# Fiscal Research Center

# Child Policy Partnership: Capacity of Child Care Centers by Location

Lakshmi Pandey Nicholas Warner Sally Wallace



CKNOWLEDGMENTS  Enduced in conjunction with the Economic Impact of Early Care and Education Industry in Georgia, collaboration between the Andrew Young School of Policy Studies, the Fiscal Research Center and GA's Carl Vinson Institute of Government. Funding provided by DECAL: Georgia Department of Early re and Learning.

## Introduction

The purpose of this policy report is to provide a methodology so that DECAL may evaluate the efficiency of the location of the early care and education providers relative to the potential need. Defining the location of need is difficult because there are many ways to measure need including location relative to: employment centers, residences, concentration of at-risk children, etc. As a result, the data presented in this report should be seen as a starting point in evaluating whether certain areas are currently underserved in terms of early care and learning supply.

The report is structured as follows. The first section provides a summary of the method used to identify supply and demand for each Early Education Empowerment Zones (E<sup>3</sup>Z). Section two contains the output of the analysis in tables and graphs that demonstrate supply/demand by the location of their concentration and highlights the main observations from the analysis. The final section provides suggestions for use of the analysis as well as potential limitations.

# Identifying location of supply and demand of early care and learning units

The supply of units is defined as the capacity of licensed early care and learning centers and family day care homes reported by Bright from the Start: Georgia Department of Early Care and Learning (DECAL). These units are for children ages 0 to 4 and represent data as of 2014. All providers accepting infants 0-12 months, toddlers 13-24 months and preschool children ages 3-4 years are included in the study. Child care centers are separated from family day care homes.

The demand for early care and learning slots is determined by the need for Georgia Pre-K. It is obvious that the need depends on (but is not the same as) the number of children ages 0 to 4 and the number of parents who are employed. However, it is also important to acknowledge that there are additional policy outcomes that drive need and demand for early care and education. For example, parents who are not employed may demand care to provide their young children with a more structured learning environment whether or not they are in the labor market. There also may be a need for care in areas where there is a perceived concentration of children who would benefit from expanded supply (areas where poverty rates or teen pregnancy rates are high for example).

This brief focuses on the Georgia's Early Education Empowerment Zones (E<sup>3</sup>Z), which are four specific regions of the state that have been selected by DECAL to promote early education system reform initiatives that support better outcomes for young children". The four E<sup>3</sup>Z's are: Bibb County, Clarke County, and a north and south cluster of counties. The Northern E<sup>3</sup>Z is comprised of Catoosa, Whitefield, Murray, Gordon and Gilmer counties and is located in the most northern section of Georgia along the border with Tennessee. The Southern E<sup>3</sup>Z is comprised of Colquitt, Cook, Brooks, Lowndes, and Echols counties and is located in the most southern section of Georgia along the border with Florida.

\_

<sup>&</sup>lt;sup>1</sup> There are no data for unlicensed centers or family day care homes; therefore, the unlicensed centers and homes are not included in the analysis.

<sup>&</sup>lt;sup>2</sup> The September 2014 DECAL Bright from the Start Press Release that detailed the selection of the four regions chosen.

The factors chose to evaluate demand are listed below with an explanation of the reason they are included:<sup>3</sup>

- Population This variable is the total population and is included mainly to provide an overall context for the locational distribution of early care and education.
- Population ages 0 to 4 This is the target group and represents the broadest definition of demand for early care and education.
- Population ages 0 to 4 below poverty line<sup>4</sup> This represents a potentially at-risk population of children whose marginal benefit from early care and education may be higher than the typical population.
- Population below poverty line This is an overall measure of an at-risk population that helps to anchor where the children in poverty live versus the general population in poverty.
- Births to mothers below poverty line This is an arguably more honed and potentially timelier measure of at-risk children than the general population in poverty is.
- Single parents below poverty line This variable measures a potentially vulnerable population for which the marginal benefits of early care and learning could be relatively high.
- Employment Total employment is included to demonstrate the location of economic activity.

This analysis represents a hybrid quantitative-qualitative analysis that focuses on the geographical dispersion of the demand/need variables relative to the supply of early care and learning.<sup>5</sup> For each variable including the supply, the geographic location of the "center" of that variable is calculated using GIS tools. Intuitively and as an example, if there is a heavy concentration of children ages 0 to 4 in the northeast of an E<sup>3</sup>Z, the "center" of the variable children ages 0 to 4 will show up not in the physical center of the overall zone but will show up in the northeast part of the zone. Thus, this analysis shows how closely aligned early care and learning supply is with each of the demand/need variables listed above. The levels of these variables are included in a table to set the stage for the geographical analysis.

To illustrate the calculation, the population center of a county is calculated as follows (similar calculations are done for each variable):

 $X=(\Sigma_{p_i}x_i)/P$   $Y=(\Sigma_{p_i}y_i)/P$ 

X: x coordinate of population center

Y: y coordinate of population center

P: County population

x<sub>i</sub>, and y<sub>i</sub>: x and y coordinates of ith tract's geographic centroid

p<sub>i</sub>: Population of i<sup>th</sup> tract

\_

<sup>&</sup>lt;sup>3</sup> Data source: 2013 American Community Survey (ACS) 5 years survey Summary and PUMS data and employment from 2013 GADOL QCEW data.

