To what extent do variations in definitions of rent burden and vacancy result in different geographies, yielding potential sites for greatly needed affordable housing?

The laws of supply and demand project that areas of high housing demand would have few vacant spaces. Yet, across New York City and beyond, areas of both high rates of vacancy and rent burden currently exist. Our project attempts to exploit the co-location of these two geographies with vacancy rates through discussions of how varying definitions and methodologies lend themselves to important policy decisions. In the process, we are interested in defining two geographies which capture the paradigmatic spatial relationship and present opportunities for the potential of affordable housing sites.

Definitions hold great power over the extent of the population benefiting from a socioeconomic policy. We are interested in understanding varying definitions of vacancy and rent burden. Through different mapping approaches, we will explore the phenomenon of vacancy and rent burden clusters and how variations in definitions and spatial analysis impact the outcomes.

DEFINITIONS

Three definitions of each term housing and rent burden will be explored. The standard definitions that are currently used in housing policy and programs will be denoted as the “traditional” definitions in our project for vacancy, this will refer to the Census Bureau’s vacancy rate or vacant properties. This will refer to the U.S. Department of Housing and Urban Development’s policy of identifying 30% or more of housing stock as vacant.

For rent burden, the second definition uses the PLUTO tax lot data where we will extract subsets of the shapefile that are categorized as vacant land.

Finally, the third definition of vacancy will use a data set of the shapefile that are categorized as vacant land. Definitions hold great power over the extent of the population benefiting from a socioeconomic policy. We are interested in understanding varying definitions of vacancy and rent burden. Through different mapping approaches, we will explore the phenomenon of vacancy and rent burden clusters and how variations in definitions and spatial analysis impact the outcome.

MAPPING

Census Tracts - The majority of the data we used were found embedded within census tract geographies. In the case of rent burden, tracts where more than half of people were rent burdened were visualized for both the traditional 30 percent threshold and the 40/30 rule, while for residual income, tracts making higher than average income were visualized. In the case of vacancy, the top 50 percent of tracts were visualized.

Kernel Density - In the creation of kernel density maps, circular surfaces are placed over vacant lots. These surfaces vary in value, from the values in highest at the location of the vacant lot to a function with increasing distance, reaching zero 500 feet from the lot. Next a raster map is created, with each raster cell value depicting the density. To do this the values of all of the surfaces that overlap the raster cell, where they overlap the raster cell, are summed. The symbology of the kernel density map is created, with each cell value mapped into a single color scale. An unexpected high rates of both rent burden and vacancy occur within the South Bronx and eastern Brooklyn.

FINALLY MATRIX OVERLAY

These are not just geographies of hipstocracy, but geographies of opportunity. We find that not only proving the existence of these geographies, but targeting them for localized intervention, is crucial in confronting the city’s affordability crisis. So What should we do about them?

As we have identified through the existence of these geographies, the laws of the market do not serve these residents, leaving high rates of vacancy in the areas of the city most in need of affordable housing. The unexpected high rates of both high rent burden and high vacancy can be seen across the city, covering great swaths of land and affecting areas not just for low-income. This analysis shows that not only do these geographies exist, but that they seem to be disproportionately impacting low-income communities of color in the outer boroughs.

We decided to conduct further analysis of these areas to see what they have in common, and what kind of activity might be occurring within these geographies that might be linked to such unexpected high rates of both rent burden and vacancy. Both areas consist of about four community districts and five or six neighborhoods.

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The limitations of this study, as well as the implications of this analysis, will be discussed in the following section.

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