Revitalization for Whom? A Critical and Spatial Analysis of Chicago's Neighborhood Opportunity Fund

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Submitted in partial fulfillment of the requirements for the degree of:

BACHELOR OF ARTS IN ENVIRONMENTAL AND URBAN STUDIES, PUBLIC POLICY STUDIES, AND GEOGRAPHICAL SCIENCES

at THE UNIVERSITY OF CHICAGO

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April 18, 2022

Abstract

Decades of segregationist housing policies, disinvestment, and structural racism have stratified urban America into wealthier and whiter neighborhoods, and poorer communities of color. The former typically have healthy commercial districts, while the latter struggle to keep businesses alive and attract investment. In response to this, government, non-profit, and private sector actors have attempted place-based solutions, which aim to improve the lives of residents in historically disinvested communities by creating new resources, including businesses. This study examines one such place-based strategy: the City of Chicago's Neighborhood Opportunity Fund (NOF), which is only about six years old and is little studied. It is one of an extremely limited number of large, municipally-run and -financed commercial revitalization programs.

The qualitative section of this mixed-methods study analyzes the structure of the NOF, evaluating it against the literature on commercial revitalization and hypothesizing about its efficacy and potential for gentrification considering this literature. The quantitative section uses several datasets from the City of Chicago and the US Census Bureau to answer three questions: What is the spatial distribution of NOF grants? Are grants disproportionately awarded to certain groups, with regard to demographic, social, economic, housing, and transportation characteristics? And are grants being awarded to gentrifying areas? Given that the ultimate goal of the NOF should be the improvement of people's lives in Chicago's most under-resourced neighborhoods, the study finds that the program is structured poorly to do so, and it may exacerbate gentrification and displacement. The study also finds that grants are distributed unevenly across space, with clustering in Little Village, Bronzeville, and South Shore; grants do not disproportionately affect any particular group; and while the program does not disproportionately award grants to gentrifying neighborhoods, certain neighborhoods at high risk of gentrification do receive a large number of grants, namely Bronzeville. These results are used to craft policy recommendations. This study will be most directly useful to the City of Chicago as they realign NOF eligibility criteria and structure to achieve better results. More broadly, urban planners and policymakers will find this study useful as they craft future neighborhood revitalization efforts.

Acknowledgements

This project would not have been possible without the support of a great number of people.

Emily Talen, my advisor, has stoked my love for urbanism throughout the past four years and provided valuable guidance. She introduced me to the Neighborhood Opportunity Fund, and she has acted as a sounding board for ideas and offered valuable feedback and throughout this process.

Damien Bright, my preceptor, deserves many thanks for all our deeply insightful and challenging conversations. Damien provided me with incisive feedback and pushed me to follow my instincts. Without him, this study would have been significantly more boring to write and to read.

Kristi Del Vecchio and Maria Bautista also provided excellent feedback and encouragement.

Sofia Carey at the City of Chicago's Department of Planning and Development provided me with the data I needed to complete this project and kindly took time to answer my questions.

The entire Program on the Global Environment is filled with inspiring and kind souls, and I am thankful for the education they have provided me with.

Most of all, I cannot thank my family and friends enough for their support and for the love and joy they have filled my life with.

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1. Introduction

Decades of disinvestment from neighborhoods on the South and West sides have created a severely stratified Chicago. While Whiter and wealthier neighborhoods enjoy well-maintained and -funded commercial districts, less wealthy communities of color are often left without either. As of 2019, the median low-poverty neighborhood in Chicago receives 4.3 times as much investment per household as the median high-poverty neighborhood.[1] This enormous economic gulf between Chicago's neighborhoods is the result of decades of structural racism. During the Great Migration, banks codified discriminatory lending practices, and the Chicago Real Estate Board and numerous court decisions upheld them. Racially restrictive covenants, blockbusting, and redlining were employed to crush the chances for multi-racial neighborhoods and Black homeownership, and there is a wealth of literature tracing the ways in which these racist practices directly led to present-day urban inequality.[2]

In response to the spatial inequality present in American cities, a popular approach on the part of local governments and nonprofits, as well as community groups and corporations, has been the place-based strategy: attempts to build back up neighborhoods through the addition of resources and physical improvements to disinvested areas. These strategies stand in contrast to people-based ones, which target specific individuals or groups for direct aid. One place-based strategy is the City of Chicago's ("the City") Neighborhood Opportunity Fund (NOF). Created in 2016, the NOF leverages funds from large developments in and around Chicago's central business district. Grants

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[1] Theodos et al., "Neighborhood Disparities in Investment Flows in Chicago."
[2] Aaronson, Hartley, and Mazumder, "The Effects of the 1930s HOLC 'Redlining' Maps"; Appel and Nickerson, "Pockets of Poverty: The Long-Term Effects of Redlining"; Krimmel, "Persistence of Prejudice: Estimating the Long Term Effects of Redlining"; Rothstein, *The Color of Law: A Forgotten History of How Our Government Segregated America*; Sadler and Lafreniere, "Racist Housing Practices as a Precursor to Uneven Neighborhood Change in a Post-Industrial City."

are then awarded to small businesses located on specific commercial corridors in historically disinvested and under-resourced South and West Side neighborhoods.

Waxman writes, "as planners, we are taught to improve places. But should that be our ultimate goal?"[3] This study is rooted in the premise that the ultimate goal of city planning, neighborhood commercial revitalization,[4] and the NOF ought to be the improvement of people's lives, and it is from this point of departure that I scrutinize the NOF.[5] I seek to answer two overall questions: Is the NOF structured effectively to improve lives? And who does the program affect? This study is mixed methods in nature, with the qualitative section seeking to answer the first question, and the quantitative section seeking to answer the second.

The thought processes going into the construction and maintenance of the NOF on the part of the City are, for the most part, not explicitly stated. City actors' theories of change regarding how the NOF will improve the lives of South and West side residents (if they also consider that to be the goal of the program) are very opaque, and it is quite possible that these actors do not have firm ideas about it, themselves. By analyzing City documentation, the structure of the program, and the spatial characteristics of the grants it has distributed thus far, I generate policy recommendations that can further the goal of improving quality of life for residents of under-resourced urban neighborhoods.

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[3] Waxman, "WHY IMPROVE NEIGHBORHOODS? Shifting the Goals of Inner City Neighborhood Commercial Revitalization," 31.

[4] "Neighborhood commercial revitalization" refers to investment in commercial property, including rehabilitation, improvements, and new development, to generally improve the conditions of an economically depressed neighborhood. This study uses the terms "revitalization" and "commercial revitalization" to mean neighborhood commercial revitalization. The NOF is a neighborhood commercial revitalization program.

[5] "Improvement of lives" is not a self-explanatory term, and it invites ethical debates, but for the purpose of this project I assume that economic, social, mental, and physical health and stability facilitate a good life. Interventions to improve quality of life should especially alleviate suffering for the most severely disadvantaged. In the context of disinvested and under-resourced Chicago neighborhoods, a good intervention should effectively and efficiently reverse the conditions that perpetuate suffering, inequality, and violence, and it should create the conditions for health. This study pays particular attention to economic health, but other relevant factors are also considered.

While this study targets one specific initiative in Chicago, it will be useful to other city governments as they pursue their own place-based strategies, as well as to residents and activists in those cities who should take a critical stance when it comes to revitalization initiatives in their communities. The study will be of special interest to Chicago policymakers and urban planners, as well as to non-government actors in the neighborhood revitalization sphere.

Public, place-based interventions have primarily come from the federal level,[6] and these programs are accompanied by a large literature.[7] In recent years, a handful of local-level, public, place-based initiatives like the NOF have cropped up, but given the small size and relative youth of the programs, they are much less well studied. Since programs like the NOF are so young, the literature on this newest wave of publicly funded, municipal level, place-based initiatives is practically nonexistent. This study fills a gap in the commercial revitalization literature by evaluating a municipal revitalization program which has yet to be studied in depth.

Methodologically, I use literature review, point pattern analysis, statistical testing, and mapping, concluding that while NOF grants are reaching the audiences they were intended to reach, albeit via an uneven spatial distribution, the program is not structured optimally to improve lives. The links between the physical presence of neighborhood small businesses and quality of life are tenuous, and the structure of the NOF makes it likely to exacerbate gentrification and displacement in neighborhoods which are at risk for the phenomena. These results are used to create policy recommendations for the City of Chicago, namely branching out from the focus on small

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[6] These include Empowerment Zones (EZs), Opportunity Zones (OZs), New Markets Tax Credits (NMTC), and Community Development Block Grants (CDBG).

[7] Galster et al., "Measuring the Impact of Community Development Block Grant Spending on Urban Neighborhoods"; Gelfond and Looney, "Learning from Opportunity Zones: How to Improve Place-Based Policies"; Harger and Ross, "Do Capital Tax Incentives Attract New Businesses? Evidence across Industries from the New Markets Tax Credit"; Neumark and Kolko, "Do Enterprise Zones Create Jobs? Evidence from California's Enterprise Zone Program."

businesses, increasing democratic control over the program, and revoking eligibility for gentrifying neighborhoods.

First, the background section (ch. 2) describes in greater detail the history, funding mechanisms, and political economy of the NOF. The literature review and critical analysis (ch. 3) constitutes the qualitative section of this mixed-methods study, analyzes the structure of the NOF, evaluating it against the literature on commercial revitalization, and commenting on its efficacy and potential for gentrification considering this literature. It also includes a review of similar studies with attention to methodological choices. Chapters 4 describes all datasets used for this study's quantitative analysis and how they were coerced into desirable formats for this study. Chapters 5-7 describe this study's quantitative analyses: point pattern analyses, a resident characteristics analysis, and a gentrification analysis. Policy recommendations for the City of Chicago are offered (ch. 8) followed by a conclusion (ch. 9).

2. Background

The Neighborhood Opportunity Fund was created in 2016 when then-Mayor Rahm Emanuel's administration revised the extant floor area bonus system, which allowed developers to construct larger buildings if they made on-site investments including ground level plazas and arcades. Under the new regulations, developers would be granted the same bonus if they instead paid into the brand-new NOF: a South and West side neighborhood commercial revitalization fund. Emanuel also expanded the borders of Chicago's downtown zoning district to generate more money for this fund.[8] In its first few years the program faced criticism from aldermen, who bemoaned its lack of accountability and claimed that winning projects were determined by politics,[9] as well as from business owners who echoed this sentiment and felt that the application process was too complicated.[10] When Mayor Lori Lightfoot took office, she criticized the Emanuel administration's failure to award more than $890,000 in grants, and she absorbed the NOF into her larger INVEST South/West (ISW) initiative. She also changed the structure of the program, offering recipients more upfront capital to address financing issues.[11]

Initiated in 2019 under Lightfoot's administration, ISW is an initiative aiming to "marshal the resources of multiple City departments, community organizations, and corporate and philanthropic partners toward 12 commercial corridors within 10 South and West side community areas."[12] The multifaceted initiative has involved new, mixed-use development; public investments in parks, schools, housing, and libraries; historic preservation; transportation improvements; public art;

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[8] City of Chicago Office of the Mayor, "Mayor Emanuel Introduces New Downtown Bonus System to Generate Funds for Neighborhood Commercial Development Projects"; Ruthhart, "Emanuel: Charge Downtown Developers More, Spend Money in Struggling Neighborhoods."
[9] Spielman, "Emanuel Moves to Shed 'Mayor 1%' Label with Neighborhood Development."
[10] Sabino and Cherone, "After Rahm's 'Smoke And Mirrors,' Lightfoot Claims Neighborhood Opportunity Fund As Her Own."
[11] Sabino and Cherone.
[12] City of Chicago, "INVEST South/West."

and streetscape improvements.[13] Given that they broadly have the same goals of targeted neighborhood reinvestment and revitalization, it makes sense that the NOF would be absorbed into ISW.

The NOF now represents an important part of ISW, as it is the singular way in which small businesses receive direct support from the initiative.[14] Also indicative of the NOF's significance is the fact that it makes up a major part of the DPD's involvement in ISW.[15] According to the City, the ISW program aims to leverage $750 million in funds in its first phase, $250 million of which are from the DPD. The NOF is one of only two pieces that make up this DPD commitment, the other being tax increment financing (TIF) funding.[16] Thus, the NOF represents a major part of the DPD's efforts to revitalize commercial corridors in disinvested Chicago neighborhoods.

The City's description of ISW – and by extension, the NOF – as "unprecedented" is not erroneous.[17] There are an extremely limited number of local, publicly-run and -financed commercial revitalization programs in the US, and those that do currently exist are not more than 10 years old. Arguably the only comparable program to the NOF is Seattle's Equitable Development Initiative (EDI). Created in 2015, the fund aims "to support projects that address displacement and lack of access to opportunity for historically marginalized communities in Seattle."[18] The program will distribute up to $6.8 million in the 2021 round, which is paid for by taxpayers. Much like the NOF,

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[13] City of Chicago, "INVEST SOUTH/WEST Two-Year Update."
[14] City of Chicago Department of Planning and Development, *INVEST South/West Kickoff Celebration: Englewood, Auburn Gresham and New City*, 31:20; City of Chicago Department of Planning and Development, *INVEST South/West: A New Collaboration for Chicago's South and West Sides*, 4:51.
[15] Unlike in some other cities (e.g., New York, with the New York City Economic Development Corporation) Chicago's Department of Planning and Development handles the City's economic development initiatives.
[16] City of Chicago Department of Planning and Development, *INVEST South/West Kickoff Celebration: Englewood, Auburn Gresham and New City*, 31:20.
[17] City of Chicago, "INVEST South/West."
[18] Seattle Office of Planning & Community Development, "2021 Round Equitable Development Fund Guidelines," 2.

the fund is a place-based approach, and it provides grants to organizations which support under-resourced communities. Unlike the NOF, though, Seattle's EDI does not have geographic criteria. Rather, applications are reviewed by the city planning office and evaluated based on how well the support the city's overall equity plan. There is a greater emphasis on nonprofits and social services compared to the NOF's business focus. The EDI's structure allows for more flexibility and a more holistic approach to thinking about community benefits in the application review process. However, this structure also creates questions about transparency and accountability.

To receive a Neighborhood Opportunity Fund grant, businesses must apply and be selected by an advisory committee made up of eleven members from a variety of Chicago organizations, mostly nonprofits with economic development focuses. Grants can be awarded to both new businesses and to existing businesses for renovations and expansion, and funding can only be used for specific purposes such as land acquisition, environmental remediation, façade improvements, and architectural fees.[19] As of August 2021, the NOF has committed about $28 million to 164 projects.[20] The program has very specific geographic criteria, and applicants must have a physical location on an eligible commercial corridor to be considered.

