

INTRODUCTION

This manuscript details the final outcomes of my Spatial Justice Studio (SJS) Fellowship project. Since receiving the SJS Fellowship, there have been several primary deliverables produced from the project. First, an academic paper has been written, submitted, and is currently under review at a peer-reviewed academic journal. Second, a newspaper op-ed article has been written and published. Third, this final report, and within it, a blog-post style mini-report, has been written and submitted to the Spatial Justice Studio.

DELIVERABLE #1: ACADEMIC PAPER

An academic paper has been written and submitted to the journal *Housing Studies*. It is currently under review. I co-wrote the paper with three undergraduate research assistants. Rachel Midgett, Lindsay Webb, and Jaylyn Headed all contributed. Rachel is a Sociology major at Winston-Salem State University (WSSU), Lindsay Webb is a Peace & Conflict Studies major at UNC-Greensboro, and Jaylyn Headen is a Justice Studies major at WSSU. Our paper contributes to the literature in being one of the first empirical examinations of the relationship between housing-type/stock segregation and social capital. Moreover, we are the first to empirically examine a possible causal mechanism linking the two, specifically housing type segregation’s effect on income segregation in schools. We estimate a structural equation model to test these relationships, separated by the type of county (metropolitan, non-metropolitan, etc.) and find evidence in support for our hypothesis. Specifically, we find statistically significant evidence that housing type segregation decreases social capital (measured as economic connectiveness) through its promotion of increased segregation-by-income in counties’ underlying schools. We also found evidence that housing type segregation effects social capital through a wide variety of other county variables.

Table 1 contains the estimated direct, indirect, and total effects of housing type segregation on childhood-economic connectiveness. The total indirect effects are always negative, regardless of county type. For the direct effects, there is a negative effect in large metropolitan counties, while the effect is positive for the other sets of counties.

Table 1. Direct, Indirect, and Total Effect of Housing-Type Segregation on Childhood Economic Connectiveness

Effect Type	Large Metropolitan	Small or Medium Metropolitan	Micropolitan	Non-Core
Direct Effect	-0.00093	0.11065	0.03500	0.19732
Total Indirect Effect	-0.20129	-0.00873	-0.03130	-0.03986
Total Effect	-0.21056	0.10192	0.00370	0.15746

Note: The Total Indirect Effect is just the sum of the indirect effects. The Total Effect is the sum of the Direct Effect and the Total Indirect Effect.

Table 2 contains the estimated indirect effect of housing type segregation on childhood-economic connectiveness through income segregation in schools, for the four different sets of counties. For the four sets, the effect of housing-type segregation on income integration in schools is negative, and the effect of income integration on childhood social capital is positive.

Table 2. Estimated Indirect Effects of Housing-Type Segregation on Childhood Economic
Connectiveness through Income Integration in Schools

