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POLICY BRIEF

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Housing Affordability and Commute Times for Essential Economy Workers in Georgia

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Introduction

In 2015, there were over 1 million Essential Economy jobs in Georgia, representing more than 25 percent of all jobs in the state. Essential Economy positions have low barriers to entry, do not require a four-year degree and cannot be easily offshored (Essential Economy Council 2013). These jobs are spatially constrained – that is, they cannot be done outside of specific workplaces. We have found that Essential Economy workers in Georgia frequently work in communities in which they cannot reasonably afford to live. Unaffordable housing in and near the workplace imposes transit and other hardships on the workers unable to live near their workplace and clogs transportation networks in the surrounding area for all drivers (Baumann 2014; Hepler 2014; Sultana 2002). In this brief, we look at the average home affordability gap for Essential Economy workers in Georgia. We start by providing background on Essential Economy workers and why we have focused on this type of worker. Next, we describe the data sources for this study and how we performed our analysis. Finally, we discuss our findings and conclusions.

Background

The relationship between work and home locations has long been a popular topic of research (see, for example, Hanson, Schnier and Turnbull 2012; Edlund, Machado and Sviatschi 2015; Kellett, Morrissey and Karuppannan 2016). The particular tradeoff between housing and transportation expenses for lower-income households has also received some attention, with research finding that for every dollar a lower-income household saves on housing, an additional 77 cents is spent on transportation (Lipman 2005, 2006). Our analysis of Essential Economy (E.E.) workers – including line cooks, retail workers, personal care aids, construction laborers, etc. – zooms in on a sector of Georgia's workforce that is spatially constrained, which brings the

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relationship of home and workplace into sharper focus. For example, a tree-trimmer must work in places where there are trees in need of trimming, and a barista must work in a café; their work cannot be done elsewhere. Often, the housing options near these workplaces are above the reach of an E.E. worker's income.

Data and Methods

We sought to quantify the gap between a home value affordable to an E.E. worker making the average E.E. wage and the median home value in their place of work.[1] To do so, we refined the method Clark, Lodato and Thayer (2018) used to estimate the affordable home value of E.E. workers in Sandy Springs, Georgia, and expanded this analysis to the entire state.

For the analysis, we combined two core datasets: the U.S. Census Bureau's Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics (LODES) data for 2015 (Census Bureau 2017d) and the list of 86 Standard Occupation Codes (SOCs) within the Essential Economy, as provided in the original report (Essential Economy Council 2013). The LODES dataset features Census block group-level data on the number of workers living in any given work-home block group pair. It also includes a geographical crosswalk — enabling aggregation to larger geographies — and files on the characteristics of both home and work block groups, including the number of workers in the block group employed in each two-digit North American Industry Classification System (NAICS) code. We aggregated these data up to the tract level for improved coverage.

The Essential Economy list of SOCs was updated with 2015 data from the U.S. Bureau of Labor Statistics' (BLS) Occupational Employment Statistics (BLS 2018b), including the average income in Georgia for each SOC. This dataset was then paired with the BLS's 2014 crosswalk between SOCs and NAICS codes, yielding the percentage of each two-digit NAICS for each Essential Economy SOC (BLS 2018a). In turn, the crosswalk-based pairing gave an estimate of the E.E. percentage of workers and the weighted average E.E. wage for each two-digit NAICS code.[2] Then, the two core datasets were combined to find the estimated number of E.E. workers per tract with NAICS-weighted average wage for E.E. workers in that tract.

Once this base dataset was complete, we used the estimated E.E. wage for each workplace tract (weighted average annual wage for all tracts: $22,080) to calculate the maximum affordable home value (weighted average affordable home value: $137,370) for workers making that wage by applying standard mortgage industry assumptions and mortgage conditions from 2015 to the wage amount.[3] Additionally, this analysis assumes the most favorable terms for a mortgage in 2015 and uses a NAICS-adjusted but approximate wage, which other data sources suggest may be somewhat high compared to actual wages reported (Minnesota Population Center 2018).

Next, the weighted average affordable home value of each work tract was compared to the median home value for 2015 from the U.S. Census Bureau's American Community Survey (Census Bureau 2017c). By subtracting the median home from the affordable value, we calculated the average home affordability gap for E.E. workers in each work tract.

