communities, both theoretical and empirical evidence demonstrates that educational choice programs increase economic activity, as measured by property values. The results are quite generalizable, having been found in studies that cover urban⁴, suburban⁵ and rural areas⁶. Likewise, research shows that private school choice programs can have other community benefits beyond economic activity - including social cohesion, reduced perceived neighborhood disorder, and reduction in crime⁷. However, no school choice programs in the US to date have been specifically designed to alleviate concentrated poverty and boost economic activity.

Even though no program has been specifically designed this way, the idea that school choice can be used to create jobs and improve neighborhoods is gaining traction across the US. In 2017, the American Enterprise Institute published a policy piece titled "CPR Scholarships, Using Private School Choice to Attack Concentrated Poverty, Crime and Unemployment." The author proposed developing a private school choice program designed to improve low-income communities. The acronym "CPR" was shorthand for "Community Protection, and Revitalization," but the paper explicitly considers the use of Education Savings Accounts (ESAs) as an economic development driver. Neighborhood Hope Scholarships could be structured as ESAs.

But no matter the name, the core idea behind Neighborhood Hope Scholarships is a simple one; target distressed communities with the broadest and most flexible school choice tool available (ESAs), so that economically secure families are willing to live near poor people, thereby reducing concentrated poverty.

KEY PROGRAM ELEMENTS

In the next section of this report, we will discuss various methods that can be used to define "Economic Development Zones." However, regardless of how these zones are designated, it is critical that the program be designed in a manner that will ensure its success.

⁴ Fack, G. and J. Grenet. When Do Better Schools Raise Housing Prices? Evidence from Paris Public and Private Schools. *Journal of Public Economics*, 2010, 94:1-2, 59-77.

Merrifield, J.D., K. King-Adzima, T. Nesbit, and H. Gunasekara. The Property Value Effects of Universal Tuition Vouchers. *Journal of Housing Research*, 2011, 20:2, 225-38.

⁶ Cannon, S.E., B.R. Danielsen, and D.M. Harrison. School Vouchers and Home Prices: Premiums in School Districts Lacking Public Schools. *Journal of Housing Research*, 2015, 24:1, 1-20.

⁷ Margaret R. Brinig and Nicloe Stelle Garnett, *Lost Classroom, Lost Community,* (Chicago: The University of Chicago Press, 2014).pp. 57-89.

Families should not be "means-tested" for eligibility.

An important shortcoming of many educational choice programs arises when the program is "means tested." Means testing targets a program only toward low-income families. This might seem reasonable at first blush, but it is important to keep in mind the goal of this program is to create economically blended neighborhoods. Economically secure families will not be retained in (or attracted to) a low-income neighborhood by a program that they are not allowed to participate in. Therefore, a program that only includes poor families will lack key economic development qualities while keeping low-income families isolated in struggling neighborhoods.

Before restricting any group from participation in a school-choice program, policymakers should first ask, "Who do we want to repel from poor neighborhoods? Doctors? Executives? Business owners?" If the goal is economically blended communities, places of concentrated poverty need these economically-secure people as residents. When more affluent people remain in a community, service sector jobs are created in the same community. Service sector jobs tend to be lacking in distressed communities precisely because more affluent customers are not resident in the neighborhood. Therefore, policymakers need to allow these less obvious candidates to participate in school choice programs.⁸

Milwaukee's Parental Choice (voucher) Program is a means-tested program that should serve as a cautionary tale. While this program has funded tens-of-thousands of private school students in the city, the middle class still leaves the city when their children reach school age because the program excludes them.⁹

Prior-attendance requirements

Many school choice programs have provisions that require applicants to be enrolled in a public school at the time they apply for the choice program. Priorattendance requirements are designed to keep families out of the program if they are already attending a private school.

But consider the dilemma faced by a family considering a move to a job on the southside of Atlanta. If the children in the family previously attended a private school, they would not be willing to move into South Atlanta because their choices would look like this: 1) live in a less desirable neighborhood while attending private school and

This is true even for lower-end service businesses like fast-food restaurants. There are very few McDonalds in the city of Atlanta south of I-20, and two Chick-fil-a restaurants, despite the chain's prominence throughout the overall metro area.

⁹ See Figure 3, page 6 of Danielsen, Bartley R. "CPR Scholarships: Using Private School Choice to Attack Concentrated Poverty, Crime, and Unemployment." *American Enterprise Institute* (2017). http://www.aei.org/wp-content/uploads/2017/03/CPR-Scholarships.pdf

forfeiting their right to an ESA for future years, or 2) enroll in a south-Atlanta public schools which will look very unattractive to a private school family, or 3) move to the suburbs instead. Notice that the prior-attendance policy undermines the policy objective to bring this family into a south-Atlanta neighborhood. When assigned public schools are driving families out of neighborhoods, choice programs with prior-attendance requirements won't be very useful in solving these neighborhoods' problems.

Lottery enrollments

Another shortcoming of some parental-choice programs arises when lotteries are used to determine program participation. Programs implement lottery systems when enrollment demand is anticipated to exceed the level of available funding. Again, consider a family that can afford outside options but who might be willing to remain in or move into a home in a poor neighborhood, under the right circumstances. The family will not want to move to a neighborhood where they are promised only a chance to enroll in a lottery for an adequate school, but where losing the lottery consigns their child to a substandard school assignment. Why risk losing the lottery? The family will then be stuck with the outcome that they wished to avoid. With lotteries, a family can only avoid this risk by avoiding the unattractive assigned-school district entirely.

While these policies (means testing and lottery enrollments) are designed, well-intentionally, to target benefits to the poor while excluding wealthier families who can exercise other options, school choice programs that grant benefits exclusively to the poor will continue to yield concentration of the poor because they do not address the reality that economically secure families will continue to vote with their feet.

Unlike most current school choice programs, Neighborhood Hope Scholarships would be intentionally designed to avoid family flight from low-income areas because research clearly shows low-income families are better off when they are not isolated by policies that exclude or drive out more prosperous families. More affluent neighbors bring jobs and social stability that benefit entire neighborhoods. Inclusive school choice programs that allow access by wealthier families not only yield neighborhoods that are less poor and more diverse, but also poor families gain more from these programs as they are both directly and indirectly impacted by the outcomes.

Still, the reality is that transitioning into a program that allows students to attend private schools could have short-term transition costs that might strain the state's budget if there are too many applicants in the early years of the program. In this case, three alternatives to a lottery system should be considered.