<sup>&</sup>lt;sup>4</sup> Following the Office of Management and Budget's (OMB) Statistical Policy Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the threshold, then that family and each individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using the Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps). http://www.census.gov/hhes/www/poverty/about/overview/measure.html

<sup>&</sup>lt;sup>5</sup> The center of early care and learning centers are mapped separately from the center for family day care homes.

The maps provide the opportunity to compare the location of providers with where the population is as well as the other critical populations, listed above, along with where the jobs are located. For each area, a red star with a circle around it represents the center of early care and education capacity in the region or county. This indicates the point where the most early care and education is available after taking into account how far it is from the providers.

Each map also includes a series of labeled blue stars indicating the center of population for the populations listed above and one for the center of employment. The star labeled "population of age 0-4" describes the place within that region that would minimize the distance that the population 4 and below would have to travel to reach a provider.

By comparing the centers of these variables on a map, in some cases, it is very obvious where need is not being met with supply. In other cases, there is closer alignment. In the next section, the information is reported by county for the  $E^3Zs$ .

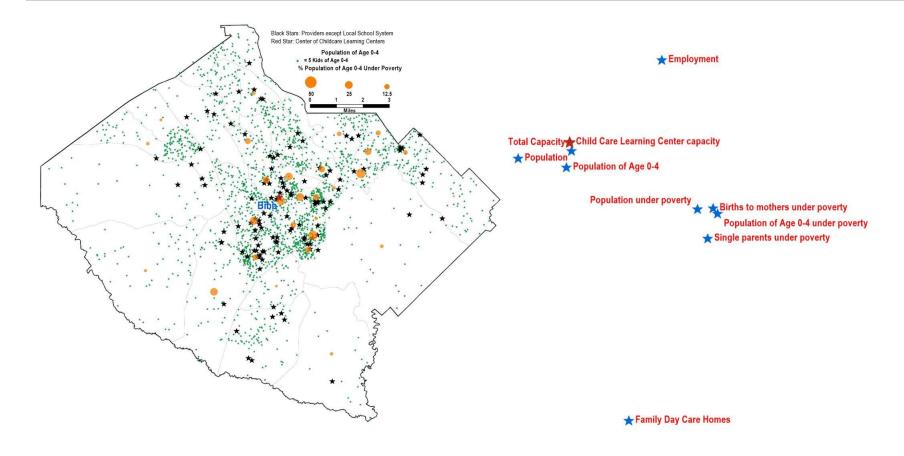
# Supply and Demand/Need for Early Care and Learning: Geographic Results

For each county, data for the supply and demand/need variables are presented in a tabular form followed by a county map (with census tracts outlined). The map includes a designation for the geographic center for each variable (marked as a blue star) and also includes a white star representing the actual location of each center/family day care home. A red circle designates the geographic center of day care slots. In the case of Bibb, Clark, and Lowndes counties, the center for each variable has been pulled up and moved off the map to make each variable more readable. Effectively, the blue stars and notes should be positioned over the maps.

#### **BIBB COUNTY**

- Available day care centers are serving about 46 percent of children ages 0 to 4.
- Population projections show a slight decline for ages 0 to 4.
- The center of day care facilities in the county favors the location of the children rather than employment center.
- The at-risk population is concentrated in the eastern part of the county while the supply of center-based care is in the geographic middle of the county.
- The family day care homes are far removed from the centers of employment, population, and at-risk population.

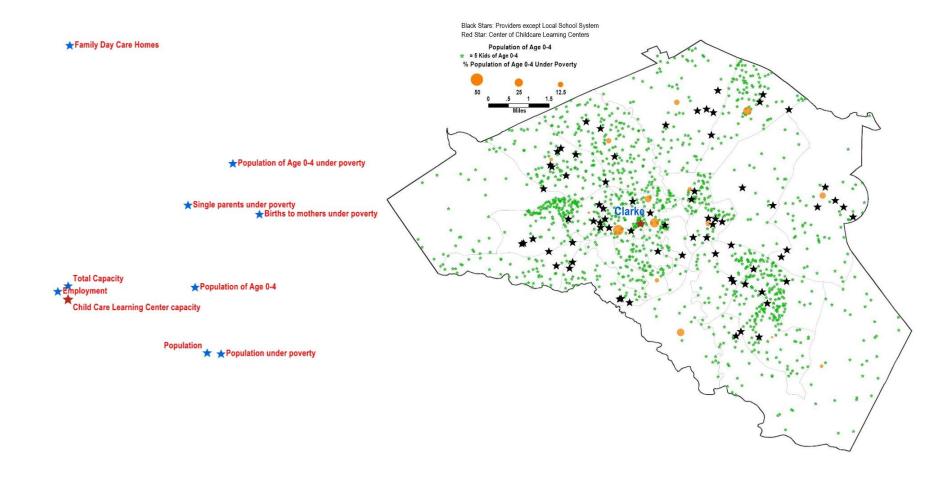
BIBB COUNTY		
Description		
Population characteristics		
Total population	155,524	
Population of age 0-4	11,445	
% Population of age 0-4	7.35	
2015 Population of age 0-4	11,404	
2020 Population of age 0-4	11,378	
% Population below poverty line	24.89	
% Population of age 0-4 below poverty line	44.42	
% Teen birth	13.80	
% Birth to mothers below poverty line	43.00	
% Birth to mothers on public assistance	3.08	
Households characteristics		
Total households	56,585	
% with Vehicles	88.0	
% Single-parent families below poverty line	11.47	
Employment characteristics		
Total employment	77,717	
Capacity characteristics		
Total capacity	5,230	
Child care learning center capacity	5,086	
Family day care home capacity	144	
% Capacity as a ratio of children of age 0-4	45.69	
Distance from center of day care capacity in miles		
Population	0.39	
Population of age 0-4	0.07	
Population below poverty line	0.95	
Population of age 0-4 below poverty line	1.09	
Births to mothers below poverty line	1.05	
Single parents below poverty line	1.08	
Family day care homes	1.74	
Employment	1.06	
County area in square miles	255	