[19] City of Chicago Department of Planning and Development, "Neighborhood Opportunity Fund Small Grants Program Manual," 12–13.
[20] City of Chicago, "Neighborhood Opportunity Fund."

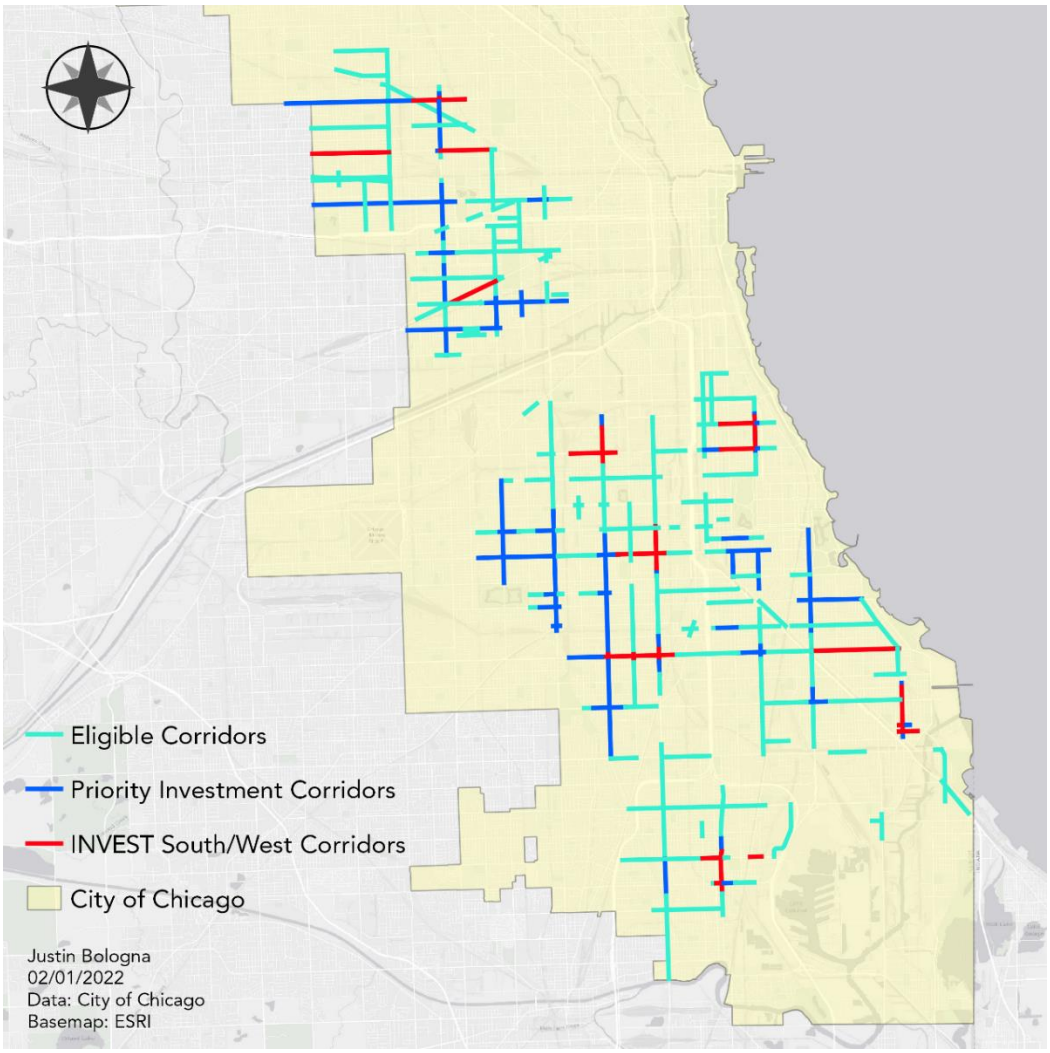

Figure 1: NOF-Eligible Corridors

3. Literature Review and Critical Analysis

This chapter offers a critical analysis of the Neighborhood Opportunity Fund considering the literature on neighborhood commercial revitalization. By examining the literature on revitalization, the structure of the NOF, and the City's description of it, I conclude that the links between distributing grants to neighborhood small businesses and improving quality of life for neighborhood residents are weak, and the program may lead to gentrification in some locations.

A great deal has been written about neighborhood and commercial revitalization, but much of this literature deals with revitalization techniques not relevant to the NOF and/or not relevant to the scope of this study. For example, while many books and journal articles discuss the efficacy of using housing as a tool to revitalize neighborhoods,[21] the NOF only funds commercial development. In this chapter, first, I review the foundational study for the NOF in its own section. Then there is a discussion of the program's ideological underpinnings. Then, in the heftiest section, I review studies on the theorized mechanisms by which revitalization initiatives might improve lives, and I evaluate whether the NOF aligns with each mechanism, and whether or not it should. Next, I review other considerations surrounding revitalization and what might make it effective. Finally, I review spatial studies of grant distributions to inform the methodological approach for the quantitative part of this study.

[21] Brown, Brown, and Perkins, "New Housing as Neighborhood Revitalization"; Ellen et al., "Housing Production Subsidies and Neighborhood Revitalization"; Lens, "The Limits of Housing Investment as a Neighborhood Revitalization Tool"; Varady, "Neighborhood Confidence."

3.1 Delmelle: The Foundation for the NOF's Spatial Eligibility Criteria

Delmelle's 2016 study serves as the academic foundation for the NOF.[22] Delmelle identifies and attempts to fill a gap in the literature: there has been very little research attempting to map the long-term trajectories of urban neighborhoods in a robust, quantitative way. Her study offers a novel methodology for studying spatiotemporal patterns of neighborhood socioeconomic change. The study uses socioeconomic, housing, and demographic variables from 5 US Censuses (1970-2010.) "The approach first involves establishing discrete classes of neighborhoods following a k-means clustering procedure and then applies a sequential pattern mining algorithm to determine the similarity of longitudinal sequences. Sequences are then clustered to derive a typology of neighborhood trajectories."[23] Essentially, Delmelle uses an algorithm to identify the most common neighborhood socioeconomic trajectories.

Via this novel methodology, Delmelle identified 10 "sequence clusters" of Chicago census tracts: "Upgrading form Struggling," "Blue Collar to Young Urban," "Stable Young Urban," "Stable Older Suburban," "Stable Older Suburban to Blue Collar," "Persistently Struggling," "Stable Blue Collar," "Blue Collar to Struggling," "Newer Suburban to Stable Older Suburban," and "Newer Suburban."[24] A comparison of Delmelle's map of "Persistently Struggling" tracts to a map of NOF eligibility reveals that this category was the foundation for the NOF eligibility. Delmelle's identification of neighborhood trajectories in general and the City's subsequent choice to target the one representing persistent economic disadvantage appears to be a methodologically robust way to identify neighborhoods in need of revitalization, at least at a broad scale. By using Delmelle's work,

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[22] Delmelle, "Mapping the DNA of Urban Neighborhoods: Clustering Longitudinal Sequences of Neighborhood Socioeconomic Change."
[23] Delmelle, 36.
[24] Delmelle, 43–46.

the City has done a good job of identifying, at a high level, neighborhoods to target for revitalization.

However, the City's spatial eligibility criteria stop here, at a scale which may not be fine enough to maximize social good with a finite amount of funding. On a technocratic level, the City's spatial criteria for NOF funding are good, but might not be specific enough to be called optimal. The quantitative section of this study zooms in one step further to identify patterns within the subset of neighborhoods which are eligible for NOF grants. Every neighborhood, block, and street is a unique social, cultural, and economic setting, and there is a need to investigate where, within the set of eligible areas, NOF funding is going.

3.2 Maranion and the NOF's Ideological Underpinnings

At this point, it is useful to discuss the only piece of academic writing on the NOF to date. Maranion's 2021 article in the student journal of the University of Chicago Crown Family School of Social Work, Policy, and Practice describes the background of the NOF and analyzes the program in terms of political economy.[25] Maranion convincingly argues that "Chicago's NOF can be understood as, predominantly, a spatial Keynesian approach with elements of neoclassical principles, and thus one that invites a neo-Marxist critique."[26]

Keynesians broadly advocate for government intervention where the market has failed or become unstable. They support government expenditure to simulate demand where the market has slumped. Since the NOF is, at its core, a city program that redistributes funds to historically under-resourced neighborhoods that see very little investment, it is, at its core, Keynesian. The neoclassical elements of the NOF identified by Maranion are the preservation of freedom of choice for grant

[25] Maranion, "The Power of Place: An Analysis of Chicago's Neighborhood Opportunity Funds."
[26] Maranion, 35.

recipients in terms of what type of business they opt to pursue, as well as its positive stance towards market participation.[27] The program is fundamentally based upon the premise that entrepreneurial endeavors are a promising means to lift people out of poverty. The neo-Marxist critiques that can be made of the NOF are various, but they all stem from the proposition that capitalism fundamentally creates economic inequality, so encouraging entrepreneurship in communities which have been exploited by capital will not advance equity.

Maranion offers a highly articulate and thoughtful exploration of critiques that could apply to the NOF, eventually coming to the logical conclusion that the NOF ought to be radically democratized if there is any hope of it truly serving the populations it is intended to serve. This sentiment has been expressed and taken a step further by several theorists on urban political economy. Perhaps most famously, David Harvey raises this issue in his discussion of the right to the city. After arguing that global finance capital is the driving force of urbanization, constantly remaking the city, commoditizing it, and dispossessing those who lack capital in the process, Harvey calls for "greater democratic control over the production and utilization of the surplus [generated by urban development.]"[28]

An important move that Maranion does not make, perhaps because it falls outside the scope of her relatively brief article, is questioning the premise of "revitalization" in general. She states that place-based interventions all assume "public intervention can and will encourage the private investment needed to reinvigorate underserved areas."[29] But what does "reinvigorate" even mean here? What would that look like? This question is left unanswered by Maranion, but the following subsection of this study seeks to address it.

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[27] Maranion, 33.
[28] Harvey, "The Right to the City," 37.
[29] Maranion, "The Power of Place: An Analysis of Chicago's Neighborhood Opportunity Funds," 34.

3.3 Mechanisms by which Revitalization Improves Lives

To define desirable revitalization and evaluate the NOF, one of the largest questions that must be answered is: by what mechanism(s) can urban commercial revitalization improve people's lives? Quite often, entities engaged in commercial revitalization work do not even try to address this question, and if they do, their theory of change is often vague, incomplete, and/or stated only implicitly. This is a fundamental problem with place-based initiatives. Individuals involved in planning, revitalization, economic development, and similar work may act as if improving places is their final goal rather than explicitly outlining the next step of how improved places improve peoples' lives. This can be because the actors do not find the question important to interrogate, they do not know, or even because they wish to obscure a political agenda and avoid scrutiny.

For instance, the National Main Street Center (NMSC) is a highly important actor in the field of commercial revitalization, describing itself as "the leading voice for preservation-based economic development and community revitalization," and broadly aiming to bring economic vitality back to downtowns across the country.[30] Why they pursue this mission, though, requires some interpretation. Their website states that Americans deserve to live in "a place that has a thriving local economy, is rich in character, and features inviting public spaces that make residents and visitors feel that they belong," and that "across the country, thousands of communities have used the Main Street Approach to transform their economies, leverage local leadership, and improve overall quality of life." Their Spring 2020 report measures impact in terms of dollars reinvested, buildings rehabilitated, net gain in jobs, and net gain in businesses.[31]

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[30] National Main Street Center, "The Movement."
[31] National Main Street Center, "State of Main," 14.

It seems that NMSC aims to improve the lives of the members of participating communities via some combination of job creation, tourism revenue, fostering leadership, and access to resources and amenities, but this is only a best interpretation since nowhere on their website is a theory of change stated. The disconnect too often seen between revitalization work and the material improvement of people's lives is reminiscent of Sidney Harris's "then a miracle occurs…" cartoon, and Chicago's NOF does not escape this critique.

Interactions between neighborhood commercial development and residents' lives are highly complex and they cannot be easy and intuitively described. Still, a review of the literature reveals five main mechanisms by which urban commercial revitalization is theorized to improve lives: job creation, community economic self-sufficiency, resource access, the retention of middle-income residents, and the construction of a health-promoting built environment. Below, the evidence for each theorized mechanism is reviewed, and the NOF is discussed in the context of each.

3.3.1 Job Creation

Job creation has often been used as a metric for the success of a commercial revitalization. Indeed, NOF materials mention "neighborhood employment" as a goal of the program,[32] albeit less frequently than other metrics of success. If a revitalization initiative supports or creates businesses, the theory goes, there will be more local employment opportunities for members of under-resourced communities, contributing to the alleviation of poverty and a virtuous cycle of economic growth. Yet, this theory is problematic for several reasons, especially in the context of small businesses.

First, the number and quality of jobs created by small businesses are questionable. There is extensive evidence proving that wages are lower at small firms compared to large ones. Oi and Idson

[32] City of Chicago Department of Planning and Development, "Neighborhood Opportunity Fund Small Grants Program Manual," 3.

find a 35% wage gap between workers at large firms and small ones.[33] Zipp also finds that jobs at small firms offer lower wages, as well as less stability and worse benefits.[34] However, he also finds that employees of small businesses were more satisfied with their work. A highly influential 1996 paper by Davis et al. debunks common contemporary rhetoric about the job creating power of small businesses in the manufacturing industry.[35] Using US Census Bureau data, they prove that small firms account for fewer jobs than large ones. They also demonstrate the riskiness of small businesses and the precarity that accompanies employment in one. From 1972-1988, the one-year survival rate for both existing jobs and newly created jobs was much higher among large firms compared to small ones (0.92 versus 0.81 for existing jobs and 0.76 versus 0.65 for new jobs).

Another critique of the job creation mechanism is that there are not strong links between physical proximity to jobs and the likelihood of employment at those firms. Using Brooklyn's Red Hook neighborhood as a case study, Kasinitz and Rosenberg's 1996 article finds that social links were much more important predictors of employment than geographical ones.[36] Red Hook was a neighborhood with a large number of blue-collar jobs as well as a large number of residents of low socioeconomic status. A survey of employers found that most jobs were held by non-residents who found them though social networks that residents did not have access to. And as Teitz argues, the economies of American cities are so regionalized (and now globalized) that the neighborhood economy is not a good way to understand labor markets.[37] Teitz was writing in 1989, and in 2022 this critique has become radically truer. Moreover, residents will not necessarily have the skills or qualifications required to fill newly created jobs.

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[33] Oi and Idson, "Chapter 33 Firm Size and Wages."
[34] Zipp, "The Quality of Jobs in Small Business."
[35] Davis, Haltiwanger, and Schuh, "Small Business and Job Creation: Dissecting the Myth and Reassessing the Facts."
[36] Kasinitz and Rosenberg, "Missing the Connection."
[37] Teitz, "Neighborhood Economics."