- 1. Grant the scholarships on a first-come-first serve basis. In subsequent years, give priority to families who are already in the program, and then to families who apply for the program in the order of application. Provide a factsheet for real estate agents, and they will make families aware of their options.
- 2. Prorate the scholarships so that all applicants get a reduced percentage of

- the budgeted amount.
- 3. Prioritize the ED Zones so that students in some zones are funded before other zones get funding. For example, perhaps after funding prior year recipients, students in the poorest neighborhoods receive funding before less-poor neighborhoods are funded. Ideally, all higher-priority neighborhoods would have scholarships fully funded before a lottery is required to allocate the remaining funds in the last ED Zone to receive funding.

The important thing to keep in mind is that just as UPS negotiated the terms of their headquarters location from Connecticut to Georgia before they decided where to invest, families are unlikely to remain in or move to an ED Zone unless the terms of the deal are known and in writing.

METHODS FOR DESIGNATING ECONOMIC DEVELOPMENT ZONES

Having discussed the important elements to consider for a Neighborhood Hope Scholarship program to be effective, this report will move to explaining potential methodologies for selecting the low-income communities eligible for the scholarships. There are several methods that might be considered for defining financially-distressed geographic areas as scholarship zones. We believe that the best alternative is to piggy-back off of already existing federal anti-poverty programs that are geographically-targeted. These programs use census tract boundaries for defining eligibility.

CENSUS TRACTS

A census tract is a geographic region defined by the United States Census Bureau. Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. In the state of Georgia, there are 1,965 census tracts. Sometimes, census tract boundaries coincide with the limits of cities, towns or other administrative areas. But several tracts commonly exist within a city or county. In rural areas without clear political boundaries to guide the Bureau's tract-drawing process, census boundaries can appear to be arbitrary. However, individual census tracts are always contained within a single county. In other words, each tract is in one county, but each county can contain many tracts.¹⁰

One attractive feature of census tracts, for purposes of creating a new economic development program, like this one, is the federal government already uses these tracts for designating low-income communities (called LICs) in various federal anti-poverty programs.

Both the New Markets Tax Credit (NMTC) and the Community Reinvestment Act (CRA) target program benefits to census tracts that qualify as LICs. For example, the NMTC, established to spur revitalization efforts of low-income and impoverished communities, provides tax credit incentives to investors for equity investments in census tracts where

- the poverty rate exceeds 20% in the most recent census, or
- the median family income in the district is less than 80% of the statewide or metro area median, whichever is greater.

Unpacking this, there are three important elements interacting here:

- 1. Census tracts define the geographies considered for eligibility.
- 2. Individual tracts are eligible as LICs based on Census Bureau poverty or income metrics.

¹⁰ There are four counties in Georgia that have only a single census tract in the county: Taliaferro, Quitman, Clay and Glascock counties.

- 3. There are two alternative metrics that can serve to qualify a tract
 - A high poverty rate, or
 - Low-median family income

OPPORTUNITY ZONES (SPECIAL CENSUS TRACTS)

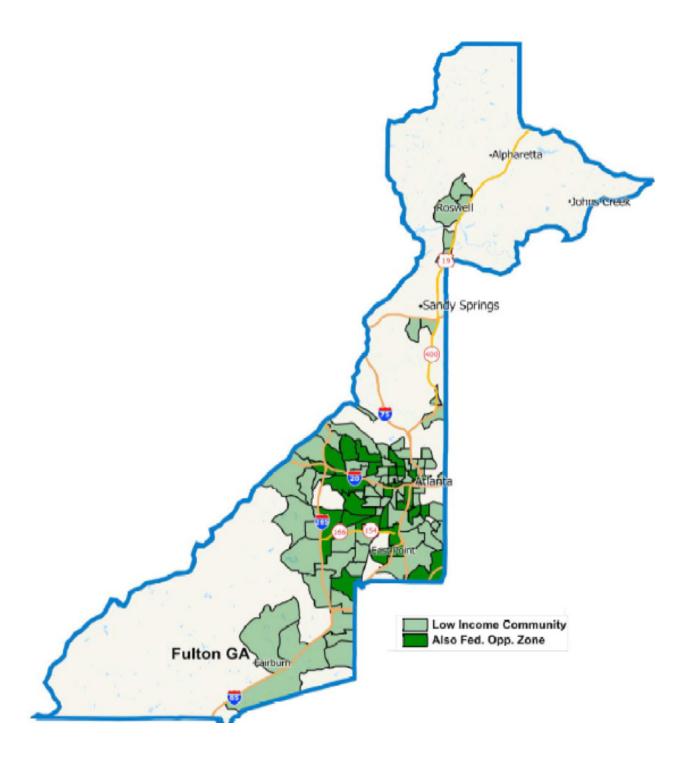
Opportunity Zones are designated for a community development program enacted by the Tax Cuts and Jobs Act of 2017. The program encourages long-term investments in certain low-income census tracts nationwide. The program provides tax incentives for investors to invest in census tracts that have been designated as Opportunity Zones by the governor of each state. Investment funds are raising billions of dollars to invest in these census tracts. Georgia has designated 260 low-income census tracts across the state as Opportunity Zones. Fulton County contains 27 qualifying Opportunity Zone tracts. See the following map. All of the green tracts are federal LICs, and the dark green tracts are also Opportunity Zones under the 2017 tax act.

Obviously, the fact that Opportunity Zones have already been identified as areas in need of additional development makes them highly attractive as target areas for Neighborhood Hope Scholarships. The scholarships would make these areas attractive places for families to live, and the Opportunity Zone designation will help to attract capital to the same areas.

On the negative side, governors have designated qualifying tracts that are scattered across their entire state. As a result, 80 of 159 counties in Georgia have an Opportunity Zone, but 51 of these counties have only 1 or 2 qualifying tracts. Given that census tracts average about 4000 residents (and not just school aged residents), very few students would qualify for ESAs in most counties if Opportunity Zones are used as the ESA qualification areas.

Nevertheless, the appeal of tying scholarships to Opportunity Zones is compelling. Thus efforts should be made to find a way to incorporate Opportunity Zones into the designation of ED Zones.

FULTON COUNTY CENSUS TRACTS



RECOMMENDED ED ZONE METHODOLOGY

Because the federal government already defines LICs for the New Market Tax Credit (as well as for the Community Reinvestment Act and for Opportunity Zone creation) we recommend that the Neighborhood Hope Scholarship piggyback off of this designation.

Therefore, we recommend the following methodology for defining ED Zones where Neighborhood Hope Scholarships will be made available to residents:

- 1. All census tracts that are defined as LICs for purposes of the New Market Tax Credit as designated on January 1, 2020
- 2. All census tracts that are subsequently designated as LICs at some later date.

Notice that once an area is designated as an Economic Development Zone, residents within it will retain Neighborhood Hope Scholarship eligibility, regardless of later improvements in economic conditions.