#### **CLARK COUNTY**

- The number of available early care and learning slots represents about 27 percent of children ages 0 to 4. One-quarter of all children ages 0-4 has at least one parent registered for university/college classes.
- The 0 to 4 population will grow 7 percent by 2015, and by year 2020, the county will have an additional 1,400 (almost 20 percent) children in need of early education services.
- The center of day care facilities in the county is closer to the employment center than the population at-large or at-risk population.

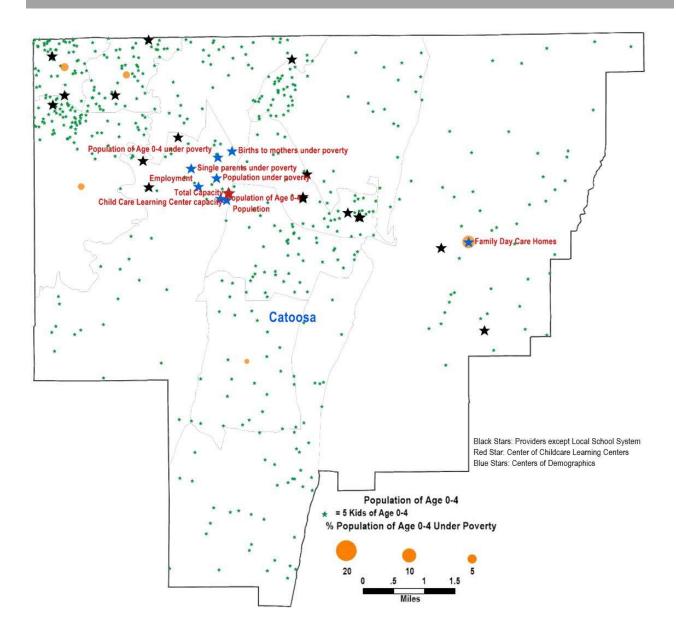
CLARKE COUNTY	
<b>Description</b> Population characteristics	
Total population	118,864
Population of age 0-4	7,045
% Population of age 0-4	5.92
2015 Population of age 0-4	7,549
2020 Population of age 0-4	8,449
% Population below poverty line	36.71
% Population of age 0-4 below poverty line	38.33
% Teen birth	7.26
% Birth to mothers below poverty line	42.00
% Birth to mothers on public assistance	2.24
Household characteristics	
Total households	41,358
% with Vehicles	93.0
% Single-parent families below poverty line	11.03
Employment characteristics	
Total employment	80,565
Capacity characteristics	
Total capacity	1,879
Child care learning center capacity	1,795
Family day care home capacity	84
% Capacity as a ratio of children of age 0-4	26.67
Distance from center of day care capacity in miles	
Population	0.90
Population of age 0-4	0.78
Population below poverty line	0.98
Population of age 0-4 below poverty line	1.32
Births to mothers below poverty line	1.29
Single parents below poverty line	0.94
Family day care homes	1.71
Employment	0.11
County area in square miles	121



#### **CATOOSA COUNTY**

- The number of slots available in the county is equivalent to about 30 percent of children ages 0 to 4.
- The population ages 0 to 4 will grow 6.4 percent by 2015, and by year 2020, the county will have an additional 350 children in need of early education services.
- At-risk children and families are located slightly north of the concentration of slots.

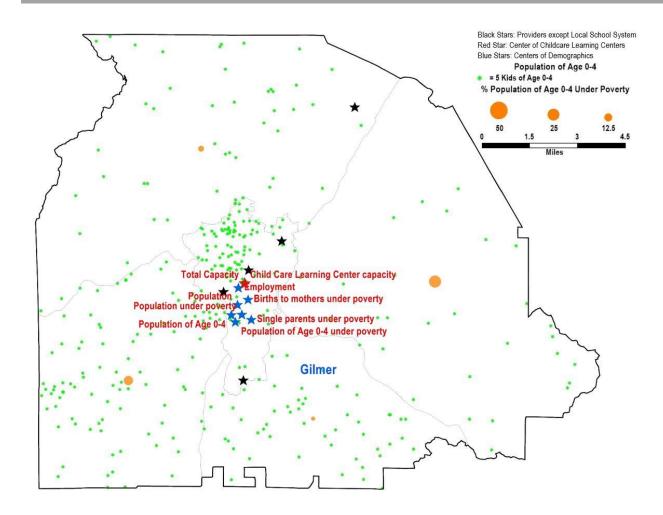
CATOOSA COUNTY		
Description		
Population characteristics		
Total population	64,606	
Population of age 0-4	3,831	
% Population of age 0-4	5.92	
2015 Population of age 0-4	4,077	
2020 Population of age 0-4	4,173	
% Population below poverty line	13.93	
% Population of age 0-4 below poverty line	27.74	
% Teen birth	6.21	
% Birth to mothers below poverty line	31.00	
% Birth to mothers on public assistance	0.80	
Households characteristics		
Total households	23,941	
% with Vehicles	95.5	
% Single-parent families below poverty line	3.96	
Employment characteristics		
Total employment	17,704	
Capacity characteristics		
Total capacity	1,157	
Child care learning center capacity	1,151	
Family day care home capacity	6	
% Capacity as a ratio of children of age 0-4	30.20	
Distance from center of day care capacity in miles		
Population	0.46	
Population of age 0-4	0.32	
Population below poverty line	0.69	
Population of age 0-4 below poverty line	1.23	
Births to mothers below poverty line	1.50	
Single parents below poverty	1.03	
Family day care homes	6.95	
Employment	0.52	
County area in square miles	162	