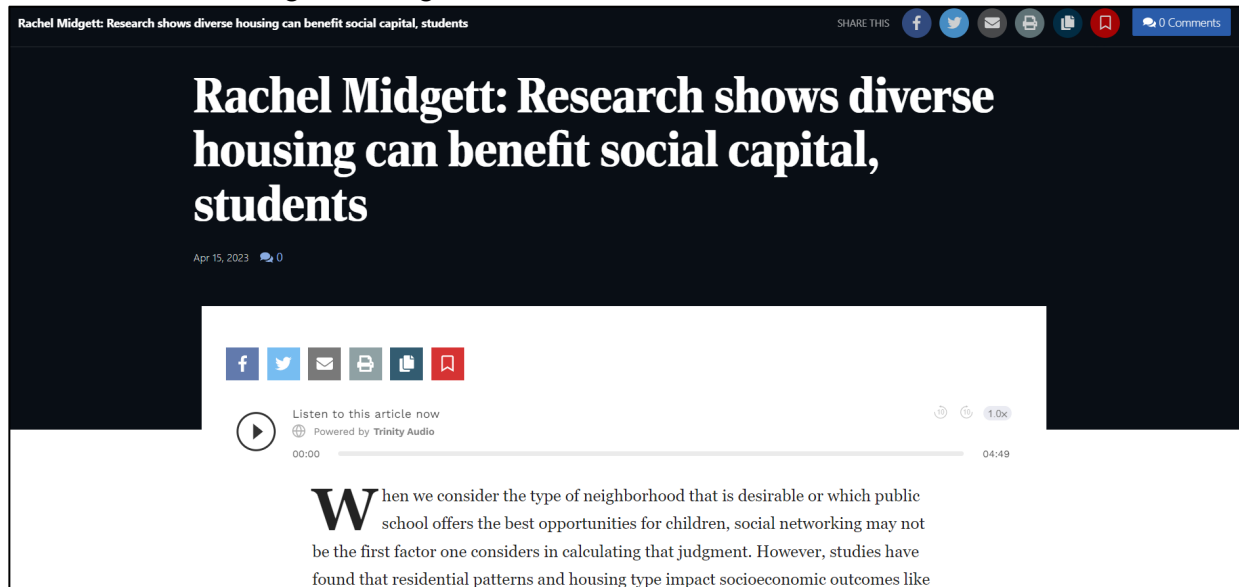
County Type	Indirect Effect	Key Output Variable		Direct Effect of Mediating Variable on Output Variable		Mediating Variable		Direct Effect of Key Input Variable on Mediating Variable		Key Input Variable
Large Metropolitan	-0.10020	Economic Connectedness in Childhood	←	0.32174	←	Income Integration in Schools	←	-0.31143	←	Housing Type Segregation
Small - Medium Metropolitan	-0.07313	Economic Connectedness in Childhood	←	0.32389	←	Income Integration in Schools	←	-0.22578	←	Housing Type Segregation
Micropolitan	-0.15469	Economic Connectedness in Childhood	←	0.48495	←	Income Integration in Schools	←	-0.31898	←	Housing Type Segregation
Non-Core	-0.13076	Economic Connectedness in Childhood	←	0.36083	←	Income Integration in Schools	←	-0.36240	←	Housing Type Segregation

Note: The analysis dataset included all the counties in the U.S. except for the counties in Alaska, the District of Columbia, Florida, Louisiana, Vermont, Wyoming, and Puerto Rico. Data close to the year 2010 were used to align with the measure of economic connectiveness.

DELIVERABLE #2: NEWSPAPER OP-ED ARTICLE

Rachel Midgett wrote and published an op-ed article in the *Winston-Salem Journal*. Rachel writes in the op-ed about our research, how it relates to the research agenda of the Spatial Justice Studio, and how our findings have implications for our own county of Forsyth. Her article can be found here: https://journalnow.com/opinion/columnists/rachel-midgett-research-shows-diverse-housing-can-benefit-social-capital-students/article_3aa7f17c-db12-11ed-b716-af1bdcc94edf.html.

Figure 1. Image of *Winston-Salem Journal* Article Publication



DELIVERABLE #3: MINI-REPORT/BLOG-POST

In this section, Rachel Midgett and Lindsay Webb write a mini-report/blog post expanding on the larger study, but focused specifically on Forsyth County, N.C. They both wrote it without much involvement from me, beyond some small editing suggestions.

Study Overview:

The Spatial Justice Studio has completed a study that delves into the intricate relationship between housing type segregation and social capital outcomes among children. Theoretical evidence suggests that urban sprawl could impact social capital by limiting social connectedness among people of diverse socioeconomic backgrounds. Our study tests this theory by quantitatively examining the mechanisms that link housing type segregation and social capital, focusing on the economic segregation levels among elementary schools primarily.

We chose U.S. counties as our unit of analysis as it is a stable geographic unit with similar governmental functions and separated counties into four categories based on their population size. To measure economic connectedness in childhood, we referenced data for high school students. In addition to exploring the relationship between income segregation in schools and housing type segregation, we included several other variables in our analysis. These variables include population density, homeownership, racial segregation, racial/ethnic diversity, income inequality, labor force participation, unemployment, commuting methods, job accessibility, migration patterns, crime, poverty, housing vacancy, education attainment levels, single

mothers, marriage stability, local government expenditures, local tax rates, incomes, economic productivity, and religiosity. To quantitatively analyze these relationships we used a structural equation model for our analytical approach.