Because it is important to avoid lottery allocations, to the extent possible, when applications for scholarships exceed the number than can be funded in any year, a geographically predetermined preference system will be required.

AVOIDING THE PROBLEMS OF GENTRIFICATION

Once policymakers understand how Neighborhood Hope Scholarship Zones could operate, they are often quickly convinced that the program will have a strong positive economic impact on the targeted development zones. Thinking through this impact, policymakers are likely to voice concern about what should be done if the program works too well! In other words, as soon as a policymakers understand the power of Neighborhood Hope Scholarships, they have questions about whether the program could lead to gentrification.

The Oxford Dictionary defines "gentrification" as "the process of renovating and improving a house or district so that it conforms to middle-class taste." For those who live "middle-class" lives, gentrification sounds promising, but gentrification can come with negative consequences. The most worrisome consequence being an increase in rents, ultimately pricing poor families out of their neighborhoods.

We need to acknowledge up front that a Neighborhood Hope Scholarship program will make high-poverty areas more attractive to the middle class. So, questions about gentrification are not unreasonable, and the issue must be analyzed carefully.

Often, gentrification is a concern of "first impression." When one first reads about a policy that will retain middle class families in poorer neighborhoods, it is a common reaction to ask, "What happens to all the poor people?" which is another way of asking, "What happens if the program is too successful?"

But like many first impressions, there is more here than meets the eye. It is true that gentrification can have negative effects. Improving neighborhoods can create winners and losers. Property owners like rising home values, but renters would rather pay less. Unfortunately, rising rents can lead to displacement of poor people, but as we will discuss shortly, recent research shows that this concern is often misplaced.

But first, let's move past first impressions and dive into a deeper understanding of this issue. Consider the following hypothetical proposal that the U.S. Department of Housing and Urban Development (HUD) could promote in an effort to prevent gentrification:

"Good schools make neighborhoods more desirable, raising home prices and rents. Since we want to keep rents affordable for low-income families, we need to keep good schools out of low-income neighborhoods."

If this policy seems misguided, rest assured that HUD has never promoted it. No one thinks we should give poor neighborhoods bad schools just to keep rent cheap. It is illogical to oppose policies that improve education in poor neighborhoods just because the policies will make the neighborhoods more attractive, and rents will rise. Fortunately, where economic development lifts up a neighborhood, HUD has explored ways to soften potential impacts on existing residents. Housing problems in low-income

areas are best addressed through good *housing policies*. Education problems in low-income areas should be addressed with good *education policies*.

ANSWERS IN HOUSING POLICY

The US Department of Housing and Urban Development has given a lot of thought to solving gentrification issues. See, for example, "Ensuring Equitable Neighborhood Change," which describes numerous programs aimed at assisting low-income families living in neighborhoods that are progressing. Here are a few current HUD programs addressing these issues:

- Rental Assistance
- Affordable Housing Development Incentives
- Mixed-Income Development Incentives
- Housing Choice Voucher Programs

These programs are not perfect, and they are not always implemented optimally. But still, it is better to rely on housing experts, who are focused on making neighborhoods affordable, rather than relying on struggling schools to depress housing costs.

Fortunately, there are *very few* areas of deep poverty at risk of having <u>too many rich people move into the neighborhood</u>. ¹² Instead, many poor areas are depopulating. A journalist for *The Atlantic*, discussing this same topic, points out a problem considered much worse than gentrification:

"The reality is that the displaced are getting pushed out of working-class neighborhoods that are [already] 'good enough' to attract people and investment, while the poorest and most vulnerable neighborhoods remain mired in persistent poverty and concentrated disadvantage." ¹³

By analogy, we don't withhold food during famines because we worry that people will eat, live longer, and require more healthcare. We have programs to address healthcare issues once we have erased food insecurity. Likewise, we should not withhold an anti-poverty school choice program from poor neighborhoods due to fear of too much success (gentrification).

^{11 &}lt;a href="https://www.huduser.gov/portal/sites/default/files/pdf/Insights-Ensuring-Equitable-Growth.pdf">https://www.huduser.gov/portal/sites/default/files/pdf/Insights-Ensuring-Equitable-Growth.pdf

¹² https://www.citylab.com/equity/2015/08/americas-biggest-problem-is-concentrated-poverty-not-inequality/400892/

^{13 &}lt;a href="https://www.theatlantic.com/politics/archive/2015/09/this-is-what-happens-after-a-neighborhood-gets-gentrified/432813/">https://www.theatlantic.com/politics/archive/2015/09/this-is-what-happens-after-a-neighborhood-gets-gentrified/432813/

ON A POSITIVE NOTE

Recent research finds that much of the conventional wisdom about gentrification. is not accurate, and perhaps the most fascinating findings relate to the costs of renting in gentrifying neighborhoods. Conventional wisdom as well as actual data tell us that average rent levels increase as a neighborhood gentrifies. However, average rents present an overly simplistic view of what is actually going on in most gentrifying neighborhoods. A recent paper¹⁴ published by the Philadelphia Federal Reserve Bank notes that while average neighborhood rents rise, "surprisingly, gentrification has no effect on reported monthly rents paid by original resident less-educated renters." Apparently, higher-educated new arrivals bid up the rent of higher-end properties, but they are not particularly interested in moving into preexisting rental units. Rents for high-end properties rise, but the rents for lower-end properties do not increase very much, even though the neighborhood amenities are getting better for everyone. Housing economists refer to this as "market segmentation." Thus, low-income residents in gentrifying areas generally do not compete for housing with wealthier new arrivals, despite what was previously thought. In other words, wealthier new arrivals tend to move to rehabbed and converted abandoned buildings and properties, but they do not appear to be interested in moving into low income housing. Communities that restrict development, like San Francisco, experience the negative effects of gentrification because the restrictions undermine the development of a segmented market and force better educated new arrivers to compete with less educated residents for the artificially limited stock of housing. Fortunately, more sensible states like Georgia do not have these development restrictions.

It's also important to note that, except in very densely populated areas, new construction is first built on vacant properties or on underutilized commercial and industrial sites. Most high-poverty neighborhoods are not very densely populated because people have been avoiding these neighborhoods for a long time. For example, even today, South Atlanta's population density is less than it was in the 1960's.