#### **GILMER COUNTY**

- Current capacity for early care and learning is 17 percent of children ages 0 to 4.
- The slots and demographics are closely aligned geographically.

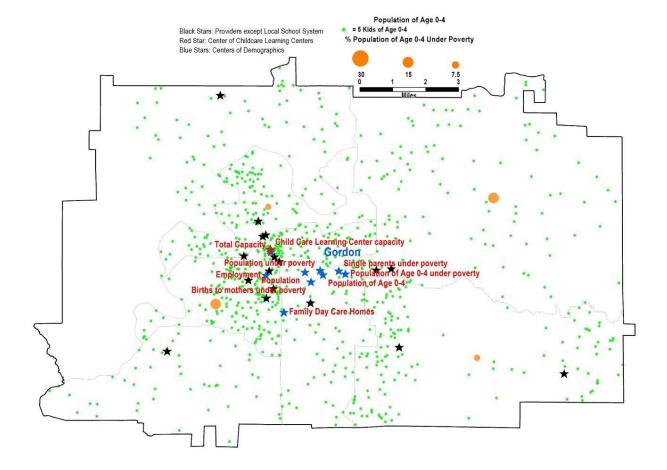
GILMER COUNTY		
Description		
Population characteristics		
Total population	28,308	
Population of age 0-4	1,595	
% Population of age 0-4	5.63	
2015 Population of age 0-4	1,631	
2020 Population of age 0-4	1,616	
% Population below poverty line	21.66	
% Population of age 0-4 below poverty line	46.65	
% Teen birth	13.01	
% Birth to mothers below poverty line	64.00	
% Birth to mothers on public assistance	8.16	
Households characteristics		
Total households	11,513	
% with Vehicles	94.7	
% Single-parent families below poverty line	4.54	
Employment characteristics		
Total employment	5,678	
Capacity characteristics		
Total capacity	273	
Child care learning center capacity	273	
Family day care home capacity	0	
% Capacity as a ratio of children of age 0-4	17.11	
Distance from center of day care capacity in miles		
Population	1.06	
Population of age 0-4	1.60	
Population below poverty line	1.47	
Population of age 0-4 below poverty line	1.85	
Births to mothers below poverty line	0.78	
Single parents below poverty line	1.73	
Family day care homes		
Employment	0.35	
County area in square miles	431	



#### **GORDON COUNTY**

- Current capacity for early care and learning is 17 percent of children ages 0 to 4.
- Capacity is located slightly northwest of the demand/need.

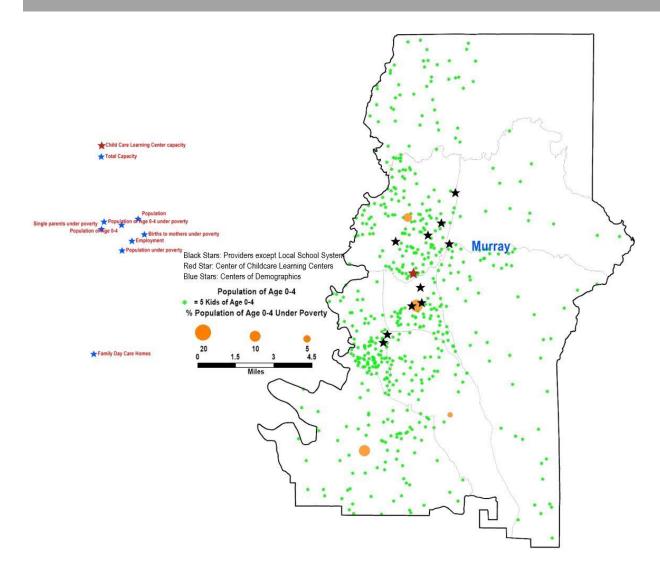
GORDON COUNTY		
Description		
Total population	55,409	
Population of age 0-4	3,940	
% Population of age 0-4	7.11	
2015 Population of age 0-4	4,347	
2020 Population of age 0-4	4,773	
% Population below poverty line	20.97	
% Population of age 0-4 below poverty line	37.70	
% Teen birth	13.23	
% Birth to mothers below poverty line	32.00	
% Birth to mothers on public assistance	0	
Households characteristics		
Total households	19,066	
% with Vehicles	94.5	
% Single parent families below poverty line	6.57	
Employment characteristics		
Total employment	19,804	
Capacity characteristics		
Total capacity	668	
Child care learning center capacity	650	
Family day care home capacity	18	
% Capacity as a ratio of children of age 0-4	16.95	
Distance from center of day care capacity in miles		
Population	1.99	
Population of age 0-4	2.76	
Population below poverty line	2.57	
Population of age 0-4 below poverty line	3.69	
Births to mothers below poverty line	2.45	
Single parents below poverty line	3.37	
Family day care homes	2.17	
Employment	1.12	
County area in square miles	358	



#### **MURRAY COUNTY**

- Most of the day care capacity is located close to employment.
- Current slots account for just 13 percent of the 0 to 4 population.
- The concentration of at-risk populations is south of the center of early care and learning capacity.