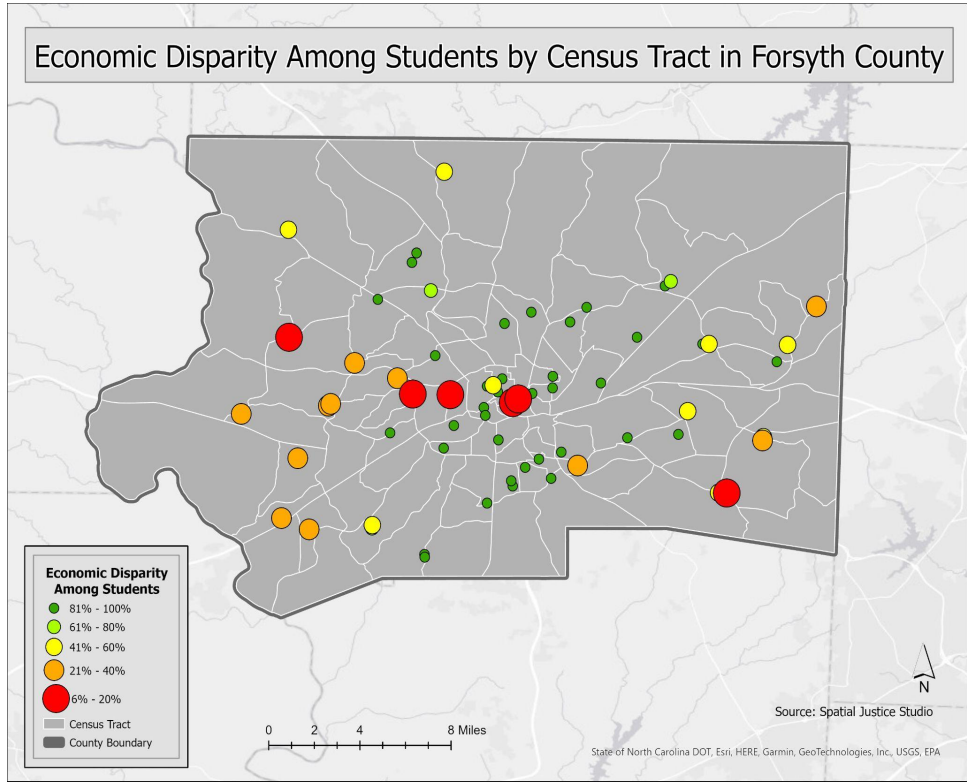
Ultimately, we found that housing type segregation adversely affects childhood social capital outcomes because it exacerbates income segregation and disparity in schools. These findings are supported by the empirical evidence that shows that this trend remains consistent across all county sizes. However, effects for some variables differ across different county sizes. Further research could further our understanding of the underlying causes for these differences.

Local Lens:

By investigating the relationship between housing stock segregation and economic connectiveness among school children in Forsyth County, the objective was to uncover the potential effects of housing type on economic connectedness. We analyzed 66 public schools in the county including the city of Winston Salem and the surrounding townships such as Clemmons, Kernersville, Lewisville, Pfafftown, Rural Hall, Tobaccoville, and Walkertown. All schools teach grades K-8 and include public charter schools, magnet, and alternative schools.