Given this new insight on gentrification, we should not be surprised to find that other studies find that gentrification is not viewed as a bad thing by existing residents when they are able to remain in revitalizing neighborhoods, which they often can—read here.neg.15 and here.neg.15 and <a href="here.ne

- better jobs,
- higher incomes,

Brummet, Quentin and Reed, Davin, The Effects of Gentrification on the Well-Being and Opportunity of Original Resident Adults and Children (2019-07-16). FRB of Philadelphia Working Paper No. 19-30. Available at SSRN: https://ssrn.com/abstract=3421581 or http://dx.doi.org/10.21799/frbp.wp.2019.30

^{15 &}lt;u>https://www.sciencedirect.com/science/article/pii/S0166046211000044</u>

https://www.citylab.com/equity/2015/09/the-role-of-public-investment-in-gentrification/403324/

¹⁷ http://www.frbsf.org/community-development/publications/working-papers/2015/august/gentrification-displacement-role-of-public-investment/

- lower violent crime rates,
- better options in supermarkets, banks and drug stores,
- assignment to better public schools
- and, in fact, better public services in general.

Urban planners recognize these benefits of improving poor neighborhoods while working to keep poor people from being priced out of those same neighborhoods. Once people recognize gentrification as a problem of housing policy, rather than a justification for leaving low-income neighborhoods with bad schools, they will generally be convinced that Neighborhood Hope Scholarship zones are, on net, an excellent jobscreation and neighborhood improvement tool to bring economic vitality to low-income communities.

Of course, some people will not allow themselves to be convinced. Opposing "gentrification" can be a tactic used to distract people both from thinking about the many negative effects produced by struggling schools, and from considering how Neighborhood Hope Scholarships can correct those effects. Therefore, it is important that we address gentrification up front so that policymakers possess a clear understanding of the benefits of the program and the housing policy solutions that can be brought to bear when the program seems to have "too much success."

THE TAKEAWAY

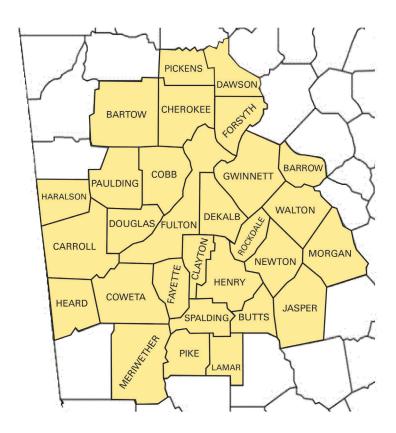
In summary, policy makers need to understand three important points:

- 1. The problems created by gentrification are usually much less severe than conventional wisdom suggests.
- 2. These problems are isolated to only a very small number of places near rapidly developing urban areas, primarily those that restrict development, and
- 3. Where applicable, potential gentrification problems should be addressed through <u>housing policy</u> not by withholding good school options from families in these areas.

METHODOLOGIES USED IN THIS ANALYSIS

In this section, we will examine the location of potential Economic Development (ED) Zones across the state and estimate the private school enrollment increases that can be expected as a result of implementing Neighborhood Hope Scholarships in these areas. The following introduction to the maps shown in this report will explain how we use sensitivity analysis to estimate the number of new private school students who will use the scholarships.

IMPORTANT DEFINITION: Core-based statistical areas (CBSAs) are used by the United States Office of Management and Budget, and they can be thought of simply as metropolitan areas. Here is an image of the Atlanta-Sandy Springs-Roswell CBSA.



The Atlanta CBSA is a sprawling, 29-county area with less than 10% of the CBSA's total population living inside the Atlanta city limits.

In addition to the Atlanta CBSA, there are 14 other metropolitan areas that the OMB designates as CBSAs. The alphabetical listing is as follows:

- Albany, GA
- Athens-Clarke County, GA
- Augusta-Richmond County, GA-SC
- Brunswick, GA

- Chattanooga, TN-GA
- Columbus, GA-AL
- Dalton, GA
- Gainesville, GA
- Hinesville, GA
- Macon-Bibb County, GA
- Rome, GA
- Savannah, GA
- Valdosta, GA
- Warner Robins, GA

SENSITIVITY ANALYSES:

Since The Neighborhood Hope Scholarship program will be a new program, it may be helpful to consider the impact that various scholarship levels will have on potential private school enrollment increases¹⁸. The tables presented in this section will cover county-by-county breakdowns of the number of 5- to -19 year olds living in Low-Income Communities, along with the estimated **increase in private school enrollment** (**APRIV**) based on two different scholarship funding levels.

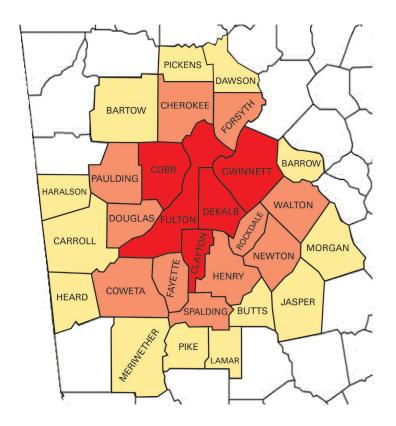
- \$5,548, which is the state-level spending per student in FY 2018
- \$7,000, a round number that is approximately 26% higher than the current state-level spending value—given recent large state funding increases for Georgia public schools, including significant teacher pay raises, the state average will rise to this level in the near future.

The higher scholarship value is displayed because it helps demonstrates a feature that needs to be considered when setting an appropriate scholarship level. Because the demand for private schools will increase as the size of the available scholarship increases, the projected cost to the state from increasing the per-child scholarship level is not linear. In other words, if the scholarship amount is increased by 26%, the projected total cost of the scholarships to the state will increase by more because **APRIV** also increases. In other words, the amount spent per child and the number of participating children both rise.

¹⁸ The methodology for calculating the anticipated increase in private school enrollments (**ΔPRIV**) is detailed in the Appendix.

ATLANTA REGION CBSA

The Atlanta-Sandy Springs-Roswell CBSA has 29 counties, but the five most populous core counties are Fulton, DeKalb, Cobb, Gwinnett and Clayton Counties. Other Counties in the area can be viewed as "Inner Ring" suburban counties and "Outer Ring" exurban counties. We will categorize the metro counties accordingly.



CORE COUNTIES:

Fulton and DeKalb Counties are the most central counties in the metro area, and also the most densely populated. While Fulton County has a larger population, much of northern Fulton County comprises higher-income neighborhoods. As a result, while the total school-age population of Fulton County is almost 45% higher than DeKalb County, the number of children living in Low Income Communities is almost equal (see the highlighted values in the chart on page 22.)

Table 1a shows the school-age population, the percentage of children living in federally designated low-income communities (LICs) and the projected increase in private school enrollments that would occur if Neighborhood Hope Scholarships were implemented in all of these LICs. The methodology for calculating the increase in private school enrollments is detailed in the Appendix.