While job creation is certainly a benefit of neighborhood economic development, the number and quality of jobs created by NOF-funded businesses is questionable. As the program is currently structured, job creation is not likely to be a mechanism by which the NOF can improve the lives of NOF-served neighborhoods, because the NOF targets small, independent businesses. If City officials truly want to use this mechanism, they should alter the NOF to target larger businesses, which create more, higher quality, and more stable job opportunities, as is discussed in subsection 3.4.1.

3.3.2 Community Economic Self-Sufficiency

Many influential thinkers have posited community economic self-sufficiency as the most promising means to achieve liberation from oppressive structures in urban America. Huey Newton coined the term "revolutionary intercommunalism" in the 1970s,[38] as a response to the domination of peoples all over the world by powerful elites (especially in the US government). Revolutionary intercommunalism would entail the self-liberation of individual communities, small and large, from their oppressors (cultural, economic, political, etc.) and the eventual banding together of these newly liberated communities to form a communist or anarchist society, "[sharing] all the wealth that they produce" with one another.[39] Malcolm X wrote on this issue in the context of neighborhood retail. Perhaps the most important proponent of building autarky in urban America, Malcolm X pointed out that urban neighborhoods are already racially segregated, so it is perfectly feasible and desirable for Black urbanites to create more self-sufficient communities. He asks why the Black American cannot "use his talent and his know-how to set up business opportunities, job opportunities, housing opportunities for the black people the same as the white leaders have done for white

[38] Newton, "Intercommunalism."
[39] Newton.

people."[40] Stokely Carmichael and Charles Hamilton articulate a similar vision in *Black Power*, rejecting institutions and structures that perpetuate the domination of Black people by defanging Black resistance and channeling it into non-threatening avenues (specifically calling out city planning commissions).[41] They advocate, instead, for the establishment of parallel community institutions which are truly of and for the community. They also criticize Black politicians who do not come from the community and who serve the downtown machine.

There is not much existing research on the effects of economic self-sufficiency for small communities, and the research that does exist tends to focus on the places where this has come to fruition: geographically isolated communities, especially rural villages in the Global South.[42] A smaller sub-goal contributing to autarky is local business ownership, which there have been a few studies on. Using a US county-level dataset, Rupasingha finds evidence that local entrepreneurship has a positive effect on per capita income growth, a positive effect on employment growth, and a negative effect on change in poverty.[43] He also finds that smaller businesses have more positive effects on economic growth than larger ones. Fleming and Goetz also produce evidence that local ownership has a positive effect on economic growth for small firms, and that the trend holds true across rural and urban counties alike.[44] Kolko and Neumark investigate the hypothesis that local ownership insulates cities from economic shocks, since locally owned businesses are less likely to lay off workers when there is a reduced labor demand.[45] While they find strong evidence that this is true

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[40] X, Remembering Malcolm X: Rare Interviews and Audio.
[41] Carmichael and Hamilton, *Black Power: Politics of Liberation in America*, 42–43.
[42] Dalinghaus, "Reconstructing Independence on Sint Maarten"; Nuraini, "Building Village Economic Independence Through Village-Owned Enterprises (BUMDes)"; Triyanto et al., "Rural Tourism as a Way to Build Economic Independence"; Zulkarnaini and Mashur, "Development Of Local Economic Independence Through Optimizing Of Village Fund Management."
[43] Rupasingha, "Locally Owned."
[44] Fleming and Goetz, "Does Local Firm Ownership Matter?"
[45] Kolko and Neumark, "Does Local Business Ownership Insulate Cities from Economic Shocks?"

for corporate headquarters and local chains, the evidence for this is mixed among small, independent businesses.

Unfortunately, these studies have too large of a geographic scale for one to confidently say that the findings would hold true for disinvested urban neighborhoods. Additionally, numerous critics have pushed back on the idea that neighborhood economic autonomy is practical. Waxman summarizes this stance nicely, citing two main authors. Michael Tietz and Jeremy Nowak argue that "neighborhood economies, as such, do not really exist, and that it does not make sense to apply national dependency theories to a neighborhood context."[46] Economically strong neighborhoods, these authors argue, are not strong because they are self-sufficient, but because they offer something to draw people and businesses. If the goal is to improve the lives of residents, they say, it is much more effective to link them to high quality economic opportunities throughout the region than to try to build everything from the ground up. Despite some evidence that local ownership of small businesses can contribute positively to economic growth and security for neighborhoods, there is likely not enough to accept this as a robust mechanism for the improvement of people's lives in under-resourced urban neighborhoods. Who is reaping the rewards of that economic growth? Does this work at the neighborhood scale?

The possibility that great economic autonomy could lead to community power in the long term and at the large scale cannot be dismissed, but the NOF does not subscribe to this vision. As a City-run program, those in charge of the NOF are categorically not building community self-sufficiency. While there is a bonus for awardees who live in the same neighborhood as their project, it is not an eligibility criterion. City documents and presentations on the program even repeatedly

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[46] Waxman, "Utilizing Economic Theories of Retail to Revitalize Inner-City Neighborhood Business Districts : The Case of Uphams Corner Main Street," 19; Teitz, "Neighborhood Economics"; Nowak, "Neighborhood Initiative and the Regional Economy."

discuss that they want NOF grants to catalyze further private investment, which would almost certainly be coming from outside of the neighborhood.

Proponents of community autarky like Carmichael and Hamilton would likely criticize the lack of community democratic power over how the NOF functions and which kinds of projects receive funding. Additionally, by encouraging entrepreneurship rather than other types of development, the NOF encourages the kind of assimilation into the existing middle class that Carmichael and Hamilton criticize: "The goal of black people must not be to assimilate into middle-class America… The values of that class are based on material aggrandizement, not the expansion of humanity."[47] This is not to make a normative claim about integration into middle class economic structures versus building autarky: it is simply an argument that the NOF is not building autarky. The argument could be made that, regardless of the City's goals, residents can take advantage of the NOF to build community economic self-sufficiency, but it is not clear that residents of the South and West sides are doing so, or that they even want autarky.

3.3.3 Resource Access

Perhaps the most intuitive way that commercial revitalization would improve the lives of residents is by providing them with new resources and businesses to patronize, benefitting them as comsumers. Waxman articulates this in his discussion of economic theories of retail.[48] According to this set of theories, rational consumers will attempt to minimize travel time and maximize surplus when they do their shopping. The creation of new businesses in neighborhoods with low

[47] Carmichael and Hamilton, *Black Power: Politics of Liberation in America*, 40.
[48] Waxman, "Utilizing Economic Theories of Retail to Revitalize Inner-City Neighborhood Business Districts : The Case of Uphams Corner Main Street," 28.

commercial density will bring goods and services closer to residents, improving access, thereby improving their lives.

There is not a comprehensive literature on the effects of proximity to all different kinds of commercial land use on quality of life. However, one particular kind of commercial use has been the subject of much study: grocery stores. The concept of the urban food desert – a community with very poor access to high-quality, nutritious, affordable groceries – has been the subject of much popular discussion in the past decade, especially after former first lady, Michelle Obama, publicized the issue and pushed for an end to food deserts as a part of her *Let's Move!* campaign in 2010.[49] The theory states that living in a food desert is a root cause of spatial urban health disparities, but the academic literature fails to find a link between food deserts and health outcomes.

A 2010 review of the food deserts literature by Walker et al. concluded that more research was needed on the effects of living in a food desert, since most research up to that point was more concerned with describing the characteristics of food deserts rather than describing the health effects of living in one.[50] They cite one study which did find modest improvements in diet and nutrition after the opening of a supermarket in what was previously a food desert.[51] However, since then, numerous other studies have cast doubt on the importance of grocery access for health outcomes. Fitzpatrick et al. do not find food deserts to be a contributor to poor health among low-income, elderly Americans, a particularly vulnerable group with limited mobility.[52] Cooksey-Stowers et al. find that "food swamps" – areas with a high density of establishments selling fast food and

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[49] The Obama White House, *Eliminating Food Deserts in America*.
[50] Walker, Keane, and Burke, "Disparities and Access to Healthy Food in the United States."
[51] Wrigley, Warm, and Margetts, "Deprivation, Diet, and Food-Retail Access."
[52] Fitzpatrick, Greenhalgh-Stanley, and Ver Ploeg, "Food Deserts and Diet-Related Health Outcomes of the Elderly."

junk food – are much better predictors of health outcomes than food deserts.[53] Zhen argues that lowering the prices of healthy foods and making them more attractive to consumers is a much more effective way to decrease health disparities than attempting to eliminate food deserts.[54]

Not all types of commercial development equally contribute to economic wellbeing and quality of life. One type that might have little success in increasing access to goods and services is retailers of general consumer goods. A hugely important consideration with this is the meteoric rise of online retail in the past two decades. Our understanding of the value of brick-and-mortar retailers must account for the fact that companies like Amazon are able to deliver virtually any consumer good to urbanites, typically with fast and free shipping. Even ordering groceries is becoming an increasingly economically feasible option. However, the many services, offices, manufacturers, and retailers of goods that are not easily deliverable (e.g., florists, bakeries, etc.) have less convenient and economical online alternatives.

The economic benefits of access to new businesses in their neighborhoods for consumers are questionable. While new development will certainly not have negative consequences in this regard, it is not clear that it will have significant positive impacts. The NOF is especially unlikely to create quality of life improvements through this mechanism since it primarily funds small businesses, which are typically unable to compete with the prices of big box retailers.

3.3.4 Retention of Middle-Income Residents

Perhaps the literature's most comprehensive and thoughtful discussion of the mechanisms by which place-based interventions can improve lives comes from Andy Waxman in his 1999

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[53] Cooksey-Stowers, Schwartz, and Brownell, "Food Swamps Predict Obesity Rates Better Than Food Deserts in the United States."
[54] Zhen, "Food Deserts: Myth or Reality?"

master's thesis and 2000 article.[55] After his own literature review on the topic, Waxman argues for the integration of people- and place-based approaches. He concludes that neighborhood commercial revitalization must create the conditions for poverty alleviation, which is done by improving quality of life to retain middle-income residents.[56] He argues that the priority must be retaining and attracting the kinds of businesses that improve quality of life and connect residents to jobs throughout the region.[57] This is an extension of the resource access mechanism; even if businesses do not directly serve low-income residents, those individuals might benefit indirectly if the businesses serve middle-income residents.

Waxman's position rests upon the claim that mixed income neighborhoods offer more socioeconomic upward mobility for their impoverished residents than very poor neighborhoods. Specifically, he bases this off urban sociologist William Julius Wilson's highly influential books, *The Truly Disadvantaged* and *When Work Disappears*.[58] Wilson proposes that, at the time of writing, the concentration of poverty in urban areas had reached new levels of severity, and unemployment, crime, and social isolation create vicious cycles.

Both Joseph and Joseph et al. explore the four main theorized mechanisms by which mixed income development can address poverty: Social networks, social control, culture and behavior, and the political economy of place.[59] Through the creation of conceptual frameworks and thorough reviews of literature, the studies conclude that "the most compelling propositions are those that

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[55] Waxman, "Utilizing Economic Theories of Retail to Revitalize Inner-City Neighborhood Business Districts : The Case of Uphams Corner Main Street"; Waxman, "WHY IMPROVE NEIGHBORHOODS? Shifting the Goals of Inner City Neighborhood Commercial Revitalization."
[56] Waxman, "WHY IMPROVE NEIGHBORHOODS? Shifting the Goals of Inner City Neighborhood Commercial Revitalization," 41–42.
[57] Waxman, 43.
[58] Wilson, *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*; Wilson, *When Work Disappears: The World of the New Urban Poor*.
[59] Joseph, "Is Mixed-income Development an Antidote to Urban Poverty?"; Joseph, Chaskin, and Webber, "The Theoretical Basis for Addressing Poverty Through Mixed-Income Development."

suggest that some low-income residents may benefit from a higher quality of life through greater informal social control and access to higher quality services" rather than through social interaction, network building, and role modeling.[60] These two broad categories contain a wide variety of specific actions that might be taken by a middle income resident yielding benefits for low income residents. These include increasing the level of social organization, advocating for a more equitable distribution of municipal services, leveraging political and social connections to improve the community, demanding higher quality education, and having more spending power.

These are highly interesting and compelling findings in the context of Waxman's proposition. Waxman suggests that the development of businesses offering high quality goods and services can attract and retain middle income residents, and Joseph and Joseph et al. give evidence that this is actually a virtuous cycle: the middle-income residents support those businesses, creating a benefit for lower income residents through access to higher quality goods and services. However, it is important to temper these expectations based on the findings of subsection 3.3.3. Joseph and Joseph et al. might have an overinflated sense of the benefits of access to retail and other commercial resources.

While the literature does not inspire complete confidence that attracting and retaining middle-income residents is a surefire way to lift the poorest out of poverty, or that all the mechanisms by which this is theorized to happen are robust, there is reason to be hopeful. Joseph and Joseph et al. suggest that middle income residents can support businesses that are valuable for very low-income individuals.

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[60] Joseph, Chaskin, and Webber, "The Theoretical Basis for Addressing Poverty Through Mixed-Income Development," 369.

3.3.5 Social- and Mental-Health-Promoting Built Environments

The final way that neighborhood commercial revitalization is theorized to improve quality of life for residents is by facilitating the improvement of the built environment, which strengthens opportunities for healthy social connections and improves the mental health of residents. The foundation for this idea is Jane Jacobs's seminal 1961 book,[61] which advances a vision of dense, walkable, urban communities which facilitate frequent interaction between residents who see each other on the street. According to Jacobs, the more developed land there is on a given street (especially commercial development, since it gives visitors a reason to be there,) the greater the chances will be for informal interaction. Additionally, this will create a safer environment, since there are residents and shop owners monitoring what is going on; she calls "eyes on the street."[62] Wilson's aforementioned works build on Jacobs's basic premise that a healthy community is a socially connected one, arguing that many urban neighborhoods are so distressed because economic depression compounds social isolation and a fear of public spaces.[63]

The academic literature generally supports the hypothesis that a dense and vibrant built environment supports social cohesion and capital. A systematic review by Mazumdar et al. finds that access to destinations (e.g., businesses and cultural centers) supported neighbors knowing each other, social engagement, and sense of community.[64] Walkability and density were also linked to social benefits.

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[61] Jacobs, *The Death and Life of Great American Cities*.
[62] Jacobs, 35.
[63] Wilson, *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*; Wilson, *When Work Disappears: The World of the New Urban Poor*.
[64] Mazumdar et al., "The Built Environment and Social Capital."