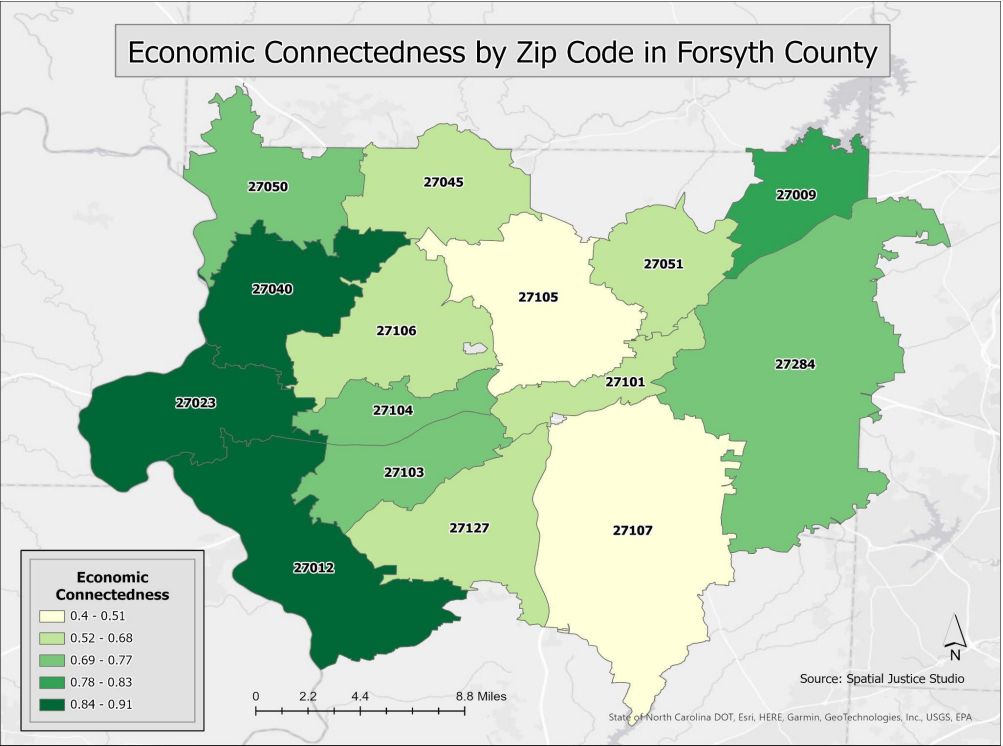
Understanding Economic Disparity and Social Capital:

Economic disparity was assessed by comparing the enrollment of students in free or reduced-price lunch programs to those who are not within the student population of each school. This examination provided valuable insights into the allocation of economic resources across schools within the county. 37 out of 66 schools or 56% of schools in the county are 81% -100% economically integrated. The majority are located in Winston-Salem's inner city. On average, better economically integrated schools have fewer total enrolled students. One-third of the schools analyzed are less than 50% economically integrated. These schools are evenly distributed across rural, suburban, and inner-city areas.