Table 1a: School-Age Populations, % in LICs, and Projected Δ in Private Enrollments

Core County	School-Age Population		Projected Δ Private Enrollment		
Core County	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Fulton	195,711	84,724	43%	5,359	6,761
DeKalb	136,001	82,695	61%	5,230	6,599
Gwinett	205,635	65,095	32%	4,117	5,195
Cobb	150,735	46,265	31%	2,926	3,692
Clayton	62,792	47,861	76%	3,027	3,819
Total Core	750,874	326,640	44%	•	

Consider, for example, the first county in the table, Fulton County. There are approximately 195,711 children age 5 to 19 living in Fulton per the most recent decennial census. Of these, 84,724 (or 43%) live in LICs. If an ESA of \$5,548 were offered to the families of all of these children, we estimate that 5,359 of these children would accept the ESA rather than attend their assigned traditional public school.

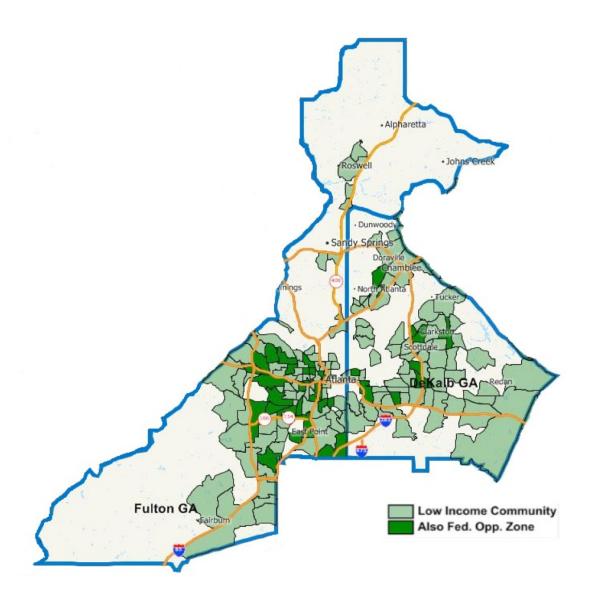
If the ESA were raised to \$7,000, a total of 6,761 new students would participate. Thus 1,402 additional students would enroll in private schools if the ESA amount were raised from \$5359 to \$7,000. (Calculated as 6,761-5,359 = 1,402.) Notice that as the scholarship level rises, the number of students requesting the ESA should also rise. Thus, increasing the per-student ESA grant by 10% will increase total costs by significantly more than 10% because participation will also increase.

Also of note (and highlighted) Clayton County, while smaller, has 76% of its children living in LICs. This is the highest rate of any high-population county in the Atlanta metro area.

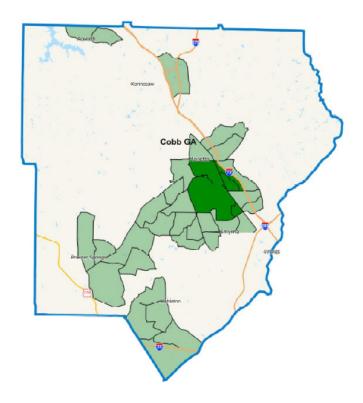
FULTON AND DEKALB COUNTY LICS

The following map of Fulton and DeKalb Counties shows all of the federally-designated Low-Income Communities. All of the shaded census tracts, both light green and dark green, are LICs. The dark green tracts are also federal opportunity zones. These dark green zones have access to preferential tax rules for investments in them. There is no stipulated difference in the poverty levels of Opportunity Zones relative to other LICs. Since economic conditions are similar for all LICs, we recommend that all LICs be given the same access to Neighborhood Hope Scholarships. Thus, the tables that we present are based on the assumption that all shaded areas on the maps will have access to the program.

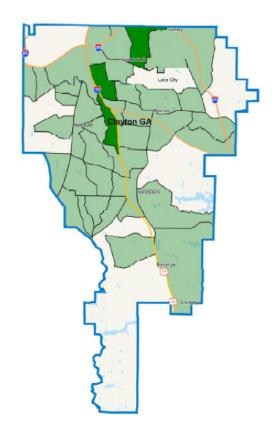
FULTON AND DEKALB COUNTY LICS



COBB COUNTY LICS



CLAYTON COUNTY LICS



GWINNETT COUNTY LICS



The suburban inner-ring counties (Table 1b) tend to have fewer LICs, and the overall percentage of children living in LICs in these counties is only 23%, as compared to 44% in the core counties. However, there is significant variation across counties. While Fayette County has no federally designated LICS, almost 55% of Newton County's children live in low-income areas.

Table 1b: School-Age Populations, % in LICs, and Projected Δ in Private Enrollments

Suburban County	Scho	ol-Age Population	Projected Δ Private Enrollment		
Suburban County	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Cherokee	50,804	3,770	7.4%	238	301
Coweta	29,391	6,907	23.5%	437	551
Douglas	31,972	12,092	37.8%	765	965
Fayette	24,867	-	0.0%	-	-
Forsyth	50,367	730	1.4%	46	58
Henry	51,721	16,660	32.2%	1,054	1,329
Newton	24,612	13,501	54.9%	854	1,077
Paulding	35,921	4,012	11.2%	254	320
Rockdale	19,504	8,384	43.0%	530	669
Spalding	12,794	7,612	59.5%	481	607
Walton	19,113	7,788	40.7%	493	621
Total Suburban	351,066	81,456	23%	-	

Exurban outer-ring counties (Table 1c) have significantly smaller populations as they transition into more rural communities. Rural areas tend to have lower incomes¹⁹, and this can be seen in the chart as more than half of the children in these counties are in low-income areas. Nevertheless, there is great variation in the percentage of children living in LICs across counties. While 100% of Heard, Jasper and Lamar are considered federal LICs, none of Dawson County is so designated.

Table 1c: School-Age Populations, % in LICs, and Projected Δ in Private Enrollments

Exurban County	Scho	ol-Age Populatio	on	Projected Δ Priv	vate Enrollment
Exurball County	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Barrow	16,068	5,599	34.8%	354	447
Bartow	21,740	9,932	45.7%	628	793
Butts	3,986	2,697	67.7%	171	215
Carroll	25,174	19,327	76.8%	1,222	1,542
Dawson	4,302	-	0.0%	-	-
Haralson	5,843	4,411	75.5%	279	352
Heard	2,329	2,329	100.0%	147	186
Jasper	2,854	2,854	100.0%	181	228
Lamar	3,944	3,944	100.0%	249	315
Meriwether	4,020	3,218	80.0%	204	257
Morgan	3,674	602	16.4%	38	48
Pickens	5,355	2,069	38.6%	131	165
Pike	4,085	624	15.3%	39	50
Total Exurban	103,374	57,606	56%	-	

Maps for Suburban and Exurban counties are contained in an online appendix to this report.