A meta-analysis on the effects of the built environment on mental and sexual health by Satcher et al. finds that the built environment has significant effects on mental health.[65] Broadly speaking, perceived blight, a lack of green space, poor housing conditions, and a lack of resources and services are linked to depression and anxiety. However, the results are less clear cut for the specific built environment factors targeted by the NOF: lack of services and resources and perceived blight. Rautio et al. conduct a literature review on the relationship between living environments and depressive mood find strong links when it comes to housing quality, green space, noise and pollution, but less consistent results regarding population density, aesthetics, walkability, and the availability of services.[66] Four out of the ten studies reviewed linked access to services to mental health.

The NOF adds resources to commercial corridors and contributes to the improvement of physical conditions of the built environment. The guidelines make clear that altering the outward physical appearance of buildings is a very important component of the program, with façade improvements highlighted in a before-and-after photo on the front page of the program website and repeatedly mentioned in program materials.[67] The program guide states that healthy commercial corridors "celebrate the culture and spirit of a neighborhood, allowing neighbors to congregate in their own community, which further fuels neighborhood pride and investment."[68] The literature suggests that this is a worthwhile goal, and it is likely to be a mechanism by which the NOF can improve the lives of residents in targeted neighborhoods. A caveat is that this social capital does not necessarily translate into economic opportunity, with Joseph and Joseph et al. finding weak links

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[65] Satcher, Okafor, and Dill, "Impact of the Built Environment on Mental and Sexual Health: Policy Implications and Recommendations."
[66] Rautio et al., "Living Environment and Its Relationship to Depressive Mood."
[67] City of Chicago, "Neighborhood Opportunity Fund."
[68] City of Chicago Department of Planning and Development, "Neighborhood Opportunity Fund Small Grants Program Manual," 3.

between social interaction, network building, and role modeling and the alleviation of poverty.[69] Nevertheless, the improvement of social and mental health is a highly valuable goal in and of itself.

3.4 Neoclassical Foundations of the NOF

Several more conservative scholars argue that following traditional, market-based strategies is the most effective way to revitalize urban neighborhoods, placing the onus of revitalization on businessowners rather than governments or other actors. These scholars focus on pragmatic business strategy in their suggestions for urban revitalization.

Porter's often cited 1995 article is a foundational text for the field of urban commercial revitalization.[70] As a proponent of the idea that engaging with the market is the best (and perhaps only) way for disinvested neighborhoods to see long-term change, Porter proposes 4 competitive advantages of the inner-city, which he believes should be exploited: strategic location near density and transit, local market demand and density which compensates for low incomes, integration with regional clusters (i.e., agglomeration effects), and human capital in the form of a moderate-wage workforce and entrepreneurial potential. Porter suggests a few avenues for government intervention: directing resources to areas of greatest economic need; increasing the desirability of the inner city for business siting through the elimination of bureaucratic red tape; delivering economic development programs through private sector institutions; and aligning incentives with true economic performance, i.e., governments should fund site assembly, environmental cleanup, etc., rather than give grants with no strings attached. A core claim of Porter's is that there is substantial unmet local demand in under-resourced urban neighborhoods.

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[69] Joseph, "Is Mixed-income Development an Antidote to Urban Poverty?"; Joseph, Chaskin, and Webber, "The Theoretical Basis for Addressing Poverty Through Mixed-Income Development."
[70] Porter, "The Competitive Advantage of the Inner City."

Porter's influence can be seen all over the structure of the NOF. As Maranion points out, the NOF is neoclassical in its positive stance towards market participation and its preservation of applicants' freedom of choice in terms of what kind of business they opt to pursue.[71] If it believes that grant awardees can succeed, the City must either accept Porter's claim about unmet local demand or expect a massive influx of new demand in the form of gentrification or tourism. Porter refers to a larger geographic scale when he suggests that governments direct resources to the areas of greatest economic need, indicating that the NOF already aligns with this directive. And his last suggestion, that governments fund things like site assembly rather than giving no-strings-attached grants, is met by the NOF as well.

Porter also claims that the most successful and enduring minority-owned businesses serve inner-city residents' particular "cultural and ethnic needs,"[72] citing only anecdotal evidence rather than empirical data. Milder's guide on market niches similarly suggests that careful market analysis and aligning new businesses with unmet demand is a good way to revitalize urban commercial areas.[73] Simons and Brennan discuss the importance of and potential for ethnic market niches,[74] but while they offer some anecdotal evidence, they do not cite any research to support their claim. While it is obvious that retail stores can benefit from serving the particular needs of their neighborhood, it is not clear that ethnic market niches are underexploited.

In fact, studies have been conducted which directly contradict these claims. Alwitt and Donley studied retail establishments in Chicago's 53 zip codes.[75] While the authors found that poor areas have fewer retail establishments than non-poor areas, when they controlled for household

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[71] Maranion, "The Power of Place: An Analysis of Chicago's Neighborhood Opportunity Funds," 33.
[72] Porter, "The Competitive Advantage of the Inner City."
[73] Milder, *Niche Strategies for Downtown Revitalization: A Hands-on Guide to Developing, Strengthening, and Marketing Niches*.
[74] Simons and Brennan, "Development of Inner-City Retail Niche Markets," 301–2.
[75] Alwitt and Donley, "Retail Stores in Poor Urban Neighborhoods."

purchasing power, there was no statistically significant difference between poor and non-poor neighborhoods. I.e., poor neighborhoods were not underserved by retail, as Porter claims. Interestingly, though, the researchers found that poor neighborhoods *are* underserved when considering only large businesses, even when purchasing power is controlled for. This finding contradicts the hypothesis that new small businesses should be encouraged in under-resourced urban communities, and it has potentially serious implications for programs like NOF. The Alwitt and Donley study is from 1997, though, and the analysis has not been redone in the interim, so it is not clear whether the relationship between area income and retail service has remained the same.

Bates and Robb use Congressional Budget Office data to analyze the survival rates of over 5000 young firms located within major metropolitan areas of the US during the mid-1990s.[76] They examined firms based on their clienteles' race (predominantly minority or predominantly non-minority) and location (neighborhood or region). The researchers found that "neighbourhood businesses catering to a neighbourhood minority clientele were over 36 per cent more likely than their counterparts selling predominantly to non-minority clients to close down and discontinue their operations by year end 1996."[77] These findings contradict Porter's claim that there are underserved market niches in under-resourced urban neighborhoods waiting to be exploited.

The NOF appears to have been heavily inspired by Porter's logic, which may not bode well for the program's efficacy considering the evidence stacked against some of the author's claims. Under-resourced urban neighborhoods are likely not underserved by small retailers, as he suggests, and it is also not clear that Chicago's South and West sides have underexploited ethnic market niches.

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[76] Bates and Robb, "Blind Faith: Entrepreneurship and the Revitalisation of Inner-City Minority Communities."
[77] Bates and Robb, 53.

3.5 Gentrification

Among the most important equity considerations for any place-based initiative is the possibility for gentrification and the displacement of residents due to rising rents and property taxes. By definition, gentrification is a class phenomenon in which character of a neighborhood is changed by an influx of wealthier residents and commercial establishments that serve them. Under a capitalist housing market adding new amenities and improving physical conditions increases the desirability of a neighborhood, potentially allowing landlords to raise rents.

Smith's seminal 1979 paper advances perhaps the most cited theory of gentrification, countering the popular understanding of the phenomenon as primarily driven by an influx of young, often White, often professional-class individuals.[78] Smith argues that gentrification is driven more by capital than by people, i.e., by supply rather than demand. According to Smith's "rent gap" theory, gentrification typically follows a period of "filtering," in which conditions deteriorate in a neighborhood. Eventually, enough filtering can create a rent gap: "the disparity between the potential ground rent and the actual ground rent capitalized under the present land use."[79] When investors and developers estimate the rent gap to be wide enough, they see an opportunity for profitable redevelopment. They enter the neighborhood, constructing new housing and purchasing and renovating existing buildings which can be rented out at higher rates.

When this occurs, older renters are at risk of being displaced due to higher rents which they cannot afford. This is what David Harvey refers to as "accumulation by dispossession." It is highly unlikely that the Neighborhood Opportunity Fund and INVEST South/West are large enough to be direct gentrifiers in South and West side neighborhoods; the concern is that the program may

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[78] Smith, "Toward a Theory of Gentrification A Back to the City Movement by Capital, Not People."
[79] Smith, 545.

contribute to conditions for gentrification in certain neighborhoods. Commercial land use is an important quality of an attractive neighborhood, and retail and food service – two major recipients of NOF grants – are amenities. As Harvey argues, "quality of urban life has become a commodity, as has the city itself, in a world where consumerism, tourism, cultural and knowledge-based industries have become major aspects of the urban political economy."[80] The fact that the NOF targets commercial corridors is significant, since commercial streets are highly visible and often considered the front door of a neighborhood. NOF projects increase the risk of gentrification by raising the potential ground rent, thus widening the rent gap.

The City's rhetoric around the NOF and ISW gives us good reason to be concerned about the prospect of gentrification, since NOF and ISW materials repeatedly mention the goal of using initial public investment to catalyze further private investment.[81] Private investment in a neighborhood is not necessarily the same thing as gentrification, since it might serve existing residents and it might not alter the character of a neighborhood, but the two are very closely linked. There is good reason to believe that the catalytic investment discussed by the City could be gentrifying and lead to displacement in the long run, because City literature does not mention any attempt to regulate or shape exactly what that private investment would look like or where it is coming from.

It is absolutely possible that the NOF could lead to gentrification. Whether or not wide scale gentrification and displacement will occur is a question of how wide the rent gap becomes in each

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[80] Harvey, "The Right to the City," 31.
[81] City of Chicago Department of Planning and Development, "Neighborhood Opportunity Fund Small Grants Program Manual," 3; City of Chicago Department of Planning and Development, "About"; City of Chicago Department of Planning and Development, *INVEST South/West: A New Collaboration for Chicago's South and West Sides*, 5:15; City of Chicago Department of Planning and Development, *INVEST South/West Kickoff Celebration: Englewood, Auburn Gresham and New City*, 17:15; City of Chicago, "INVEST SOUTH/WEST Two-Year Update," 4.

NOF-served neighborhood. The NOF could very well not be enough to move the needle on the rent gap in some neighborhoods, in which case the program should be understood as positive but inefficient in improving quality of life. However, other neighborhoods might already have enough of a rent gap for the NOF to push them over the edge and kickstart gentrification. Chapter 7 sheds light on which neighborhoods may be at risk.

3.6 Conclusion

The preceding literature review and critical analysis evaluate the ideological, theoretical, and empirical bases for the Neighborhood Opportunity Fund. Ideologically, as Maranion points out, the NOF is fundamentally Keynesian, seeking to induce new development and economic activity by subsidizing development in economically depressed areas. It also has strong neoclassical elements, given the program's assumption that participation in the market (via the pursuit of whatever type of business awardees see fit) can capitalize on unrealized local demand and economically reinvigorate an area.

The empirical basis for the NOF is shaky. The program is founded upon some neoclassical principals that do not hold up empirically. And it is not surprising that most entities engaging in revitalization efforts fail to articulate the link between their actions and the material improvement of residents' lives, because this literature review suggests that the connections are tenuous. The NOF is unlikely to create many high-quality employment opportunities for South and West side residents; it is unlikely to advance community economic self-sufficiency; proximity to new businesses may yield economic benefits for consumers, but they will likely not be dramatic; the retention and attraction of middle-income residents may yield some long-term benefits; and the NOF likely contributes to improvements in social and mental health. More concerning than a lack of efficacy or efficiency is

the fact that the NOF may actively harm the very residents it is supposed to help. The program may catalyze gentrification, which could lead to displacement.

Based on these conclusions, the subsequent quantitative part of this study asks who is affected by the program. It is important for communities receiving NOF funding to understand the implications of the program and the degree to which it affects them so they can have a chance at an organized response that furthers their interests. To inform this project's quantitative analysis, I review methodological precedents for the study of spatial distributions of grant funding and measures of gentrification in one last subsection.

3.7 Methodological Precedents

Several studies have utilized spatial data analysis to identify patterns in and evaluate distributions of grant funding. Herndon's 2017 paper explores the spatial distribution of seed grants from a Tucson nonprofit which aims to preserve crop diversity and support education, food security, and community development in the Greater Southwest region.[82] The author sought to evaluate the Community Seed Grant program by determining if grants were being awarded to the intended recipients. Since the author attempts to determine if a specific outcome is being achieved, this study is targeted rather than exploratory. Herndon uses a logistic regression to spot correlations between target areas and areas where seeds were actually sent, eventually concluding that "seed grants favor areas with higher percentages of Hispanic and Black or African American individuals as well as areas with higher poverty rates."[83]

Layser's 2021 article examining the spatial distribution of federal-level, place-based tax incentives is particularly relevant. Looking at data on New Markets Tax Credits and Opportunity

[82] Herndon, "A Spatial Analysis of Community Development in Arizona from Seed Grants."
[83] Herndon, 6.

Zones, the author seeks to determine whether subsidies are being given to gentrifying neighborhoods. Layser argues that the allocation of grants to gentrifying neighborhoods is not only an inefficient use of funding but is also likely to produce inequitable outcomes by exacerbating displacement and diverting money from neighborhoods that need it most. Methodologically, Layser uses quadrat density analysis and negative binomial regression analysis.

Alm et al. attempt to determine the factors in designation of federal Opportunity Zones (OZs,) confronting the issue that while OZs are meant to induce investment in economically struggling communities, they can also be used by governors "to reward political allies, to buy voter support, and to help business interests."[84] Similar to the NOF with its eligible areas and actual distributed grants, the authors identify a larger spatial set and a subset to compare: potential Qualified Opportunity Zones (QOZs) could potentially be selected by a governor given their economic conditions, and, from that set, designated QOZs are the ones actually chosen for the program. The authors use socioeconomic and political variables to estimate the factors determining the choice of Designated QOZs from all Potential QOZs using logit and linear probability models. They find that the QOZ selection process was likely mostly technocratic with some weak evidence for politically motivated selection.

Similarly, Greenbaum asks which factors predict the designation of federal Enterprise Zones (EZs) given that not all distressed areas received an EZ designation.[85] He then takes his research one step further by creating a framework for selecting comparison areas which can serve as the counterfactual, untreated group in EZ impact evaluations. Using probit regressions, Greenbaum examines demographic, housing, and business characteristics. The strongest predictors of EZ

[84] Alm, Dronyk-Trosper, and Larkin, "In the Land of OZ," 503.
[85] Greenbaum, "Siting It Right."

designation were vacancy, population density, racial minority population, and owner-occupation. Via spatial econometric analysis he also concludes that states target distressed ZIP codes neighboring wealthier, less dense, and whiter ZIP codes, perhaps indicating that states care more about stopping the spread of poverty than they do about improving the lives of residents in under-resourced communities. He also finds that states using housing characteristics as a part of their designation criteria placed their zones in areas with greater physical distress and less population distress. Finally, he concludes that states target areas with existing businesses.