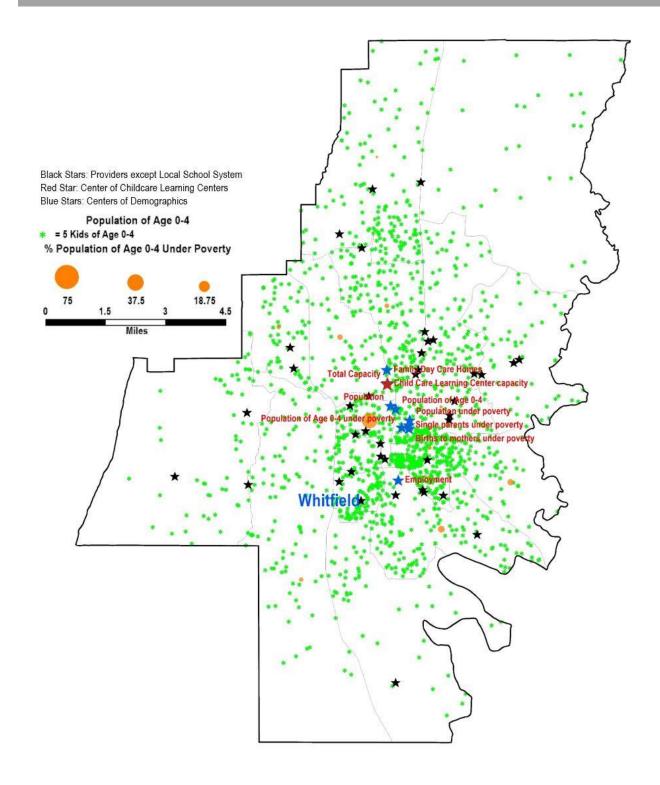
MURRAY COUNTY		
Description		
Total population	39,504	
Population of age 0-4	2,637	
% Population of age 0-4	6.67	
2015 Population of age 0-4	2,779	
2020 Population of age 0-4	2,685	
% Population below poverty line	22.42	
% Population of age 0-4 below poverty line	39.95	
% Teen birth	18.93	
% Birth to mothers below poverty line	36.00	
% Birth to mothers on public assistance	10.92	
Households characteristics		
Total households	14,092	
% with Vehicles	94.9	
% Single-parent families below poverty line	5.23	
Employment characteristics		
Total employment	7,406	
Capacity characteristics		
Total capacity	334	
Child care learning center capacity	316	
Family day care home capacity	18	
% Capacity as a ratio of children of age 0-4	12.66	
Distance from center of day care capacity in miles		
Population	1.61	
Population of age 0-4	1.61	
Population below poverty line	2.10	
Population of age 0-4 below poverty line	1.50	
Births to mothers below poverty line	1.94	
Single parents below poverty line	1.64	
Family day care homes	4.09	
Employment	1.96	
County area in square miles	347	



#### WHITFIELD COUNTY

- Most of the day care capacity is located well north of employment.
- Current slots account for approximately 20 percent of the 0 to 4 population.
- The concentration of at-risk populations is south of the center of early care and learning capacity.

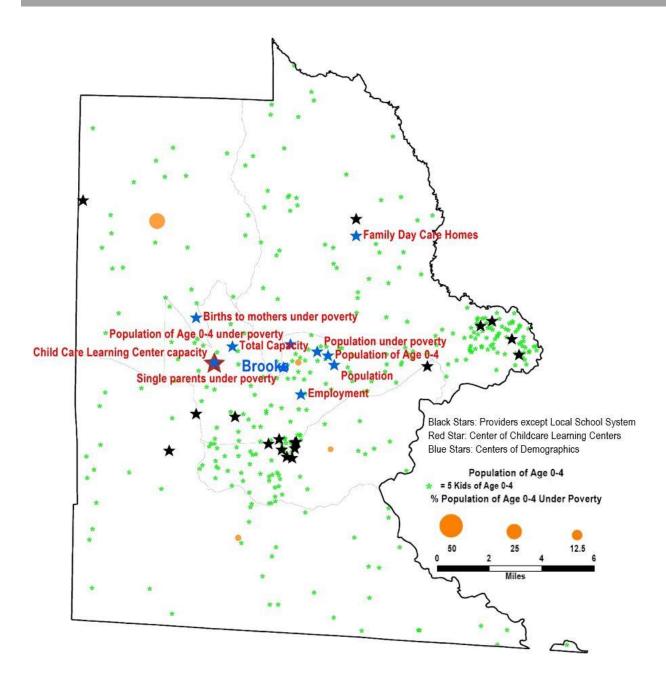
WHITFIELD COUNTY		
Description		
Population characteristics		
Total population	102,556	
Population of age 0-4	7,851	
% Population of age 0-4	7.65	
2015 Population of age 0-4	8,404	
2020 Population of age 0-4	8,989	
% Population below poverty line	20.46	
% Population of age 0-4 below poverty line	32.80	
% Teen birth	12.49	
% Birth to mothers below poverty line	34.00	
% Birth to mothers on public assistance	2.90	
House characteristics		
Total households	34,450	
% with Vehicles	94.7	
% Single-parent families below poverty line	6.45	
Employment characterizes		
Total employment	57,878	
Capacity characteristics		
Total capacity	1,614	
Child care learning center capacity	1,542	
Family day care home capacity	72	
% Capacity as a ratio of children of age 0-4	20.55	
Distance from center of day care capacity in miles		
Population	0.95	
Population of age 0-4	1.09	
Population below poverty line	1.64	
Population of age 0-4 below poverty line	1.79	
Births to mothers below poverty line	1.92	
Single parents under poverty	1.79	
Family day care homes	0.034	
Employment	3.68	
County area in square miles	291	