[1] Home value here acts as a proxy for overall housing cost, including rental housing. We selected this approach in accordance with the economics literature, which holds that a durable good's rental price will equal the user cost for that good in a standard frictionless model (Gallin 2004; Verbrugge 2010; Brown et al. 2011).

[2] We support these E.E. wage estimates from the LODES database by using an alternate data source for comparison. Survey response data from the IPUMS on E.E. workers working in these communities at the tract level provide similar, but typically 8 percent lower, annual wage estimates (Minnesota Population Center 2018).

[3] The formula to calculate maximum home value, ((((wage/12)*0.28)*((1-(1.003208333^{-360}))/0.003208333))/0.8), takes the annual wage amount, divides it by twelve months, and multiplies it by the industry standard of 28 percent to calculate the maximum affordable payment (Karaim 2017). That payment amount was multiplied by a figure that integrates the monthly interest rate (annual rate divided by 12) and number of periods (260, 30 years divided by 12) to calculate the net present value of the maximum affordable mortgage (Freddie Mac 2018). Then, that mortgage was divided by 80 percent to account for a standard 20 percent down payment, yielding the home value (Zillow 2018). This formula was adapted from Boyte-White (2017).

Findings

Based on our analysis, the average unweighted affordability gap in Census-defined places with a population of 15,000 or more was -$35,103 (Census Bureau 2017c). This gap means an E.E. worker can afford a house that would sell for $35,103 less than the value of the median home near their place of work. The severity of the gap naturally varies across geographies. The smallest affordability gap is in the southern half of the state; the largest gaps were seen in major cities like Savannah, Columbus and the northeastern I-85 corridor of Metro Atlanta, as expected. See Figure 1 and Table 1 in the Appendix for more detail.

Conclusions

When workers are unable to live near their workplace, there are several consequences for them and their communities. The longer commutes that the affordability gap may necessitate can make workers more vulnerable to sudden transportation price shocks. This situation not only strains household budgets but potentially disrupts workers' ability to reach work at all to retain employment. Longer commutes also increase traffic congestion for the whole community, imposing monetary and time costs from its inefficiency. Additionally, home location is influenced by the presence of other amenities, such as high-quality schools and alternate transportation options. The types of housing available in a given community also constrain home location (single-family homes versus apartments, for instance). A large affordability gap may distort the ability of consumers to access the amenity bundle most suited to their needs.

Understanding the relationship between home affordability and work type is important for crafting policies that maximize labor allocation and transportation network efficiency. Affordable housing advocates have called for transit-oriented housing development policies, theorizing that they will increase both destination density and workers' capacity to use alternate modes (Hersey and Spotts 2015). They also seek policies that locate affordable housing in job-rich, high-opportunity neighborhoods to ease jobs-housing mismatch and spatial segregation (Austin Turner et al. 2018; Chetty, Hendren and Katz 2016; Ross, Levitt and Sackett 2016), though the efficacy of such policies has yet to be empirically supported (Smart and Klein 2018). This brief profiles the home-work connection for a population of highly spatially-constrained workers to provide more insight into these relationships for policymakers to consider.

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Appendix

Figure 1. Georgia Work Tracts by Gap between E.E. Affordable Home and Median Home Value