Collinson explores the US Department of Housing and Urban Development's (HUD) Community Development Block Grants (CDBG), using demographic and economic indicators to create an index of community development need.[86] He then uses the index to determine the degree to which CDBG funding meets development needs, and traces this relationship through time. Collinson acknowledges that while determining community development need is a highly complex and multi-dimensional concept and that a mixed-methods approach is likely the most effective way to gauge it, that is beyond the scope of the study. Instead, he uses factor analysis to "to distill a large number of variables into a few uncorrelated factors which capture the latent structure of community development need."[87] Ultimately, Collinson concludes that the efficacy of the CDBG allocation formula has degraded over time.

[86] Collinson, "Assessing the Allocation of CDBG to Community Development Need."
[87] Collinson, 94.

4. Data

For this study's quantitative analyses, I utilize data from the City of Chicago, the US Census's American Community Survey (ACS), and the Urban Displacement Project (UDP). Using both Quantum Geographic Information System (QGIS) version 3.22.1, an open-source GIS software, and RStudio, an open-source Integrated Development Environment running on the R programming language (version 4.1.2), I manipulated and analyzed these data to determine the spatial distribution of Neighborhood Opportunity Fund grants, the populations most affected by the grants, and the degree to which grants have gone to gentrifying neighborhoods. I used a range of spatial analysis and statistical techniques to extract conclusions from the data.

4.1 NOF Grants

NOF grants are divided into two groups by the City. Small grants have a value equal to or less than $250,000, and large grants have a value greater than $250,000.[88] The NOF award data used in this study is a combination of two datasets: one for small grants and one for large grants. A complete table of all 260 small NOF projects ever awarded grants since the program's inception in 2016 was provided by the City of Chicago. A version of this dataset is available on the Neighborhood Opportunity Fund's website, but this version is incomplete since it does not include projects which were withdrawn by the grantee or terminated by the NOF due to an inability to complete the project, meet program deadlines, and meet the program requirements. Since this study examines the City's allocation of grants rather than the material impact of grants on South and West side neighborhoods, withdrawn and terminated projects remain in the dataset.

[88] This is because grants with a value of over $250,000 must be approved by the city council. They go through different processes, and a Chicago DPD employee informed me that small and large grants are handled by different teams.

The dataset was provided as a Microsoft Excel file with five fields:

- Project Name/DBA
- Street Address
- Conditional award amount
- Award year
- Project status. This categorical variable indicates that the project is either terminated, withdrew, pre-CAL (project has been selected, but the Conditional Award Letter has not yet been sent to the grantee), under construction, or completed.

The data on large NOF grants was take from the program's website, and a City official working on the program indicated that they believed this data to be complete and up-to-date. This dataset has 18 records (rows,) and it contains all of the same fields as the small grants dataset except for project status. I copied the data from the webpage and into an Excel file. One record had to be dropped from the dataset because the address of the project was listed as "TBA," making spatial analysis impossible.

I converted each Excel file to a CSV, which I subsequently imported into QGIS as a delimited text layer. I used the addresses to geocode each record as a spatial point with the MMQGIS plugin and a free trial of Google's geocoding API. I saved the output as a GeoPackage, containing 277 records.

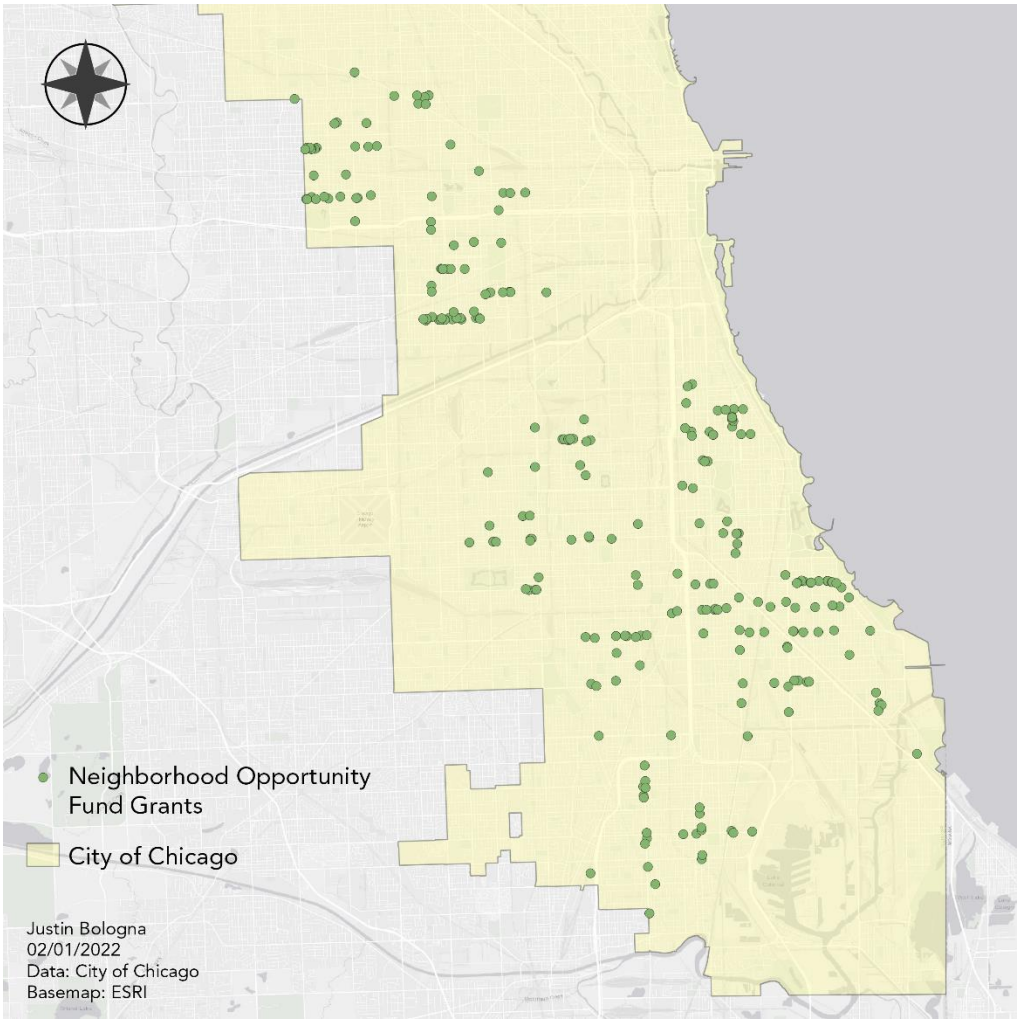

Figure 2: NOF Grant Locations

4.2 NOF Eligible Corridors

A dataset of NOF-eligible commercial corridors is not publicly downloadable, and the City of Chicago did not provide one. However, the data is viewable in a Leaflet map on the NOF website.[89] I manually reconstructed this dataset in QGIS by drawing line features into a new GeoPackage layer. The GeoPackage contains geometry information and a field indicating corridor type, a categorical variable indicating whether a given corridor is simply an "Eligible Commercial [corridor]," a "Priority Investment [corridor]," or an "Invest South/West [corridor]." There are -

[89] City of Chicago Department of Planning and Development, "Apply for the Fund."

roughly 155 miles of NOF-eligible corridors in total, made up of 99.7 miles of regular eligible corridors, 38.4 miles of Priority Investment corridors, and 17.1 miles of ISW corridors.

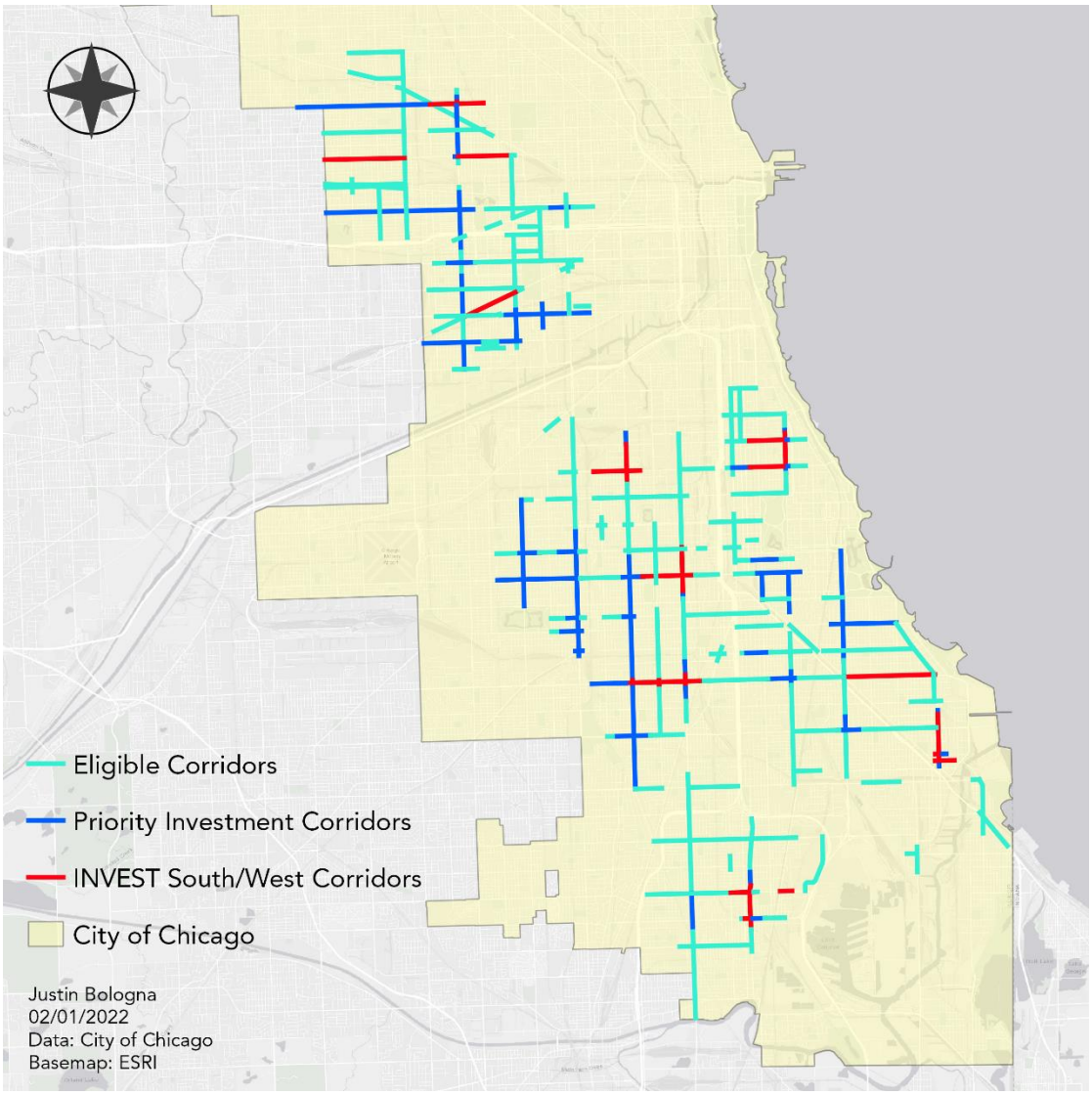

Figure 1: NOF-Eligible Corridors

4.3 Chicago's Zoning Boundaries

A shapefile of Chicago's zoning data was downloaded using the City of Chicago's ArcGIS REST Services Directory API.[90] Since this study considers the interactions between NOF awarded

[90] City of Chicago, "Zoning Boundaries."

businesses and residents living near those businesses, it is important to ensure that non-residential areas do not bias spatial operations. For example, the presence of a large industrial district within a grants buffer could significantly bias an area weighted average (defined in subsection 7.1.2). The use of zoning data partially addresses the modular areal unit problem. Additionally, the inclusion of large parks and industrial areas while calculating transit access (section 4.5) would unfairly penalize heavily industrial tracts for not having good transit access in the large swaths of land where nobody lives.

I classified zones as either residential or non-residential based on whether residential uses are allowed in the area according to a description of each zone available from 2nd City Zoning.[91] Under this definition, zones classified as residential were B, C, R, PD, D, DC, and DR, while M, PMD, DS, T, and POS were classified as not residential. This is a very generous definition of residential. For example, commercial zones which allow for apartments over storefronts are considered residential, whether those apartments really exist. The purpose of this was not to capture a perfect image of the residential population in every tract in Chicago, but to filter out large industrial districts and parks from being considered residential space. I individually inspected large zones, especially those near industrial districts, and reclassified some as non-residential.

4.4 American Community Survey

This study uses data from five American Community Survey tables:

- 2006-2010 DP04 | Selected Housing Characteristics[92]
- 2015-2019 DP02 | Selected Social Characteristics in the United States[93]

[91] 2nd City Zoning, "Zoning Districts."
[92] U.S. Census Bureau, "2006-2010 American Community Survey 5-Year Estimates Data Profiles: DP04 | Selected Housing Characteristics."
[93] U.S. Census Bureau, "2015-2019 American Community Survey 5-Year Estimates Data Profiles: DP02 | Selected Social Characteristics in the United States."

- 2015-2019 DP03 | Selected Economic Characteristics[94]
- 2015-2019 DP04 | Selected Housing Characteristics[95]
- 2015-2019 DP05 | ACS Demographic and Housing Estimates[96]

I downloaded each of the five datasets from data.census.gov as a CSV in a ZIP folder (also containing metadata information and a TXT readme). Four datasets contain five-year estimates for the 2015-2019 period, which is the most recent available. One contains five-year estimates from 2006-2010, which was necessary to track rent change. The data is at the census tract level, which is the finest available spatial scale. I took 31 variables from the ACS, which are described in Appendix A.

4.5 Public Transportation

I downloaded three public transportation datasets from the Chicago Data Portal. Each is a point ESRI Shapefile. One contains the locations of every CTA bus stop,[97] the second has every CTA rail station,[98] and the third has every Metra rail station.[99] These datasets were included to determine public transportation access across Chicago. While some private companies such as Walk Score use sophisticated techniques to describe transit access across urban areas, the data is quite expensive. Thus, I coerced these bus and rail station point data into rasters to proxy for transit access with open-source data.

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[94] U.S. Census Bureau, "2015-2019 American Community Survey 5-Year Estimates Data Profiles: DP03 | Selected Economic Characteristics."
[95] U.S. Census Bureau, "2015-2019 American Community Survey 5-Year Estimates Data Profiles: DP04 | Selected Housing Characteristics."
[96] U.S. Census Bureau, "2015-2019 American Community Survey 5-Year Estimates Data Profiles: DP05 | ACS Demographic and Housing Estimates."
[97] City of Chicago, "CTA - Bus Stops - Shapefile."
[98] City of Chicago, "CTA - 'L' (Rail) Stations - Shapefile."
[99] City of Chicago, "Metra Stations."

