

## **Introduction**

The fraction of people enrolled in Supplementary Security Income (SSI) varies substantially across the United States – even across small geographic areas. For example, in Chicago, 7.1 percent of households receive SSI benefits. This city average masks considerable variation across census tracts, ranging from a low of 0 percent to a high of greater than 49 percent. The geographic variation in SSI participation rate within the city of Chicago is large. However, what accounts for the variation is not well understood. One plausible explanation is inconsistent SSI program administration – variation in SSI application allowance and denial rates resulting from the discretion of the Social Security Administration (SSA) disability examiner. Other potential explanations for geographic variation in SSI enrollment include variations in disability prevalence, SSI application costs, proximity of SSA offices, and access to health care services.

## **Research question**

This research project explores how much of the variation in SSI participation within Chicago is related to economic and demographic differences of residents across census tracts. Firstly, local economic conditions can have an important effect on the number of individuals applying for and ultimately being awarded SSI benefits. As economic conditions deteriorate, the value of searching for a new job or continuing in one's current job declines. According to economic theory, one would expect this effect to induce some individuals to shift from the labor force to disability insurance for their primary means of support. Secondly, it is also plausible that demographic characteristics of residents in a given census tract influence their fraction receiving SSI benefits. Different demographic groups have different risks of disability. The changing age distribution across census tracts in Chicago could be important given that SSI receipt is strongly

related to age. SSI participation disparities can also be associated with determinants of health including gender, race, and educational attainment.

## **Data**

This research project uses the American Community Survey (ACS) which is the national source of high-resolution geographic information about the American population. ACS includes variables measuring detailed socioeconomic and demographic characteristics of households as well as their participation in public assistance programs (e.g., SSI) at the census tract level. SSI enrollment in a given census tract is measured by the fraction of households receiving SSI benefits and the share of SSI benefits relative to their total income. Different aspects of labor market conditions within Chicago can be captured by different variables: labor force participation, earnings, and poverty rate. Demographic indicators include age, gender, and race composition across census tracts in addition to the percentage of the workforce that has a high school education.

## **Results**

Figure 1 shows the share of household receiving SSI benefits for each census tract in Chicago in 2020. The census tracts are divided into categories, with darker shades representing categories with greater enrollment rate in SSI. The red lines indicate the borders of the 77 community areas/neighborhoods in Chicago. Figure 1 shows a concentration of the highest SSI participation rate in the majority of the Southern census tracts e.g., all the census tracts in South Deering and most of the census tracts in Englewood and West Englewood, as well as in the West side of Chicago, such Austin and East and West Garfield Park. The share of households benefiting from SSI is lowest in central Chicago and most of the Northern neighborhoods – Lincoln Park, Lakeview and North Center to name a few. However, the regions of Chicago are not completely homogenous: Residents in Hyde Park in the South do not receive SSI benefits whereas most of the

census tracts in Uptown in the North show a participation rate between 5-11%. Figure 1 also illustrates the substantial variation in the SSI enrollment rate across census tracts within a single community area. For example, most of the census tracts in Logan Square have less than 2% of participation rate in SSI but there are a few with a moderate rate and one census tract falling in the category of the largest SSI enrollment rate.

Figures 2-4 explore how much of this variation in SSI participation within Chicago is associated to economic differences of residents across census tracts. Figure 2 shows the median household income of census tracts in Chicago in 2020. Similarly, Figure 3 maps the share of households falling below the federal poverty line, which depends not only on total household income, but also on the size of the household, the number of people in the household who are children, and the age of the householder. The comparison of these two maps with the SSI enrollment reveals that SSI enrollment rate is negatively correlated with the median household income and positively associated with the poverty status: most of the census tracts with the highest share of SSI enrollment fall into the category of the lowest median household income and the highest levels of poverty, and vice versa. This is reasonable because SSI benefit receipt is conditional on having low-income levels. The third measure of economic indicator is employment rate (Figure 4). On average, the correlation between SSI participation and employment seems to be negative but not as strong as the correlation between the two previous economic measures. For examples, Calumet Heights community area in the South has a big SSI enrollment rate but also high levels of employment.