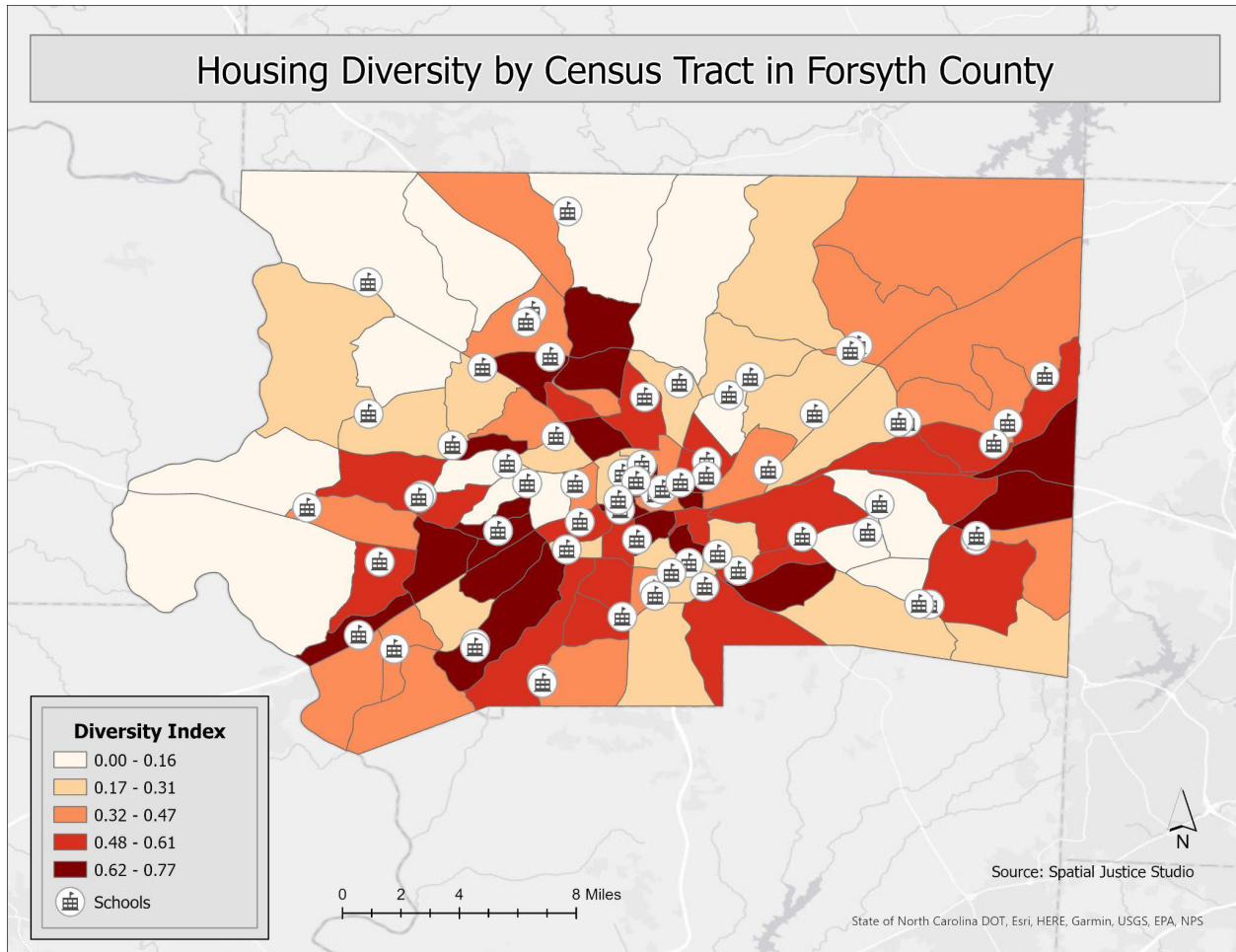
Mapping Economic Connectedness:

A noteworthy pattern observed was the correlation between economic connectedness and income segregation in schools. Schools situated in areas characterized by higher economic connectedness tended to exhibit greater income segregation among students. Conversely, schools with lower income segregation were associated with reduced levels of economic connectedness.



Exploring Housing Structure Diversity:

Another vital aspect investigated was housing type segregation, denoting the variation in housing types within a given area. Our analysis revealed intriguing disparities across the county, with certain areas such as Pfafftown, Tobacoville, Rural Hall, and specific parts of East and Northeast Winston Salem exhibiting low housing type integration.



Unveiling the Relationship:

Through the comparative analysis of housing stock segregation and economic connectedness, a significant relationship was identified. Areas characterized by lower housing type integration tended to display higher levels of economic connectedness among children. This suggests that a lack of housing type segregation might impede the equitable distribution of economic resources and opportunities within the county.

Striving for Equitable Economic Connectedness:

Based on the study's findings, fostering housing type integration and diversity emerges as a pivotal factor in achieving a more equitable distribution of economic connectedness among school children. By promoting a balanced mix of housing options, interactions and relationships across diverse socioeconomic backgrounds can be facilitated, thereby potentially bridging the existing gaps in economic disparities.

Looking Ahead:

This study offers valuable insights into the interconnectedness of housing structure diversity, economic connectedness, and income disparities among school children. It underscores the need for purposeful initiatives aimed at establishing a more balanced distribution of economic resources throughout the county. These results are important for government officials to consider for city planning and economic development policies. For example, relaxing zoning rules and requirements to promote mixed-land use and

diverse housing development would promote more income integration within schools. This, in turn, would improve economic connectedness among children and improve their potential for increased social capital.

Conclusion:

As societies strive for greater inclusivity and equity, addressing economic disparities among school children assumes paramount importance. Recognizing the potential of housing structure diversity to foster economic connectedness, concerted efforts can be made toward cultivating a more cohesive and supportive community. The findings from this study serve as a call to action for policymakers, educators, and community members to prioritize initiatives that encourage a range of housing options, ultimately bridging the gaps in economic disparities.