Rural areas have lower population density and lower income levels. Accordingly, while more than 62% of Georgia's land area are designated as federal LICs, less than half (45%) of the state's children live in these areas.

OTHER GEORGIA CBSAS

CBSA NAME	PAGE NUMBER
Albany	29
Athens	30
Brunswick	31
Chattanooga	32
Columbus	33
Dalton	34
Gainesville	35
Hinesville	36
Macon-Bibb	37
Rome	38
Savannah	39
Valdosta	40
Warner Robins	41

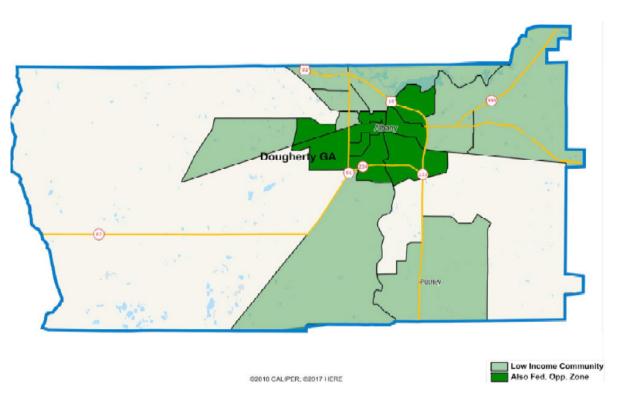
ALBANY CBSA

Dougherty County is the largest county in the Albany CBSA. Over 77% of the children in Dougherty County live in federally designated LICs.

Table 2: Albany CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Albany CRSA	Scho	ol-Age Population		Projected Δ Private Enrollment	
Albany CBSA	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Dougherty	19,735	15,203	77%	962	1213
Baker	534	390	73%	25	31
Lee	6,698	340	5%	22	27
Terrell	1,791	1,791	100%	113	143
Worth	4,110	1,802	44%	114	144
Total	32,868	19,526	59%		

DOUGHERTY COUNTY LICS



The maps for Baker, Lee, Terrell, and Worth Counties are contained in an online appendix.

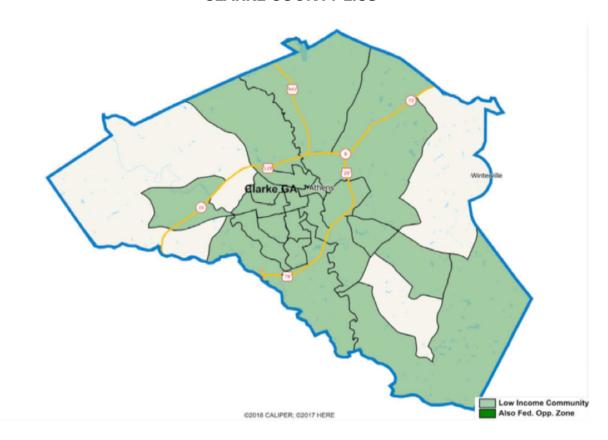
ATHENS-CLARKE CBSA

Clarke County is the largest county in the Athens-Clarke CBSA. Over 83% of the children in Clarke County live in federally designated LICs.

Table 3: Athens-Clarke CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Athens-Clarke	School-Age Population			Projected ∆ Priv	vate Enrollment
County	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Clarke	25,630	21,331	83%	1349	1702
Madison	5,378	2,227	41%	141	178
Oconee	8,455	-	0%	0	0
Oglethorpe	2,744	1,198	44%	76	96
Total	42,207	24,756	59%		

CLARKE COUNTY LICS



The maps for the Madison, Oconee, and Oglethorpe Counties are contained in an online appendix.

BRUNSWICK CBSA

Glynn County is the largest county in the Brunswick CBSA. Over 43% of the children in Glynn County live in federally designated LICs.

Table 4: Brunswick CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Brunswick CBSA	Scho	School-Age Population		Projected Δ Private Enrollment	
BI UTISWICK CB3A	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Glynn	15,881	6,796	43%	430	542
Brantley	3,939	3,939	100%	249	314
McIntosh	2,155	1,549	72%	98	124
Total	21,975	12,284	56%		

GLYNN COUNTY LICS



The maps for Brantley and McIntosh Counties are contained in an online appendix.

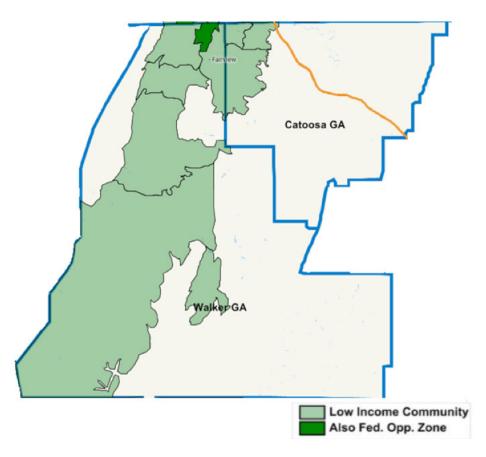
CHATTANOOGA CBSA

Catoosa County and Walker County are the largest counties in the Chattanooga CBSA, and are approximately equal in size. Over 29% of the children in Catoosa County and 53% of the children in Walker County live in federally designated LICs.

Table 5: Chattanooga CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Chattanooga	School-Age Population			Projected Δ Priv	vate Enrollment
CBSA	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Catoosa	13,320	3,798	29%	240	303
Walker	13,121	6,910	53%	437	551
Dade	3,060	698	23%	44	56
Total	29,501	11,406	39%		

CATOOSA & WALKER COUNTIES LICS



A map for Dade County is contained in an online appendix.

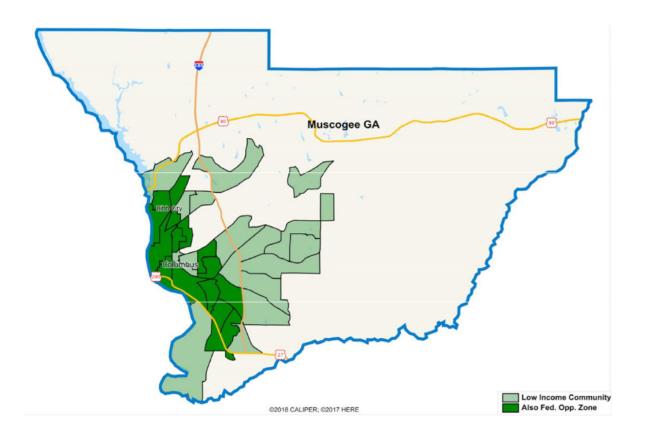
COLUMBUS CBSA

Muscogee County is the largest county in the Columbus CBSA. Over 49% of the children in Muscogee County live in federally designated LICs.