Figures 5 and 6 try to discern the relationship between SSI enrollment, educational attainment, and age distribution across census tracts in Chicago. In the Northern region where the SSI participation is low, the share of residents with at least a high school degree is greater than

87% in most of the census tracts. The opposite is true for most the Western side of Chicago where this educational achievement rate can be as low as 50%. However, this negative correlation between the two variables does not apply for the Southern neighborhoods of Chicago: The majority of the census tracts with very high levels of SSI participation exhibit a large share of residents with a high school degree or above. Similarly, the age profile does not seem to be highly correlated with SSI enrollment: the residents in the far North side and the Northwest side of Chicago are on average old but their SSI enrollment rate is low. The relationship between SSI benefits receipt and economic indicators is stronger than other demographic and social indicators.

### **Conclusion**

This research project shows that the fraction of people enrolled in SSI varies considerably not only across neighborhoods of Chicago and but also within community areas. The variation in SSI participation is highly correlated to economic indicators, such as income and employment, but less related to demographic or social differences of residents across census tracts of Chicago.

Figures

Figure 1

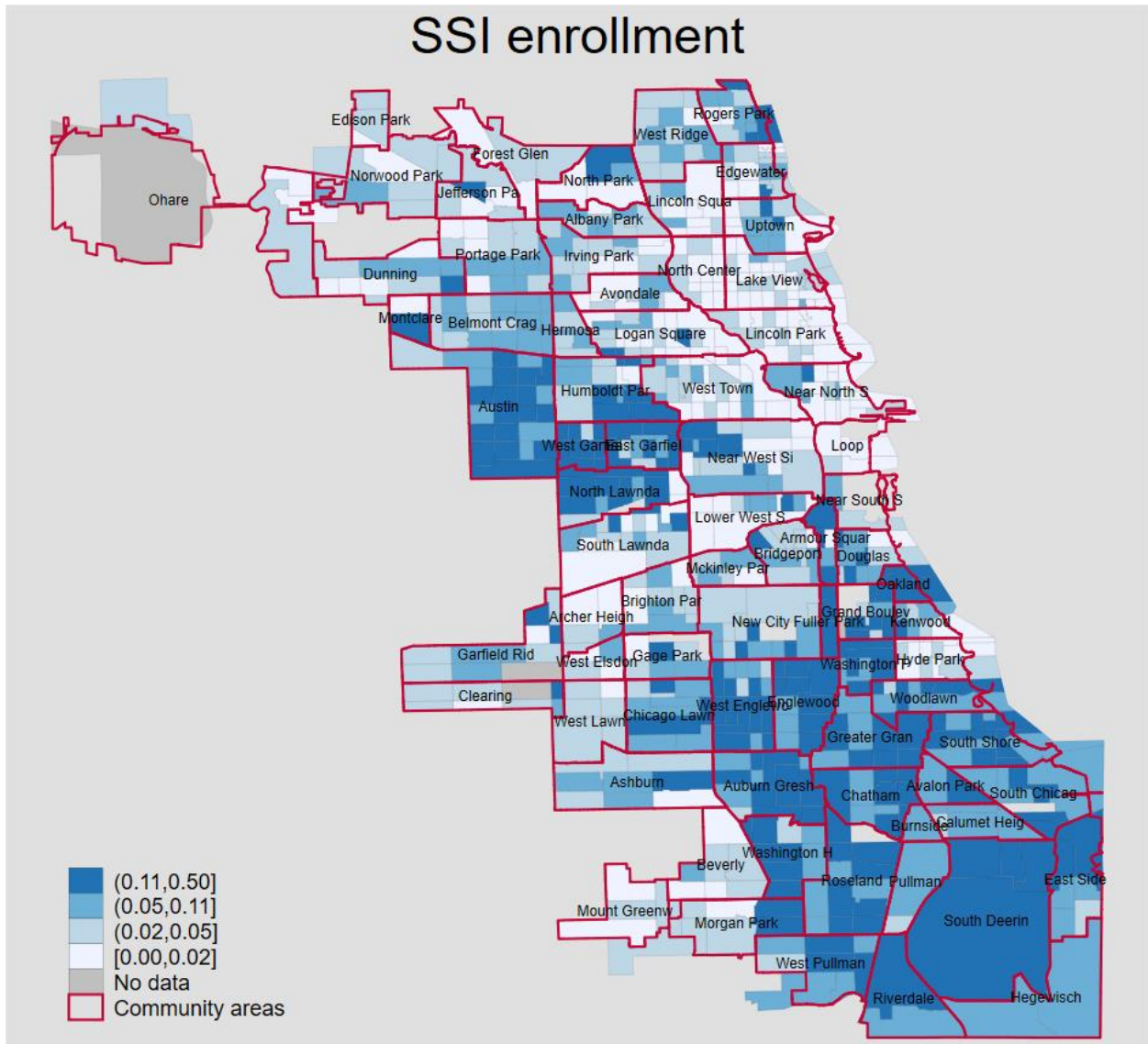


Figure 2

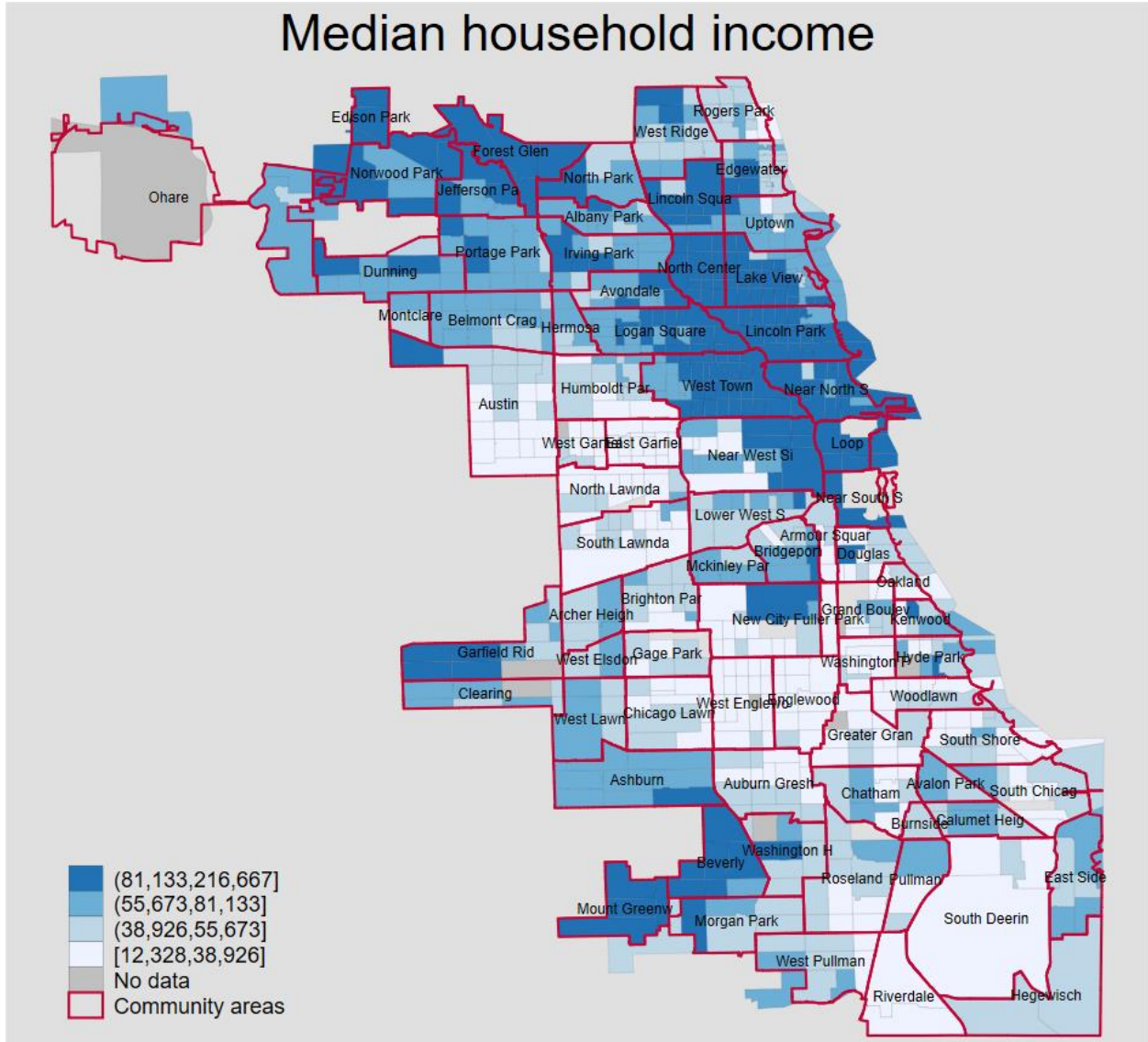


Figure 3

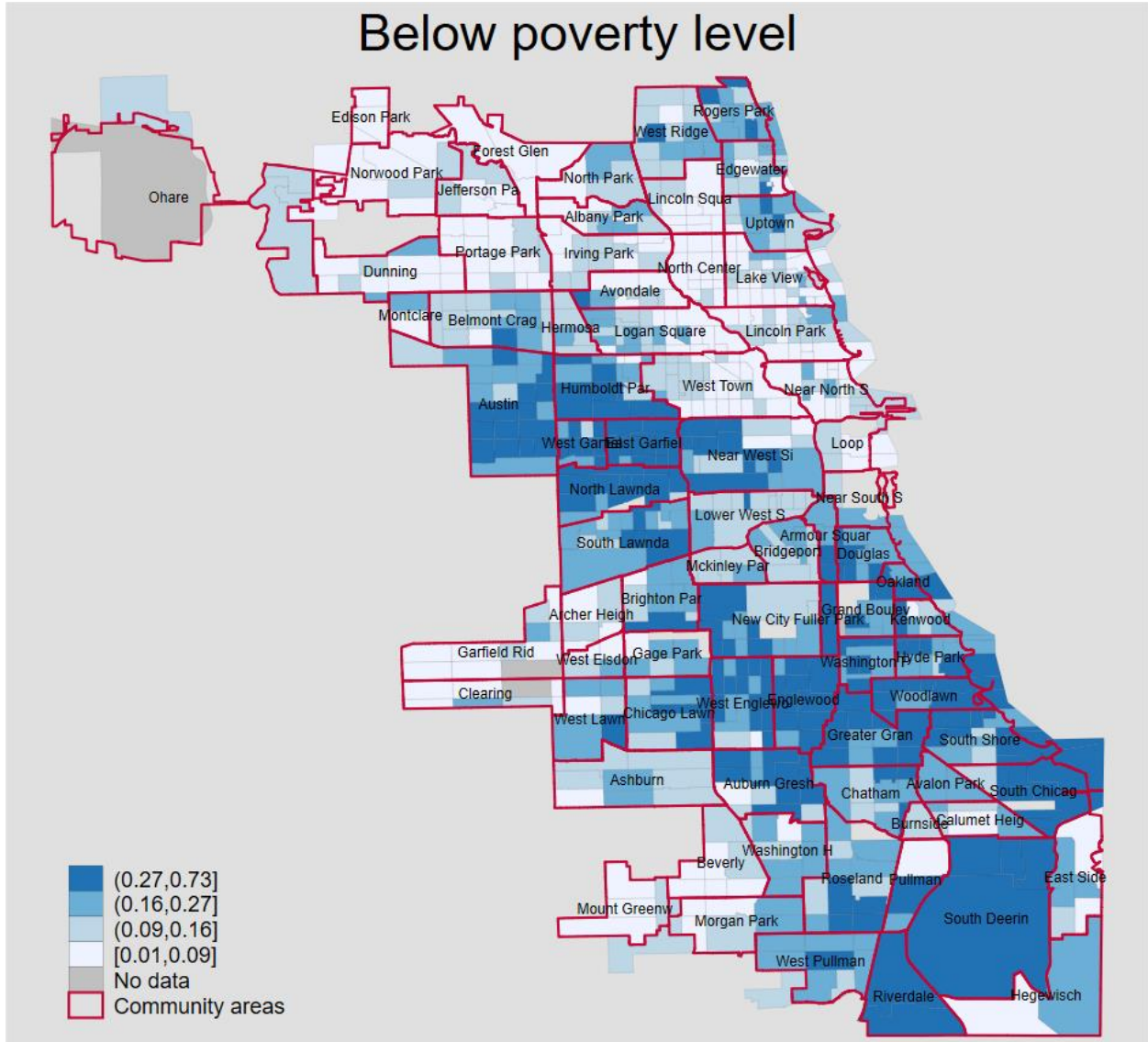


Figure 4

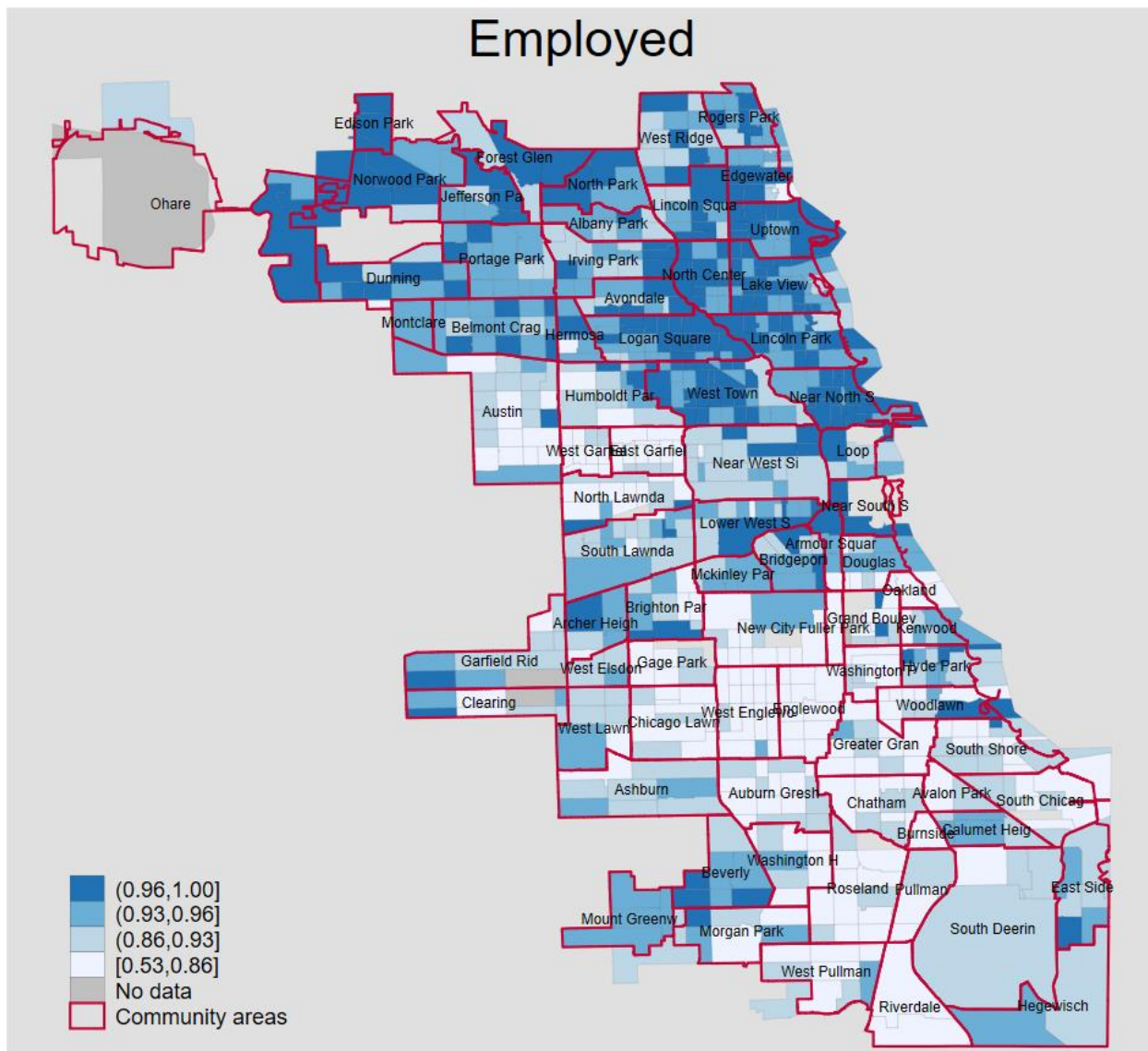




Figure 5

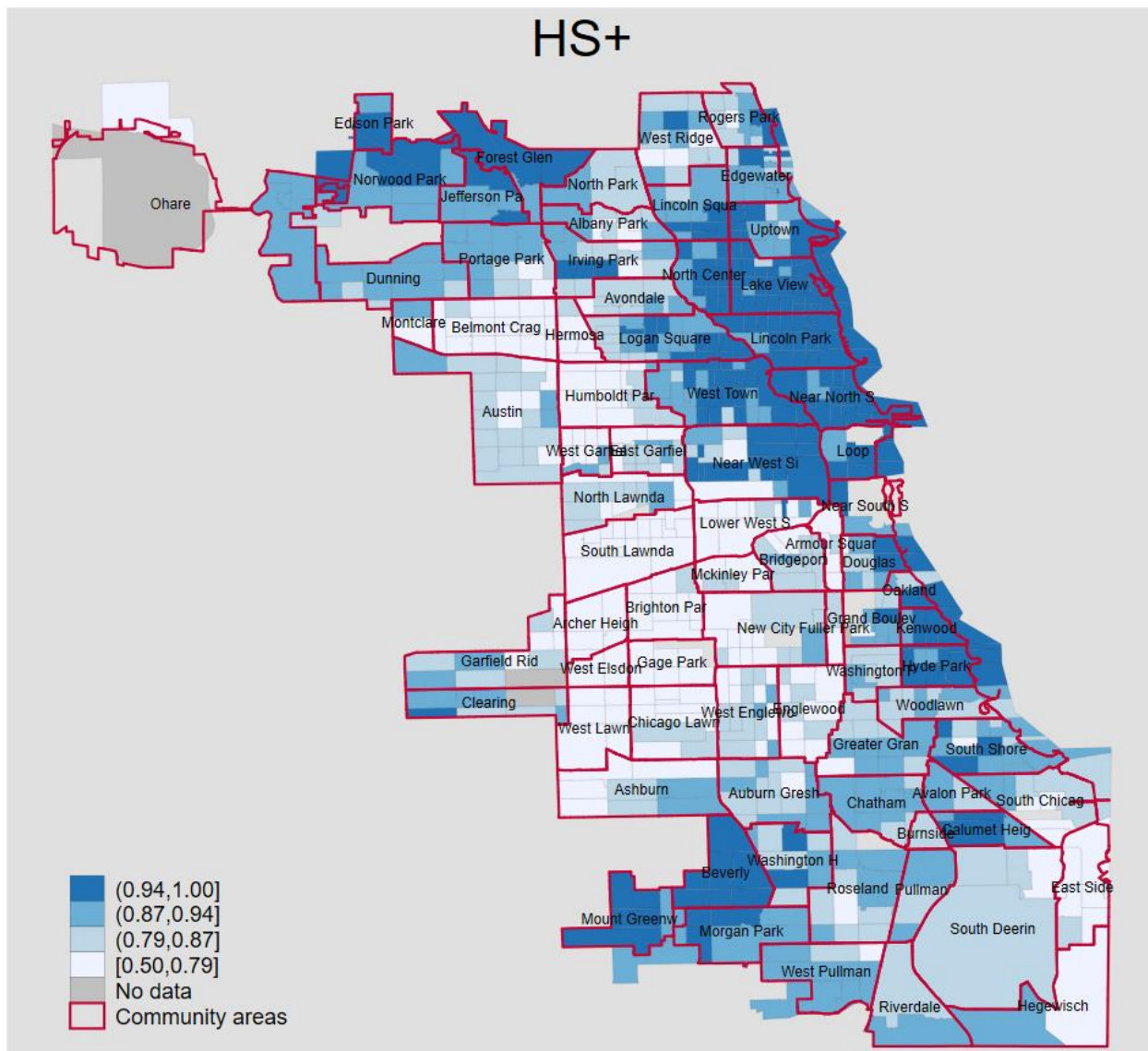


Figure 6