Since comparing the relative importance of bus and rail for overall quality of public transit access is not straightforward, the two modes were considered separately. I merged the CTA and Metra rail datasets were into one, since most Metra rail stations in NOF served areas are along the Metra Electric line, which has relatively frequent service and serves a similar function to the CTA's 'L' lines (as opposed to Metra's Commuter rail lines, which have infrequent service). Distance to the nearest rail station was used to proxy for rail access. I calculated this in QGIS by first converting the point vector file of rail stations to a raster, and then using GDAL's "Proximity (raster distance)" tool. The result was a raster in which the value of every pixel was equal to the Euclidian distance (in feet) to the nearest rail station.

Since Chicago has significantly more bus stops than rail stations, distance to the nearest bus stop was not deemed the most appropriate measure of bus service, as it would classify neighborhoods with different densities of bus stops as having very similar access. A kernel density estimation was calculated to proxy for bus access, as this better accounts for the density of stops and the presence of multiple bus routes. Maps of rail proximity and bus KDE are available in Appendix B.

4.6 Urban Displacement Project: Chicago Displacement and Gentrification Typologies

To determine whether NOF funds are flowing to gentrifying neighborhoods, I used data from the University of California Berkely's Urban Displacement Project (UDP).[100] The UDP performs quantitative and qualitative research on urban gentrification and displacement, and one of their activities is the creation of typology maps, summarizing gentrification dynamics into several distinct categories. This is one of a handful of gentrification and displacement indices that have been

[100] Chapple, Thomas, and Zuk, "Urban Displacement Project."

created in the past decade. The others include Portland's Susceptibility to Gentrification Model,[101] Seattle's Displacement Risk Index,[102] the University of Illinois Chicago's Gentrification Index,[103] Landis's methodology,[104] and the often-cited Freeman method.[105]

I decided to use the UDP's typologies because I deemed the model the most robust and detailed measure of gentrification and displacement risk. The UDP's Chicago map classifies census tracts into eleven typologies, nine of which are described in table 1, below.[106] The typologies are split between varying levels of displacement, gentrification, and exclusivity. The UDP data is also particularly compelling because of the engagement with local organizations and stakeholders. The UDP lists sixteen Chicago organizations as collaborators on the project, including Metropolitan Planning Council, LUCHA, Latinos Progresando, Garfield Park Community Council, and the City of Chicago.[107] As opposed to Portland and Seattle's models, UDP's typologies are the product of an ongoing scholarly project, not just designed for a single city.

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[101] Portland State University and Bates, "Gentrification and Displacement Study."
[102] Seattle Office of Planning & Community Development, "Seattle 2035 Growth and Equity."
[103] Nathalie P. Voorhees Center for Neighborhood and Community Improvement, "The Socioeconomic Change of Chicago's Community Areas (1970-2010)."
[104] Landis, "Tracking and Explaining Neighborhood Socioeconomic Change in U.S. Metropolitan Areas Between 1990 and 2010."
[105] Freeman, "Displacement or Succession?"
[106] The other two are areas with high student populations ("college towns") and areas without enough data for classification.
[107] Chapple, Thomas, and Zuk, "Chicago – Gentrification and Displacement."

MODIFIED TYPES	CRITERIA
LOW-INCOME/SUSCEPTIBLE TO DISPLACEMENT	• Low or mixed low-income tract in 2018
ONGOING DISPLACEMENT OF LOW-INCOME HOUSEHOLDS	• Low or mixed low-income tract in 2018 • Absolute loss of low-income households, 2000-2018
AT RISK OF GENTRIFICATION	• Low-income or mixed low-income tract in 2018 • Housing affordable to low or mixed low-income households in 2018 • Didn't gentrify 1990-2000 OR 2000-2018 • Marginal change in housing costs OR Zillow home or rental value increases in the 90th percentile between 2012-2018 • Local and nearby increases in rent were greater than the regional median between 2012-2018 OR the 2018 rent gap is greater than the regional median rent gap
EARLY/ONGOING GENTRIFICATION	• Low-income or mixed low-income tract in 2018 • Housing affordable to moderate or mixed moderate-income households in 2018 • Increase or rapid increase in housing costs OR above regional median change in Zillow home or rental values between 2012-2018 • Gentrified in 1990-2000 or 2000-2018
ADVANCED GENTRIFICATION	• Moderate, mixed moderate, mixed high, or high-income tract in 2018 • Housing affordable to middle, high, mixed moderate, and mixed high-income households in 2018 • Marginal change, increase, or rapid increase in housing costs • Gentrified in 1990-2000 or 2000-2018
STABLE MODERATE/MIXED INCOME	• Moderate, mixed moderate, mixed high, or high-income tract in 2018
AT RISK OF BECOMING EXCLUSIVE	• Moderate, mixed moderate, mixed high, or high-income tract in 2018 • Housing affordable to middle, high, mixed moderate, and mixed high-income households in 2018 • Marginal change or increase in housing costs
BECOMING EXCLUSIVE	• Moderate, mixed moderate, mixed high, or high-income tract in 2018 • Housing affordable to middle, high, mixed moderate, and mixed high-income households in 2018 • Rapid increase in housing costs • Absolute loss of low-income households, 2000-2018 • Declining low-income in-migration rate, 2012-2018 • Median income higher in 2018 than in 2000
STABLE/ADVANCED EXCLUSIVE	• High-income tract in 2000 and 2018 • Affordable to high or mixed high-income households in 2018 • Marginal change, increase, or rapid increase in housing costs

Table 1: Urban Displacement Project typologies and their associated data sources. (Reprinted from Thomas et al., *Urban-displacement/displacement-typologies: Release 1.1*, January 18, 2020, University of California Berkeley Urban Displacement Project, https://github.com/urban-displacement/displacement-typologies.)

While the UDP model is relatively recent and it has not been used extensively in scholarly literature, Mujahid et al. suggest that it has advantages over other models.[108] In a comparison of the UDP model, Landis, and Freeman, Mujahid et al. found that in addition to identifying areas at risk of gentrification (which the other two do not,) the UDP classified more areas as undergoing gentrification than either Landis or Freeman. While this alone does not suggest that UDP is a better model, the fact that there was little geographic overlap between the Landis and Freeman models but more overlap between the UDP model and each of the others, suggests that the UDP's definition of gentrification may be more holistic and less narrowly focused than the others.

By drawing together numerous datasets, the UDP typologies provide a more accurate and targeted description of gentrification and displacement risk than any single indicator (e.g., change in rent, vacancy rate, median income). The downside to using UDP data is that it does not allow for as detailed quantitative analysis and statistical testing as specific indicators. The variation between census tracts is flattened into eleven discrete categories. However, given that this study focuses on only one city (as opposed to a study like Layser's) I deemed the nuance offered by the UDP's typologies to be more important than the ability to make detailed statistical claims with lower quality data.

The UDP provides easily downloadable, open-source data for many major cities, including Chicago. I downloaded the UDP's 2018 typologies file for the Chicago region as a GeoPackage from their GitHub site and imported it directly into QGIS.[109] The data is at the census tract level, and it includes a GEOID field and a field indicating typology.

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[108] Mujahid et al., "Gentrification and Displacement in the San Francisco Bay Area."
[109] *Urban-Displacement/Displacement-Typologies: Release 1.1.*

I found the naming of the UDP typologies to be slightly alarmist, with every single category implying that for low-income people, housing is either not available, declining in availability, or is at risk of declining in availability. Despite the naming conventions, documentation and the open-source nature of the project allow us to inspect exactly what led to the classification of each category. Table 1 shows the variables used to define each typology, and it allows us to determine which typologies pose the greatest cause for concern in terms of the NOF's gentrifying potential.

The first category, "Low-Income/Susceptible to Displacement" is the most clearly not a cause for concern, as these tracts were low-income and did not experience gentrification or displacement. The "Ongoing Displacement" category differs from the first in that these tracts experienced an absolute loss in low-income households between 2000 and 2018. I take issue with the naming of this category since the loss of low-income households does not necessarily imply forcible displacement. This category of households did not exhibit features of gentrification, so I suspect that the loss of low-income households is more indicative of abandonment and general out-migration, leading these tracts to be even more distressed than "Low-Income/Susceptible to Displacement" tracts. This was confirmed by t-tests on several socioeconomic indicators.[110] Thus, tracts classified as experiencing Ongoing Displacement are decidedly not undesirable locations for NOF investment.

The next three categories concern gentrification. Tracts "At Risk of Gentrification" are still affordable to low-income renters and they have not experienced gentrification. These tracts are set apart from the first two categories by the fact that they experienced some combination of marginal increases in housing costs, increases in home or rental value in the 90th percentile, location near areas with rising rents, or a greater rent gap than the regional median. These tracts have not started to

[110] See Appendix C.

experience gentrification, and thus, their populations are unlikely to be adversely affected by NOF grants. However, they pose slightly more concern than the first two categories. The "Early/Ongoing Gentrification" and "Advanced Gentrification" typologies are currently experiencing gentrification and should not receive NOF grants.

The "Stable Moderate/Mixed Income" typology indicates that a neighborhood is still accessible to some low-income residents, but it is, on average, wealthier than previous categories. This typology is not a desirable target for NOF investment, since its populations are of a higher socioeconomic status and the neighborhoods may require less investment in their built environments. However, in small numbers, they are not cause for major displacement concern. The At Risk of Becoming Exclusive category is the same, except with marginal changes in housing prices, warranting more concern, and making these tracts even less desirable for NOF investment. Allocation of NOF grants to Becoming Exclusive and Stable/Advanced Exclusive categories would reflect a gross misuse of funds, as these tracts are not affordable to low-income individuals. The "High Student Population" category is not suitable for NOF investment, as these neighborhoods generally have good access to amenities. The "Unavailable or Unreliable Data" makes up an extremely small number of tracts and is unlikely to influence analysis.

5. Point Pattern Analysis

5.1 Methodology

The first quantitative question that this study seeks to answer is: In a purely spatial sense, where have NOF grants been awarded? Are there any spatial patterns in the distribution of grants? I use point pattern analyses to identify clustering of points ("hotspots"). The existence of hotspots indicates that the distribution of NOF grants across eligible space is not random, and that there are underlying factors affecting the spatial location of NOF awardees. To identify hotspots, two quantitative methods were used: kernel density estimations, and density-based spatial clustering of applications with noise.

5.1.1 Kernel Density Estimations (KDE)

A kernel density estimation (KDE,) sometimes referred to as a heatmap, is a method of estimating a probability density function. I.e., in a 2-dimensional setting (e.g., a map) a KDE is used to describe the density of points in a spatial extent. Using QGIS's built-in "Heatmap (Kernel Density Estimation)" function, I ran two KDEs on the NOF grant data to identify hotspots. The first KDE was run using quartic kernels and a 0.50-mile radius. The second used quartic kernels and a 1.0-mile radius. I visually inspected maps of the resulting KDE surfaces to identify hotspots, and I calculated local extrema to quantify the intensity of each hotspot.

5.1.2 Density-Based Spatial Clustering of Applications with Noise (DBSCAN)

Subsequently, a second technique was used to confirm the results of the KDE. The density-based spatial clustering of applications with noise (DBSCAN) is one of the most commonly used clustering algorithms in academic literature. It is used to identify clusters of nearby points in a 2-dimensional space. I ran a DBSCAN test using QGIS's "DBSCAN clustering" function with a

minimum of five points per cluster and a maximum distance of 0.20 miles between clustered points. I recorded clusters by size (the number of points in each cluster).

5.2 Results and Discussion

The point pattern analysis revealed that NOF grants are not evenly distributed across eligible areas. There are several clusters, the most significant of which are located around 26th St in Little Village, 43rd St and Cottage Grove Ave in Bronzeville, and 71st St and Exchange Ave in South Shore. The Kernel Density Estimations run on NOF grant data reveal several hotspots, as displayed in the map below. A hotspot is defined as an area with a higher concentration of points than would be expected under a random distribution of points throughout eligible areas.

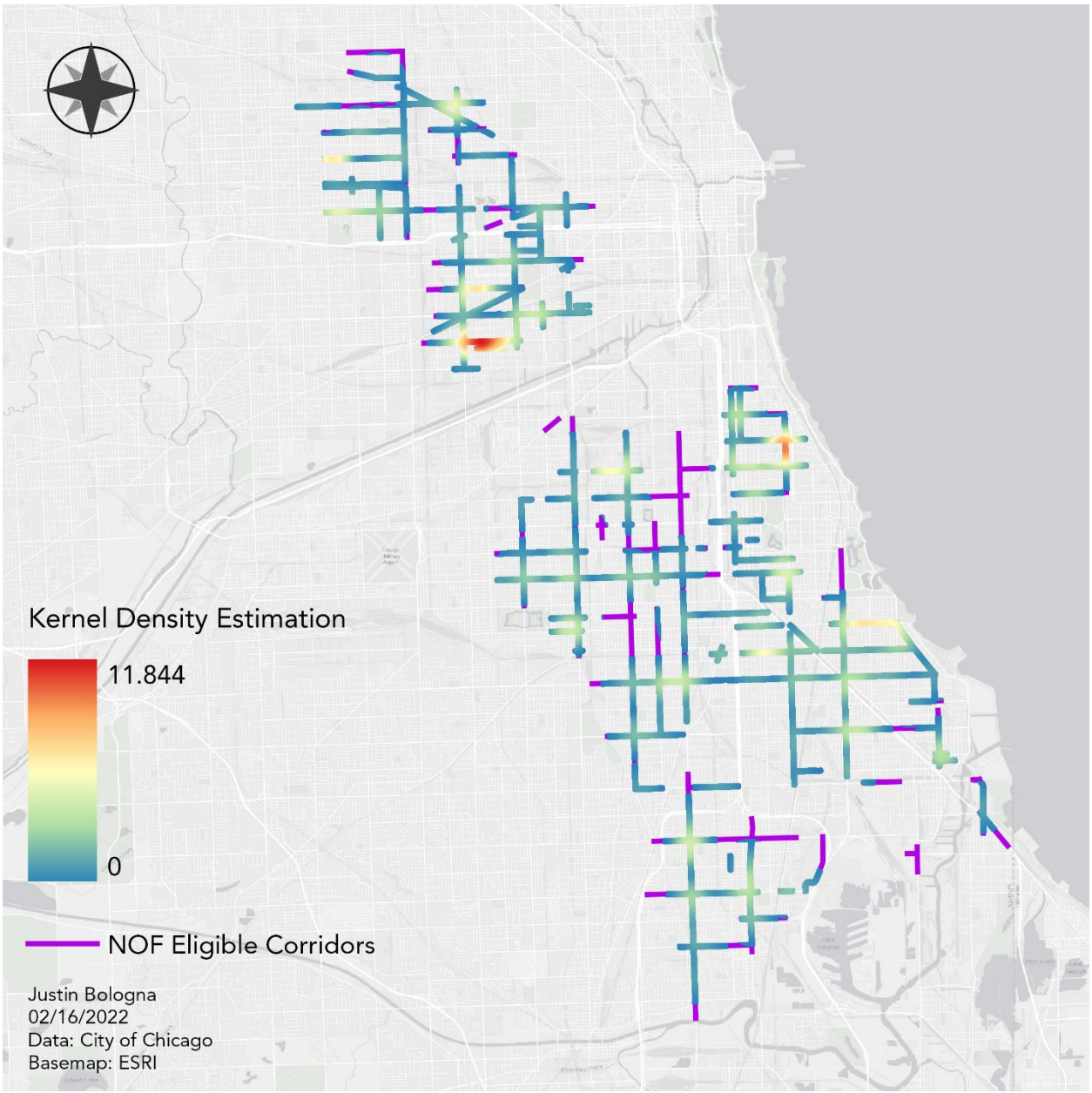

Figure 3 - Kernel Density Estimation for NOF grants with a 0.5 mile bandwidth and quartic kernels. The KDE raster is clipped to a 1/16-mile buffer around eligible corridors for visual clarity. Purple corridors are not within a half-mile of an NOF grant.