Table 6: Columbus CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Columbus CBSA	School-Age Popula		on	Projected Δ Priv	ate Enrollment
Columbus CB3A	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Muscogee	41,031	19,963	49%	1263	1593
Chattahoochee	3,132	1,874	60%	119	150
Harris	6,760	717	11%	45	57
Marion	1,737	1,098	63%	69	88
Total	52,660	23,652	45%		

MUSCOGEE COUNTY LICS



The maps for Chattahoochee, Harris, and Marion Counties are contained in an online appendix.

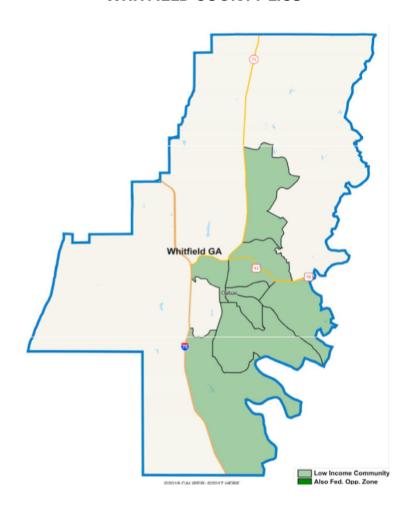
DALTON CBSA

Whitfield County is the largest county in the Dalton CBSA. Over 48% of the children in Whitfield County live in federally designated LICs.

Table 7: Dalton CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Dalton CRSA	Dalton CBSA School-Age Population			Projected Δ Priv	vate Enrollment
Daiton CB3A	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Whitfield	23,581	11,378	48%	720	908
Murray	8,538	5,323	62%	337	425
Total	32,119	16,701	52%		

WHITFIELD COUNTY LICS



A map for Murray County is contained in a separate appendix.

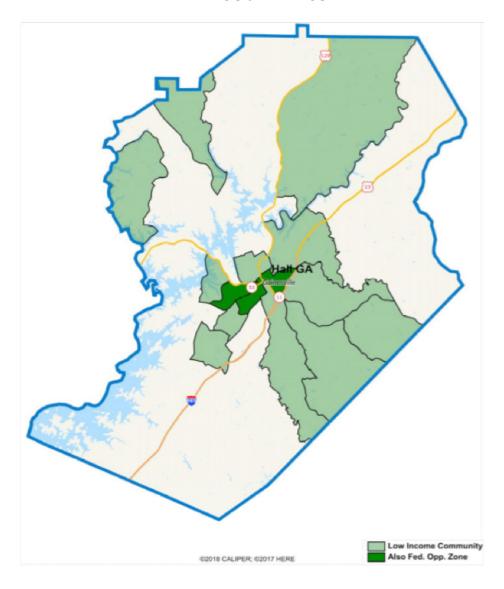
GAINESVILLE CBSA

Hall County is the largest county in the Gainesville CBSA. Over 44% of the children in Hall County live in federally designated LICs.

Table 8: Gainsville CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Gainsville CBSA	School-Age Population			Projected Δ Private Enrollment		
	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA	
Hall	42,376	18,469	44%	1168	1474	
Total	42,376	18,469	44%			

HALL COUNTY LICS



HINESVILLE CBSA

Liberty County is the largest county in the Hinesville CBSA. Over 57% of the children in Liberty County live in federally designated LICs.

Table 9: Hinesville CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Hinesville CBSA	School-Age Population			Projected Δ Private Enrollment		
	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA	
Liberty	13,708	7,792	57%	493	622	
Long	3,820	-	0%	0	0	
Total	17,528	7,792	44%			

LIBERTY COUNTY LICS



A map for Long County is contained in an online appendix.

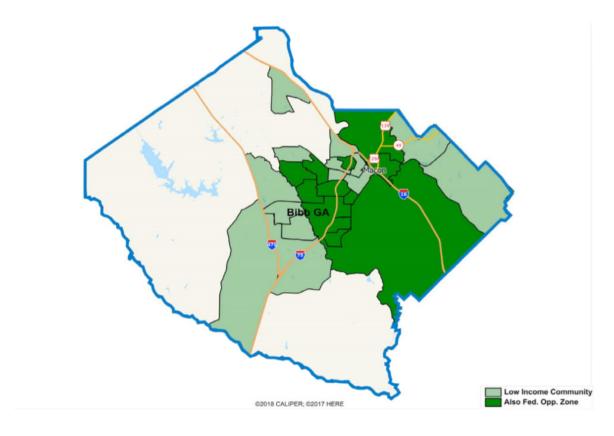
MACON-BIBB CBSA

Bibb County is the largest county in the Macon-Bibb CBSA. Over 65% of the children in Bibb County live in federally designated LICs.

Table 10: Macon-Bibb CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Macon-Bibb	School-Age Populatio		on	Projected Δ Private Enrollmen		
CBSA	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA	
Bibb	32,127	20,767	65%	1313	1657	
Crawford	2,264	1,518	67%	96	121	
Jones	5,930	2,223	37%	141	177	
Monroe	4,888	1,055	22%	67	84	
Twiggs	1,352	1,352	100%	86	108	
Total	46,561	26,915	58%			

BIBB COUNTY LICS



The maps for Crawford, Jones, Monroe, and Twiggs Counties are contained in an online appendix.

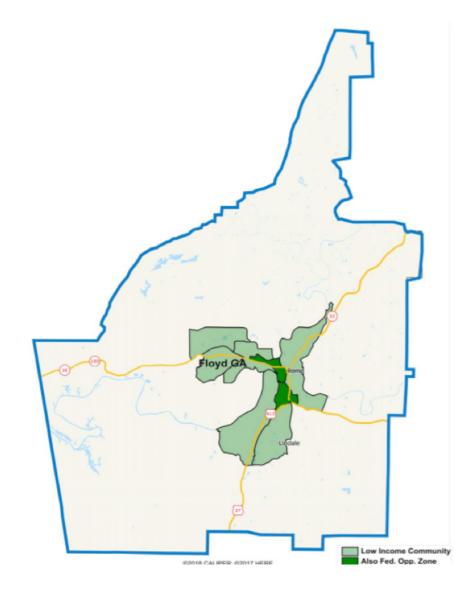
ROME CBSA

Floyd County is the largest county in the Rome CBSA. Over 49% of the children in Floyd County live in federally designated LICs.