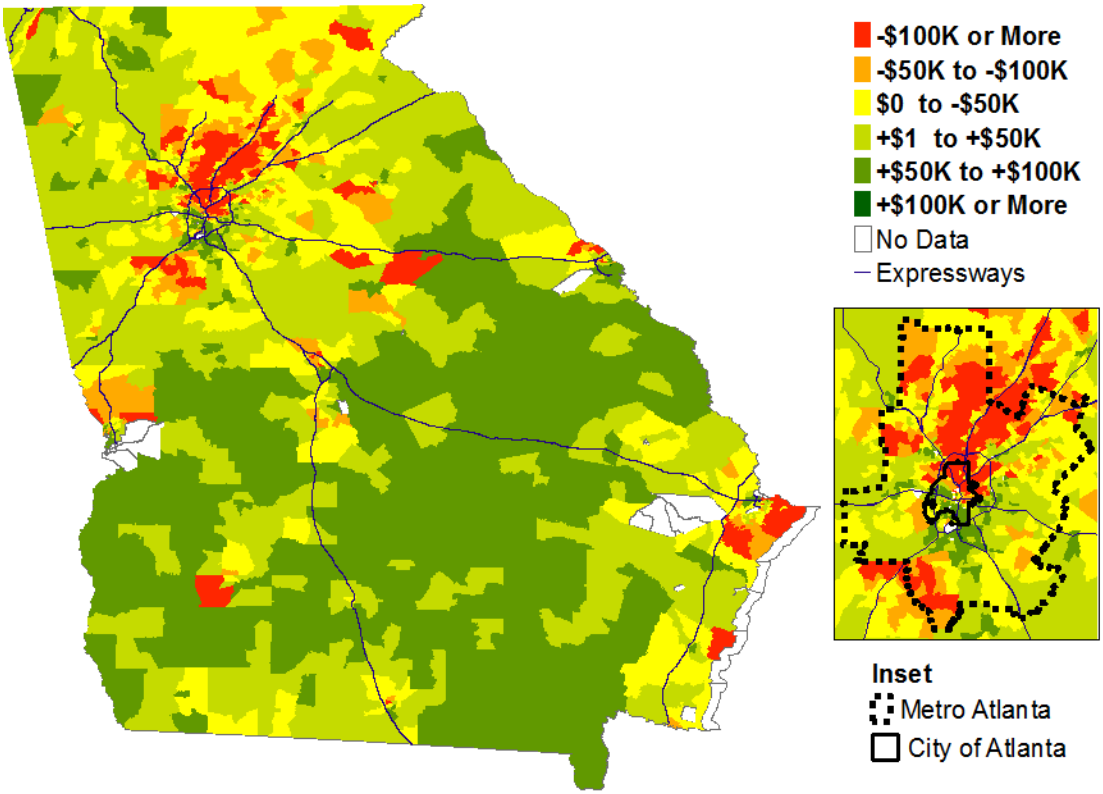

Table 1. Commuting, Housing, and Affordability in the Top 20 Largest Census-Defined Places in Georgia

PLACE NAME	ALL JOBS	E.E. JOBS	E.E. SHARE OF JOBS	AVERAGE E.E. WAGE	E.E. WAGE AFFORDABLE HOME	ACS MEDIAN HOME VALUE	HOME AFFORDABILITY GAP
Atlanta	430,886	103,207	24%	$22,051	$137,187	$209,200	$(72,013)
Columbus	85,863	23,497	27%	$22,048	$137,172	$134,500	$2,672
Augusta-Richmond County	96,040	27,454	29%	$22,075	$137,340	$101,900	$35,440
Macon-Bibb County	83,176	21,851	26%	$21,903	$136,271	$118,800	$17,471
Savannah	98,168	30,401	31%	$22,047	$137,164	$142,000	$(4,836)
Athens-Clarke County	66,337	174,23	26%	$22,045	$137,151	$150,500	$(13,349)
Sandy Springs	117,662	25,103	21%	$22,114	$137,580	$415,600	$(278,020)
Roswell	52,760	15,596	30%	$22,071	$137,314	$297,000	$(159,686)
Johns Creek	26,288	6,191	24%	$22,036	$137,094	$333,300	$(196,206)
Albany	36,762	10,287	28%	$22,066	$137,283	$98,200	$39,083
Warner Robins	21,415	69,10	32%	$22,016	$136,969	$110,000	$26,969
Alpharetta	83,914	17,062	20%	$22,087	$137,415	$327,000	$(189,585)
Marietta	52,016	11,651	22%	$22,158	$137,856	$211,500	$(73,644)
Valdosta	32,411	10,081	31%	$22,037	$137,100	$125,700	$11,400
Smyrna	31,156	7,386	24%	$22,141	$137,749	$216,000	$(78,251)
Brookhaven	27,075	7,164	26%	$25,295	$157,370	$368,300	$(210,930)
Dunwoody	42,958	10,661	25%	$22,065	$137,278	$367,800	$(230,522)
Peachtree Corners	40,910	8,620	21%	$19,844	$123,461	$280,100	$(156,639)
Gainesville	27,338	7,047	26%	$22,081	$137,377	$139,200	$(1,823)
Rome	2,3296	6,438	28%	$22,045	$137,152	$123,200	$13,952

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