Three hotspots are visually identifiable as the largest. One is in Little Village, along 26th St; one is in Bronzeville, along 43rd St and Cottage Grove Ave; and one is in South Shore, along 71st St and Exchange Ave. These hotspots were ranked in terms of the local maximum value reached by the Kernel density estimation. The most intense hotspot was located on in the Little Village neighborhood, with a maximum KDE value of 11.85 with the 0.50-mile bandwidth, and 19.04 with

the 1.0-mile bandwidth. The second most significant hotspot was in Bronzeville, with a maximum KDE value of 9.90 with the 0.50-mile bandwidth, and 14.83 with the 1.0-mile bandwidth. The South Shore hotspot had a maximum KDE value of 6.94 with the 0.50-mile bandwidth, and 14.19 with the 1.0-mile bandwidth.

The DBSCAN confirmed the results of the KDE. Below is a map of the clusters identified by the DBSCAN and the number of points in each.

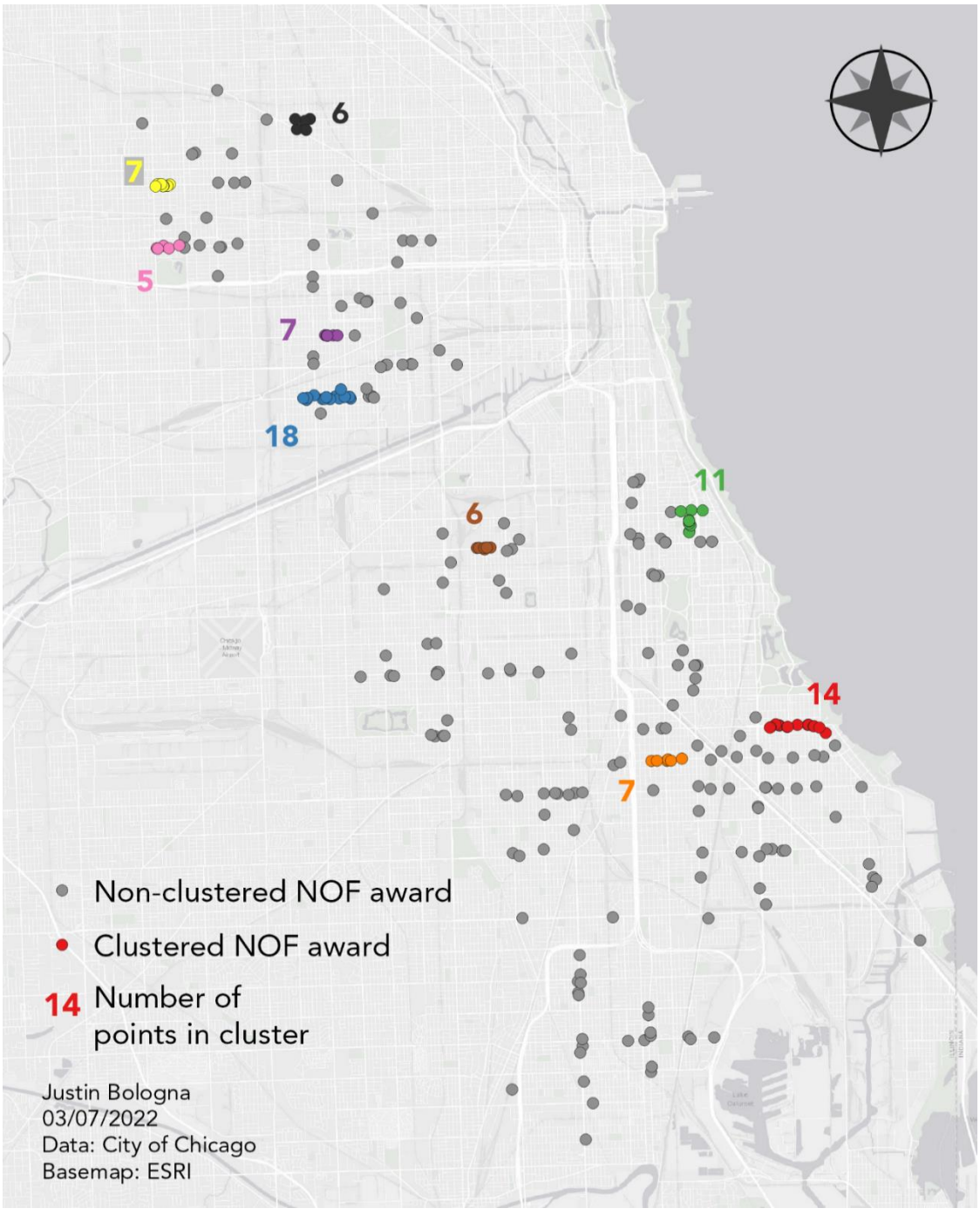

Figure 4: Density-Based Spatial Clustering of Applications with Noise test on NOF grants with a minimum cluster size of 5 and a maximum distance of 0.20 miles between clustered points. The test identifies 9 significant clusters.

The three largest clusters identified in the DBSCAN correspond to the three visually identified hotspots from the KDE. The Little Village cluster was confirmed to be the largest, with 18 points. While it reached a higher maximum KDE value, the Bronzeville cluster was found to be

smaller than the South Shore one by the DBSCAN, with 11 points versus 14. This is a result of the fact that the two tests measure slightly different things. KDEs will generate higher values when the points are more densely arranged. The DBSCAN map reveals that the Bronzeville cluster's 11 points are arranged in a relatively dense T pattern, causing the kernels to overlap more, and generating a higher local maximum than South Shore's 14 points, which are, for the most part, laid out along 71st St, with less opportunity for kernel overlap. Where the KDE accounts for the exact distance between each point, the DBSCAN has more of a binary output: a given point is either in a cluster or not.

For the purposes of this analysis, the number of points identified in a cluster by the DBSCAN is a better measure of clustering than the local maximum of the KDE, because the KDE is biased towards clusters that extend in two dimensions rather than one. The South Shore cluster is slightly more dispersed than the Bronzeville one, but the grants are still all quite close to each other; the parameters for the DBSCAN were designed to match the scale of neighborhood commercial corridors, accessible by pedestrians.

It is not surprising that grants exhibited spatial clustering. The allocation of NOF grants is determined by a variety of factors, all of which may have spatial components. These factors include the amount of land suitable for development; the number of existing businesses eligible for NOF funding; perceptions of the viability of business across eligible locations; businessowners' and entrepreneurs' engagement with the city, their neighborhoods, and the public; City outreach efforts; and bias in the application review process. Why, exactly, Little Village, South Shore, and Bronzeville had the largest clusters is a complicated question, and one that lies beyond the scope of this project, but given my local knowledge of Chicago I am not surprised that these three neighborhoods emerged as the biggest recipients of NOF funding. Little Village already enjoys relatively healthy

commercial corridors, and it has relatively little vacant land. Historically, Bronzeville and South Shore contain a relatively high amount of old money and land. By most metrics, these three neighborhoods are not as severely distressed as other South and West side neighborhoods and already have healthier business environments.

6. Resident Characteristics

6.1 Methodology

The second quantitative question asked was: In terms of key social, economic, demographic, housing, and transportation factors, are the kinds of areas being awarded NOF grants statistically different from the eligible areas as a whole? This question gets at the characteristics of people being served by NOF awards. To answer this, I ran an independent samples t-test for each selected variable between the control group (census tracts surrounding eligible corridors) and the experimental group (buffered grant locations).

6.1.1 Control Group

To answer whether awardees' service areas are statistically different from the NOF eligible areas as a whole, a control group representing areas served by NOF-eligible corridors was needed. I explored a few potential options, including the generation of random points within a buffer of NOF-eligible corridors (a polygon) and along NOF-eligible corridors (lines). I deemed these approaches to be problematic because they face the same modifiable aerial unit problem (MAUP) facing the experimental group. Additionally, the generation of random points along NOF eligible corridors implies that every mile of commercial corridor is equally likely to receive a grant, which is untrue given varying land uses along eligible corridors. Thus, neighborhoods with a denser set of corridors would be overrepresented using this methodology.

Due to these issues, I decided that the census tracts near NOF-eligible corridors should be used as the control group. While this approach sacrifices the ability to strictly control proximity to NOF-eligible corridors in control geographies, I deemed the avoidance of the MAUP and the increased quality of the data to be more important. The specific census tracts acting as the control

group are those which are directly adjacent to an NOF-eligible corridor, as well as those whose residential areas are more than half contained in a 0.5-mile buffer on NOF-eligible corridors (N=356).[111] I aggregated variables not gathered from the ACS (i.e., transit variables) to these census tract geographies.

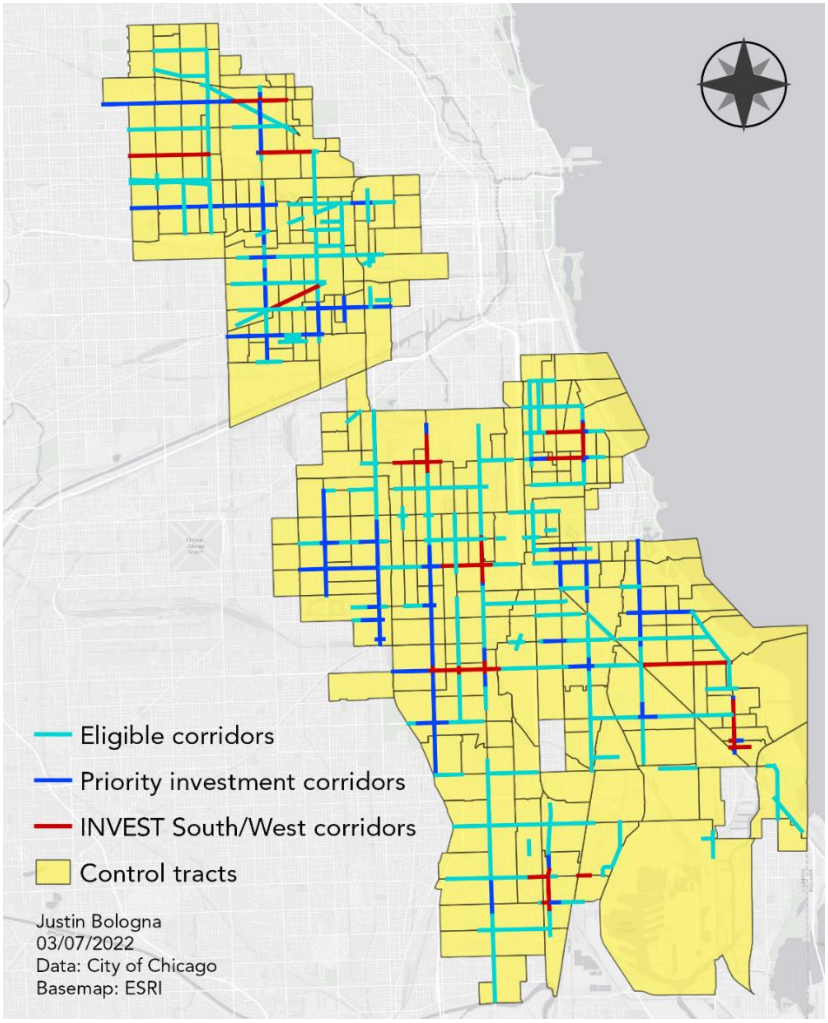

Figure 5: The 356 census tracts whose residential areas are mostly contained in a half-mile buffer of the NOF corridors serve as the control group for this study's resident characteristics question.

[111] The rationale for this is that NOF-targeted neighborhoods have been defined as those within a half mile walk of an NOF corridor. Say there is a rectangular census tract which is touching an NOF corridor at only one of its four corners. If that corner is a heavily industrial area and the bulk of the tract's population is in the far corner, it is unlikely that that population is really being served by the NOF. They are likely served by another commercial corridor that is not NOF-eligible. However, if 70% of the tract's population is within a 10-minute walk of the NOF corridor, then a much more compelling argument can be made that they are (or at least could be) affected by the NOF.

6.1.2 Experimental Group

To determine whether grants are being awarded to areas with different characteristics than all eligible areas, the variables of interest (which are summarized in census tract polygons) needed to be associated with each grant (represented by zero-dimensional points). It would not be appropriate to simply give each point the attributes of the polygon it is contained in. This is especially true since the points are mostly located on major streets, which are used to divide census tracts, meaning that nearly every point falls on the border of two or more polygons. While the census data focuses on residential characteristics, the NOF is concerned with commercial uses. The census data treats these streets as edges, to use Kevin Lynch's terminology,[112] rather than destinations with catchment basins.

Instead, I employed the concept of service areas. Each awardee has a physical location, and it serves residents in the surrounding area through some combination of the mechanisms discussed in the literature review. I use a 0.5-mile buffer around NOF grants to simulate service areas. This distance was informed by the literature. There is not much literature measuring the effects of retail development on residential property values and the decay of those effects with distance in an urban environment like Chicago. The closest study to this is Wiley's, which finds that the effects of retail development on residential property values are much stronger within 0.5 miles of the development compared to 0.75 miles or 1.0 mile,[113] but this study uses data from Atlanta, GA. Since Atlanta is less dense and more suburbanized than Chicago, the exact distance values may not be applicable to Chicago.

[112] Lynch, *The Image of the City*, 47.
[113] Wiley, "The Impact of Commercial Development on Surrounding Residential Property Values," 18–19.