#### **BROOKS**

- The county only has 47 slots (center and family day care homes) for an estimated 993 children thereby covering less than 5 percent of children ages 0 to 4.
- The location of center slots is relatively central to the need variables.

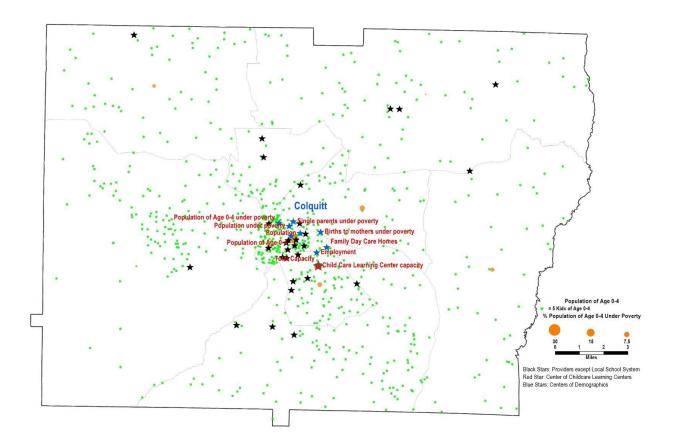
BROOKS COUNTY		
Description		
Population characteristics		
Total population	15,885	
Population of age 0-4	993	
% Population of age 0-4	6.25	
2015 Population of age 0-4	1,043	
2020 Population of age 0-4	1,052	
% Population below poverty line	24.01	
% Population of age 0-4 below poverty line	22.17	
% Teen birth	21.95	
% Birth to mothers below poverty line	10.00	
% Birth to mothers on public assistance	11.21	
Households characteristics		
Total households	6,573	
% with Vehicles	93.0	
% Single-parent families under poverty	4.65	
Employment characteristics		
Total employment	3,052	
Capacity characteristics		
Total capacity	47	
Child care learning center capacity	41	
Family day care home capacity	6	
% Capacity as a ratio of children of age 0-4	4.73	
Distance from center of day care capacity in miles		
Population	3.42	
Population of age 0-4	3.73	
Population below poverty line	3.62	
Population of age 0-4 below poverty line	2.61	
Births to mothers below poverty line	2.42	
Single parents below poverty line	2.54	
Family day care homes	9.51	
Employment	2.25	
County area in square miles	498	



#### **COLQUITT COUNTY**

- The county has seen an increase in the population of children younger than 4, and the current capacity serves about 20 percent of that age group.
- Slots are concentrated relatively close to employment but are south of several demand/need variables.

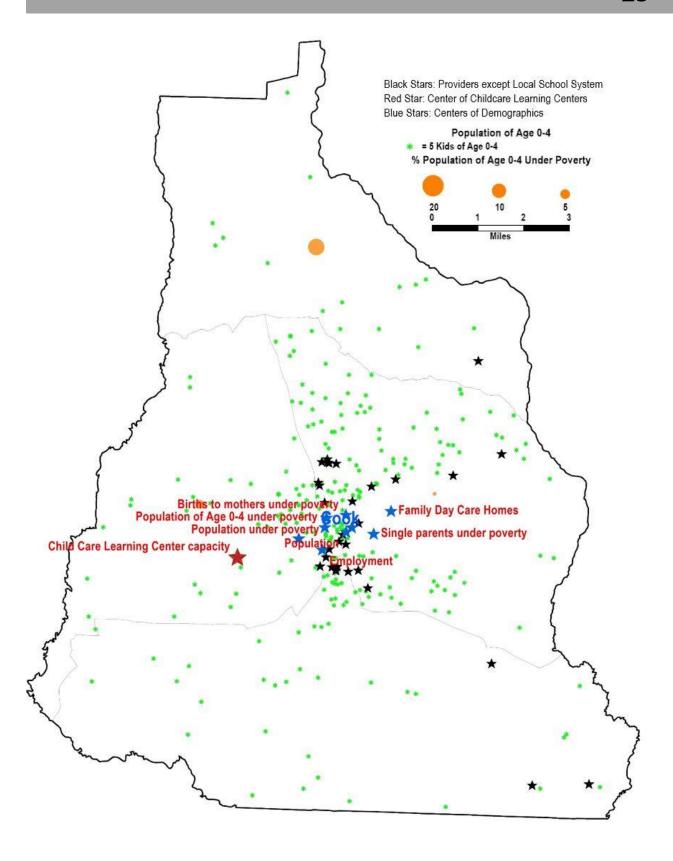
COLQUITT COUNTY		
Description		
Population characteristics		
Total population	45,781	
Population of age 0-4	3,781	
% Population of age 0-4	8.25	
2015 Population of age 0-4	3,974	
2020 Population of age 0-4	4,274	
% Population below poverty line	26.67	
% Population of age 0-4 below poverty line	43.28	
% Teen birth	12.16	
% Birth to mothers below poverty line	47.00	
% Birth to mothers on public assistance	3.37	
Households characteristics		
Total households	15,918	
% with Vehicles	91.1	
% Single-parent families below poverty	9.92	
Employment characteristics		
Total employment	17,154	
Capacity characteristics		
Total capacity	752	
Child care learning center capacity	716	
Family day care home capacity	36	
% Capacity as a ratio of children of age 0-4	19.88	
Distance from center of day care capacity in miles		
Population	1.97	
Population of age 0-4	2.13	
Population below poverty line	2.60	
Population of age 0-4 under poverty	3.07	
Births to mothers below poverty line	1.79	
Single parents below poverty line	2.69	
Family day care homes	1.65	
Employment	0.70	
County area in square miles	557	