Table 11: Rome CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Rome CBSA	Scho	ol-Age Populati	on	Projected Δ Private Enrollment		
	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA	
Floyd	19,911	9,713	49%	614	775	
Total	19,911	9,713	49%			

FLOYD COUNTY LICS



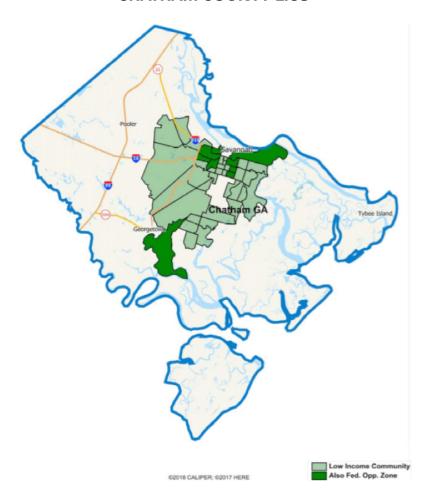
SAVANNAH CBSA

Chatham County is the largest county in the Savannah CBSA. Over 48% of the children in Chatham County live in federally designated LICs.

Table 12: Savannah CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Savannah CBSA	School-Age Population			Projected Δ Private Enrollment		
	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA	
Chatham	52,942	25,663	48%	1623	2048	
Bryan	8,228	2,367	29%	150	189	
Effingham	12,864	835	6%	53	67	
Total	74,034	28,865	39%			

CHATHAM COUNTY LICS



The maps for Bryan and Effingham Counties are contained in an online appendix.

VALDOSTA CBSA

Lowndes County is the largest county in the Valdosta CBSA. Over 62% of the children in Lowndes County live in federally designated LICs.

Table 13: Valdosta CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Valdosta CBSA	School-Age Population			Projected Δ Private Enrollment		
	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA	
Lowndes	24,041	14,964	62%	946	1194	
Brooks	3,008	2,753	92%	174	220	
Echols	1,116	1,116	100%	71	89	
Lanier	2,165	2,165	100%	137	173	
Total	30,330	20,998	69%			

LOWNDES COUNTY LICS



The maps for Brooks, Echols, and Lanier Counties are contained in an online appendix.

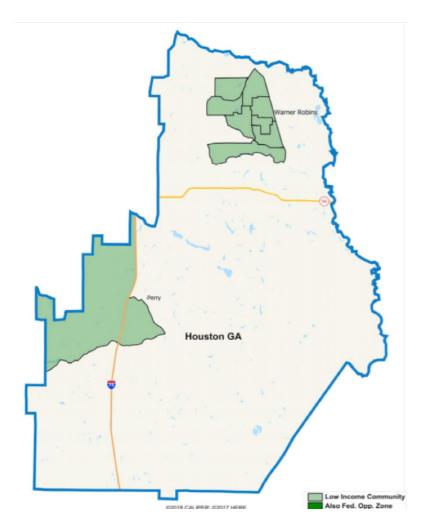
WARNER ROBINS CBSA

Houston County is the largest county in the Warner Robins CBSA. Over 28% of the children in Houston County live in federally designated LICs.

Table 14: Warner Robins CBSA Populations, % in LICs, and Projected Δ in Private Enrollments

Warner Robins	School-Age Population			Projected Δ Priv	vate Enrollment
CBSA	Total	Living in LIC	% in LICs	\$5,548 ESA	\$7,000 ESA
Houston	31,903	8,876	28%	561	708
Peach	5,774	3,070	53%	194	245
Pulaski	1,819	1,614	89%	102	129
Total	39,496	13,560	34%		

HOUSTON COUNTY LICS



The maps for Peach and Pulaski Counties are contained in an online appendix.

NON-METROPOLITAN COUNTIES

Data and maps for rural Georgia counties are contained in an online appendix.

APPENDIX: PROJECTED INCREASES IN PRIVATE SCHOOL ENROLLMENT

The projected change in private school enrollment in each county is calculated as follows:

$$\Delta Private\ School\ Enrollment = (\#\ of\ Eligible\ Students) * \left[\frac{\Delta Prob.\ of\ attending}{\$} \times \$\ amount\right]$$

This equation is taken from Ford and Merrifield (2013)²⁰ which used regression results from Chiswick and Koutroumanes (1996²¹) to estimate the increase in the probability that a child would attend a private school if the tuition price was raised or lowered. The following term:

$$\left[\frac{\Delta Prob.\ of\ attending}{\$}\right]$$

is the increased probability that a single child will attend a private school if the price is lowered by a single dollar. Therefore the term

$$\left[\frac{\Delta Prob.\,of\,\,attending}{\$} \times \$7,000\right]$$

is the increased probability that a single child will attend private school if the payment required for the child is reduced by \$7,000. We have treated the availability of a \$7,000 ESA as though it reduces the cost of private school tuition by \$7,000. The higher value used in the sensitivity analyses for each county assumes an ESA of \$7,000.

For each county, multiplying this probability for a single student by the number of students who are eligible for an ESA in each county yields the expected increase in private school enrollment.

Ford and Merrifield estimate that the increased probability that a single child will attend a private school if the price is lowered by a single dollar is 0.00114%. Therefore, if we assume the that a \$7,000 ESA will be available in all federally designated Low-Income Communities (LICs) within a county, and if there are ten thousand school-age children

²⁰ Michael Ford & John Merrifield (2013) School Choice Legislation: Impact Assessment and Fiscal Notes, Journal of School Choice, 7:1, 37-60

²¹ Chiswick, B. R., & Koutroumanes, S. (1996). An econometric analysis of the demand for private schooling. Research in Labor Economics, 15, 209–237.

in these LICs, then the estimated increase in private school children (ΔPRIV) will be 798 children, calculated as follows:

$$\Delta PRIV = (10,000) * \left[\frac{.00114\%}{\$1} \times \$7,000 \right] = 798$$

CAVEATS TO THIS ANALYSIS:

Estimates of ΔPRIV are subject to estimation error of an unknown magnitude. While the number of eligible students is relatively easy to estimate, and the amount of the ESA offered is known, the coefficient value (probability change per dollar) originally estimated by Chiswick and Koutroumanes is based on nation-wide census data from 1980. The study only considered two-parent families with both parents living in the same home. Obviously, there are many single-parent households, and it is not known whether these families are more (or less) price sensitive than two-parent families. Chiswick observed regional differences in the demand for private schools, but they did not test for regional differences in price sensitivity. It is unknown whether the sensitivity of Georgians to private school tuition levels conforms to the national average.

Chiswick and Koutromanes included numerous control variables, (e.g., race, religious affiliation, family income, parents' age, mother in the workforce, etc.) and most of these variables affected the probability that a child would attend private school. However, none of these variables were used to interact with the tuition price. As a result, we cannot say anything about how an urban black family's response to a change in tuition might differ from that of a white suburban family. We cannot predict urban versus suburban versus rural uptake of the program. In short, while the demographics of Georgia counties differ significantly, we cannot estimate how these differences would impact the propensity of parents in each county to apply for an ESA.