#### **COOK COUNTY**

- Current center capacity serves less than 14 percent of children ages 0 to 4.
- Center capacity is located southwest of employment, population, and other demand/need variables.
- There may be services drawn from neighboring counties.

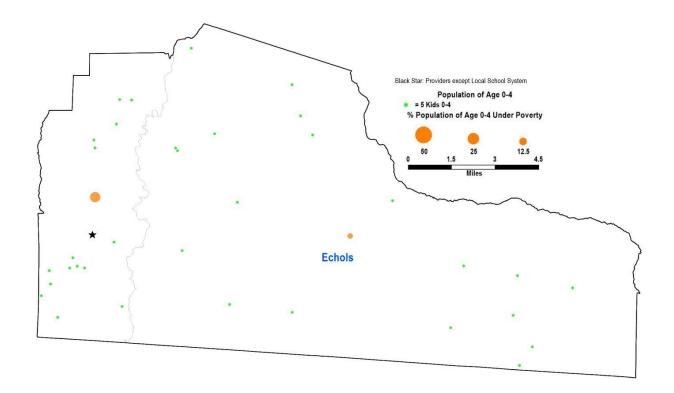
COOK COUNTY		
Description		
Population characteristics		
Total population	17,066	
Population of age 0-4	1,255	
% Population of age 0-4	7.35	
2015 Population of age 0-4	1,323	
2020 Population of age 0-4	1,390	
% Population below poverty line	23.12	
% Population of age 0-4 below poverty line	32.45	
% Teen birth	26.98	
% Birth to mothers below poverty line	40.00	
% Birth to mothers on public assistance	0	
Households characteristics		
Total households	6,308	
% with Vehicles	94.4	
% Single-parent families below poverty line	6.75	
Employment characteristics		
Total employment	4,730	
Capacity characteristics		
Total capacity	174	
Child care learning center capacity	108	
Family day care home capacity	66	
% Capacity as a ratio of children of age 0-4	13.86	
Distance from center of day care capacity in miles		
Population	3.21	
Population of age 0-4	3.40	
Population below poverty line	2.80	
Population of age 0-4 below poverty line	2.66	
Births to mothers below poverty line	3.35	
Single parents under poverty line	3.98	
Family day care homes	4.49	
Employment	2.45	
County area in square miles	233	



#### **ECHOLS COUNTY**

• There is no licensed early care and learning capacity in Echols County.

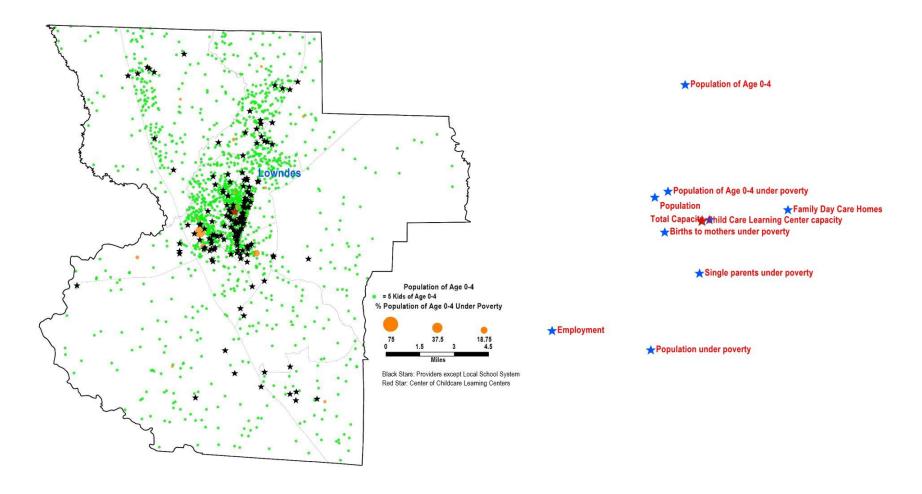
ECHOLS COUNTY		
Description		
Population characteristics		
Total population	4,053	
Population of age 0-4	166	
% Population of age 0-4	4.09	
2015 Population of age 0-4	249	
2020 Population of age 0-4	279	
% Population below poverty line	31.33	
% Population of age 0-4 below poverty line	48.19	
% Teen birth	0	
% Birth to mothers below poverty line	57.00	
% Birth to mothers on public assistance	0	
Households characteristics		
Total households	1,382	
% with Vehicles	93.1	
% Single-parent families blow poverty line	9.08	
Employment characteristics		
Total employment	945	
Capacity characteristics		
Total capacity		
Child care learning center capacity		
Family day care home capacity		
% Capacity as a ratio of children of age 0-4		
Distance from center of day care capacity in miles		
Population		
Population of age 0-4		
Population below poverty line		
Population of age 0-4 below poverty line		
Births to mothers below poverty line		
Single parents below poverty line		
Family day care homes		
Employment		



#### **LOWNDES COUNTY**

- Current capacity covers about 37 percent of the children ages 0 to 4 in the county.
- There may be children from neighboring counties also accessing early care and learning services in Lowndes County.
- The capacity center is somewhat centrally located relative to the demand/need variables.

LOWNDES COUNTY		
Description		
Population characteristics		
Total population	111,334	
Population of age 0-4	8,362	
% Population of age 0-4	7.51	
2015 Population of age 0-4	8,812	
2020 Population of age 0-4	9,615	
% Population below poverty line	24.26	
% Population of age 0-4 below poverty line	34.06	
% Teen birth	9.96	
% Birth to mothers below poverty line	38.00	
% Birth to mothers on public assistance	6.14	
Households characteristics		
Total households	39,722	
% with Vehicles	93.1	
% Single-parent families below poverty line	9.09	
Employment characteristics		
Total employment	52,238	
Capacity characteristics		
Total capacity	3,096	
Child care learning center capacity	2,892	
Family day care home capacity	204	
% Capacity as a ratio of children of age 0-4	37.02	
Distance from center of day care capacity in miles		
Population	0.35	
Population of age 0-4	0.92	
Population below poverty line	0.83	
Population of age 0-4 below poverty line	0.32	
Births to mothers below poverty line	0.23	
Single parents below poverty line	0.28	
Family day care homes	0.83	
Employment	1.14	
County area in square miles	511	



## Potential use of data and analysis

The report provides a detailed look at the geographic dispersion of currently available early care and learning slots (supply) and the demand/need for the same in 12 counties. The raw data demonstrates that in some of the E<sup>3</sup>Zs, capacity is much higher than in others. In general, the current capacity is not located close to demand/need areas (as defined within this report).

The data presented here may provide important input into the decision-making process regarding the expansion of early care and learning slots among the E<sup>3</sup>Zs. There are some caveats or cautions regarding the use of the data for policymaking. First, the demand/need variables may not align with best practices in early care and learning and/or may not align with Georgia's policy design. Second, the issue of transportation is critical for parents and children and should be considered along with the demand/need analysis presented in this report. Finally, there should be consideration of what is happening at the borders of the E<sup>3</sup>Zs presented here because bordering counties in Georgia and Tennessee could be providing needed capacity.

### **About the Authors**

**LAKSHMI PANDEY** is a senior research associate with the Fiscal Research Center. He specializes in working with administrative data and also provides analytical and technical support on research projects, such as welfare to work, the Supplemental Nutrition Assistance Program and unemployment insurance for U.S. Department of Agriculture, census data analysis, geographical information systems, incorporation and cityhood studies, and many others. He received his doctorate from Banaras Hindu University in India and has worked at Washington State University and State University of New York at Buffalo prior to Georgia State University.

**SALLY WALLACE** is associate dean of research and strategic initiatives, professor of economics, and director of the Fiscal Research Center of the Andrew Young School of Policy Studies at Georgia State University. She is also Extraordinary Professor for the African Tax Institute, University of Pretoria, Republic of South Africa. Her previous positions include provost and associate vice president of the International University of Grand Bassam, resident chief of party of the GSU/USAID Tax Reform Project in the Russian Federation, fiscal economist at the U.S. Department of Treasury, and chair of the Georgia State University Department of Economics. Wallace's areas of expertise include behavioral aspects of domestic and international taxation, evaluation of public programs, and fiscal decentralization.

NICHOLAS WARNER, a research associate at the Center for State and Local Finance at Georgia State University, specializes in education finance. His recent research has focused on school district expenditure and revenue portfolio analysis, tax expenditure estimation, examination of Georgia's special option sales tax for school facility funding, and school districts' responses to the Great Recession. His work has been published in the Journal of Education Finance as well as by the Georgia Department of Early Care and Learning. Warner received his master's degree in economics from the Andrew Young School of Policy Studies.

### **About the Fiscal Research Center**

Established in 1995, the Fiscal Research Center (FRC) provides nonpartisan research, technical assistance and education in the evaluation and design of state tax and economic policy. FRC's responsibilities include developing estimates for tax-related fiscal notes, writing the Georgia State Tax Expenditure Budget, supporting the state's economist, and conducting policy and academic research on a variety of topics associated with state tax policy issues.

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

For more information on the Fiscal Research Center, visit our website at: frc.gsu.edu.