A more helpful literature to look to in choosing an appropriate buffer distance is that on walkable urbanism. 0.5 miles is frequently used in studies of walkable urbanism (which the NOF and ISW seek to cultivate) as a proxy for a ten-minute walk. As I determined in the literature review, the main mechanisms by which commercial revitalization is likely to improve quality of life are the retention of middle-income residents and improved built environments that support social and mental health. Both are related to direct interactions between residents and commercial uses, and 0.5 miles is a reasonable distance to assume many residents would travel to patronize commercial uses. Thus, I defined the service area of each NOF awarded business as a circle with a half-mile radius.[114]

To associate each of these service areas with the variables of interest, I calculated an area weighted average. For a service area overlapping with *n* census tracts, the following equation was used to calculate the area weighted average for each variable:

$$Area\ Weighted\ Average = \sum_{i=1}^{n} x_i \cdot \frac{O_i}{A_i}$$

x is equal to the variable of interest (e.g., median income), *O* is equal to the residential area of the census tract which overlaps with the service area circle, and *A* is the total residential area of the

[114] An argument could be made that a quarter-mile (which is frequently used as a proxy for a five-minute walk) is the more appropriate buffer size. Chicago's main roads (where commercial corridors are often contained) are generally placed at half-mile intervals on the grid system. Where two NOF-eligible corridors are spaced a half-mile apart, a quarter-mile buffer would capture all the residential area between the corridors. But what about two corridors which are a mile apart? Why is the street directly in between these two not NOF eligible? Is it because this is a relatively successful commercial corridor which was not deemed an important target for NOF funding? If this were the case, a gravitational model would suggest that this more successful corridor would capture at least the residents within a quarter mile of it. Thus, a quarter-mile buffer for NOF service areas would be more appropriate because it does not include residents located closer to a more successful, non-NOF corridor.

While this logic is compelling, closer inspection of the actual conditions on the ground reveals that in most cases where NOF-eligible corridors are placed a mile apart, the intermediate, non-NOF street is non-commercial. These streets are typically home to residential or industrial uses, indicating that the residents living near them are still primarily served by NOF corridors. Additionally, a half-mile is simply more appropriate for exploring problems at the neighborhood scale in Chicago.

census tract. In most cases, *n* is between two and four. To calculate these values, the "Area Weighted Average" plugin for QGIS was used. Through this process, I added values for variables of interest to the data table for every feature in the award service areas file, which is linked back to the awards file.

6.1.3 T-Testing

After coercing the control and experimental groups into clean and usable formats, I exported the data from QGIS as CSV files, which I then imported into R as dataframes. From here, independent samples, two-sided, Welch's t-tests were conducted for each variable. For each variable, the test uses the following null and alternative hypotheses:

$H_0: \mu_{control\ tracts} - \mu_{NOF\ grants} = 0$

$H_a: \mu_{control\ tracts} - \mu_{NOF\ grants} \neq 0$

I recorded the results in an Excel file. Since running many t-tests increases the chance of type I errors (i.e., false positives), corrections are often made to mitigate this. 33 t-tests were run in this study, so I applied the Bonferroni correction, raising the bar for what can be considered a statistically significant result. To be considered significant at a significance level of *x* after a Bonferroni correction is applied, a p value must be less than $x/33$ in this case, since 33 t-tests were run. I recorded Bonferroni corrected significance levels in the Excel file.

6.2 Results and Discussion

Of the 33 independent samples t-tests run, there were only two significant results at the $p \leq 0.05$ level after the Bonferroni correction was applied. The results of the tests are given in table 2, below.

Variable	*P value*	*Sig.*	*Bon. Sig.*	*95% Confidence Interval*	μ_{exp}	μ_{ctl}
rail_proximity_mean	0.5578			-338.0422, 182.5676	3006.602	3084.34
bus_kde_mean	0.1349			-0.1418949, 1.0522363	15.58753	15.13236
rentchange	0.7681			-23.57995, 17.42402	91.22995	94.30791
veteran	0.8604			-0.3138216, 0.3755846	3.945811	3.91493
disability	0.4982			-0.5193087, 1.0667221	15.1861	14.91239
foreign_born	0.5199			-3.010154, 1.523628	11.1173	11.86056
non_citizen	0.003302	**		-10.191672, -2.045142	49.65801	55.77642
low_english	0.7619			-2.635089, 1.930491	10.04122	10.39352
internet	0.1635			-2.4174987, 0.4092852	67.22434	68.22845
single_parent	0.701			-1.2369703, 0.8323136	14.04077	14.2431
no_hs_diploma	0.744			-2.034552, 1.454240	20.61041	20.90056
vacant	0.8486			-1.031411, 1.253640	17.74295	17.63183
renter	0.5301			-1.723795, 3.345717	63.52026	62.7093
no_car	0.3509			-1.010986, 2.843452	32.92215	32.00592
owner_occ_unit_val	0.2489			-14082.508, 3657.814	166227	171439.4
med_rent	0.2185			-38.67038, 8.85939	916.9818	931.8873
rent_burdened	0.425			-0.9005644, 2.1338668	60.34369	59.72704
unemployment	0.933			-1.008241, 1.098499	16.13837	16.09324
comm_time	0.001267	**	*	0.4816715, 1.9660173	39.23656	38.01271
occ_mbsa	0.9839			-1.666094, 1.632087	24.68948	24.70648
occ_nrcm	0.5328			-0.9299775, 0.4814152	5.504451	5.728732
occ_sales	0.9042			-0.7906050, 0.8939073	22.49813	22.44648
occ_ptm	0.5412			-0.7415417, 1.4118802	19.63742	19.30225
occ_service	0.6499			-1.2990532, 0.8111628	27.57521	27.81915
mhh_income	0.4773			-2310.276, 1081.966	35336.6	35950.75
uninsured	0.4384			-0.5766594, 1.3291284	11.48553	11.1093
poverty	0.9254			-1.479473, 1.627689	29.2696	29.19549
race_white	0.08046			-6.1287360, 0.3512702	15.37859	18.26732
race_black	0.1812			-1.752458, 9.253263	72.08336	68.33296
race_natam	0.3386			-0.12125404, 0.04177454	0.2399786	0.2797183
race_asian	0.0002	***	**	-1.0702139, -0.3344914	0.5624361	1.2647887
race_latinx	0.621			-6.583705, 3.934471	22.98496	24.30958
over_65	0.7341			-0.6485417, 0.9199855	13.97882	13.8431

*Table 2: Independent samples t-tests results for resident characteristics. Sig. indicate the significance level, and Bon. Sig. indicates the significance level after the Bonferroni Correction. *$P \leq 0.5$, **$P \leq 0.1$, ***$P \leq 0.01$*

Commute time was found to be slightly higher in areas receiving NOF grants compared with all NOF-served neighborhoods. While the result was statistically significant, the difference in means was only about one minute (39.2 versus 38.0), and the result was not significant after applying the Bonferroni correction. The result was likely the result of random chance, and there is little reason to

believe that the City of Chicago needs to adjust their efforts in this regard, especially since the other transit variable, automobile access did not return significant results. The results for rail proximity indicated that, on average, individuals living near NOF grants were only about 72 feet closer to a rail station than those in all NOF-served residential areas, and the p-value was very high (0.5578). The bus service test had a lower P value (0.1349),[115] but again, the experimental group was found to have only meager improvements in transit access compared to the control group: about 3%. The last transportation related variable indicated that the experimental group had a slightly higher proportion of households without access to a car compared with the control group (32.92% versus 32.01%). This result was also insignificant. As a whole, the t-tests returned very weak evidence that the experimental group was slightly more transit dependent than the control group.

The other statistically significant test was on the variable indicating the percentage of the population identifying as Asian. This result remained significant after the Bonferroni correction, giving good reason to believe that NOF grants have been awarded to neighborhoods with disproportionately low Asian populations. Yet, examining the absolute values of the means is revealing. The City of Chicago is overall 7.0% Asian, but NOF-served tracts are only 1.26% Asian, indicating that Asian communities are not targeted by the program. Chicago's largest Asian communities are in West Ridge, Uptown, Loop-West Loop-South Loop, Chinatown, Bridgeport-McKinley Park, and Hyde Park, and all these neighborhoods have relatively healthy and thriving commercial corridors. The NOF-served tracts with the highest Asian populations are those bordering these communities (especially McKinley Park and Chinatown). Given this, the fact that a disproportionately low proportion of Asian Americans are being served by the NOF does not necessarily indicate a need for correction on the part of the City. This is certainly not to deny that

[115] This was certainly influenced by the fact that bus stops lie on major streets.

Asian Americans have also faced structural racism and barriers to wealth and property ownership in the past century. It is only to say that this racism is not nearly as strongly reflected in the built environments of Asian neighborhoods as it is in those of Black and Latinx neighborhoods. The City must fight racism and discrimination faced by Asian Chicagoans, but the NOF is likely not an effective tool to do so.

Aside from these two observations, the data suggest that characteristics of neighborhoods and people served by NOF grants are not statistically different from all NOF-served neighborhoods. While neighborhoods and their residents experienced a non-uniform distribution of NOF grants, the results of the t-tests indicate that, apart from Asian Americans, no group is disproportionately affected by NOF grants.

7. Gentrification Analysis

7.1 Methodology

The literature review indicated that the NOF may catalyze gentrification. Given this, the final quantitative question asked in this study is: does NOF funding flow into gentrifying neighborhoods, and if so, to what degree and where? To answer this, I use the Urban Displacement Project's typology dataset for the Chicago region to determine what kinds of census tracts, in terms of their UDP classification, NOF grants are being awarded to.

One issue that arises from interaction between the UDP typologies dataset (polygons) and the grants dataset (points) is that a simple point-in-polygon operation may introduce bias. As mentioned in subsection 6.1.2, NOF grants are awarded to establishments on major commercial streets, which typically mark the boundary between two census tracts. In terms of its interaction with residential housing trends and gentrification, the side of the street that a business is located on does not particularly matter, and it may be influenced by factors like a large institutional or industrial land use on one side of the street. Thus, there is a potential for bias if one simply counts the points in each polygon without addressing this issue. Section 6.1 used an area weighted average to describe the points in terms of polygon characteristics. This section describes polygons in terms of points, and thus, takes a different approach. To address this issue for the gentrification analysis, I simply duplicated every point and moved it across the street, doubling the number of records from 227 to 554.

I used QGIS's "Count Points in Polygon" tool to record the number of grants falling within each census tract that could have received a grant (i.e., tracts that are bordered by or contain an NOF-eligible corridor, N=314) and then summed and averaged them by typology, dividing by two

to account for the doubling of the grant data. The results are recorded in table 3, along with results controlling for the length of eligible commercial frontage in each tract.

I ran a Kruskal-Wallis test with UDP typology as the independent variable and number of grants per tract as the dependent variable to determine if there is a statistically significant difference in the number of grants per tract allocated to each typology. This nonparametric test analyzes variance between more than two samples and is often used when the conditions for a parametric ANOVA test are not met. These data are decidedly not normally distributed, with most tracts receiving zero grants and tailing off from there for nearly every typology. I excluded the two typologies that received zero grants. The null hypothesis for this test is that the mean ranks of the groups are all the same. The alternative hypothesis is that at least one group has a mean rank which is different from at least one other group.

Finally, I mapped grants against UDP typologies. I inspected the spatial characteristics of the grants in relation to the UDP typologies of the tracts they fall in, with special attention to the tracts deemed undesirable for NOF investment, as defined in section 4.7.

7.2 Results and Discussion

The results of the point in polygon analysis by UDP typology are summarized in table 3, below.

UDP Typology	*Number of Tracts*	*Proportion of tracts*	*Total Grants*	*Mean Grants per Tract*	*Mean Grants per Tract per Mile of Eligible Commercial Frontage*
Low-Income/Susceptible to Displacement	120	0.3822	110.5	0.9208	0.4947
Ongoing Displacement	64	0.2038	43.5	0.6797	0.3563
At Risk of Gentrification	93	0.2962	88	0.9462	0.5500
Early/Ongoing Gentrification	11	0.0350	6.5	0.5909	0.5370
Advanced Gentrification	14	0.0446	13.5	0.9643	0.8457
Stable Moderate/Mixed Income	4	0.0127	2	0.5	0.1731
At Risk of Becoming Exclusive	5	0.0159	10	2	0.9598
High Student Population	2	0.0064	0	0	0
Unavailable or Unreliable Data	1	0.0032	0	0	0

Table 3: UDP typologies of eligible census tracts and the number of NOF grants in each. Only nine of the eleven Chicago UDP typologies described tracts eligible for an NOF grant. Some tracts contained "half" of a grant as a result of the cross-street mirroring process.

Of the eleven UDP typologies in Chicago, nine made up the 314 tracts adjacent to or containing an NOF-eligible corridor. Three typologies – Low-Income/Susceptible to Displacement, Ongoing Displacement, and At Risk of Gentrification – made up 88.2% of these tracts, as shown in table 3. This observation is a good sign in terms of the NOF's gentrification risk, as these three typologies give the least cause for concern. The vast majority of NOF-eligible tracts are not ones undergoing gentrification. 25 of the 314 eligible tracts (8.0%) were experiencing ongoing or advanced gentrification, and nine (2.9%) were not low-income. Two tracts had a high student population and one had unreliable data. The presence of some gentrifying and moderate-income tracts amongst the group of eligible tracts is not particularly concerning if those tracts are not receiving much NOF funding, but the data show that they do receive a good number of grants.

The "At Risk of Becoming Exclusive" and the "Advanced Gentrification" typologies, while small in absolute number, received NOF grants at the highest rates of any typologies, with an average of 0.9598 and 0.8547 grants per tract per mile of eligible commercial frontage, respectively. Their less intense counterparts, "Early/Ongoing Gentrification" and "Stable Moderate/Mixed Income" received grants at lower rates: 0.1731 and 0.5370, respectively. The subsequent spatial

analysis of these grants (ones allocated to locations where they may exacerbate gentrification) provides greater insight into what is going on.

The three least concerning typologies received NOF grants at rates of 0.4947, 0.3563, and 0.5500 grants per tract per mile of eligible commercial frontage. It is notable that the most severely distressed tracts, those classified as experiencing "Ongoing Displacement," received grants at the lowest rate of these three groups. This suggests that on the census tract scale, the NOF does not have as strong of a presence in the most distressed areas. This fact alone may not be concerning if "Ongoing Displacement" tracts are spatially diffuse throughout eligible areas, and their residents generally live near "Low-Income/Susceptible to Displacement" and "At Risk of Gentrification" tracts which receive more NOF funding. But if "Ongoing Displacement" tracts are clustered, their residents may be under-served by the NOF.

If we understand the independent variable of UDP typology as ordinal values of gentrifying potential, we see a positive trend between average number of grants per tract per mile of eligible commercial frontage and gentrification potential.

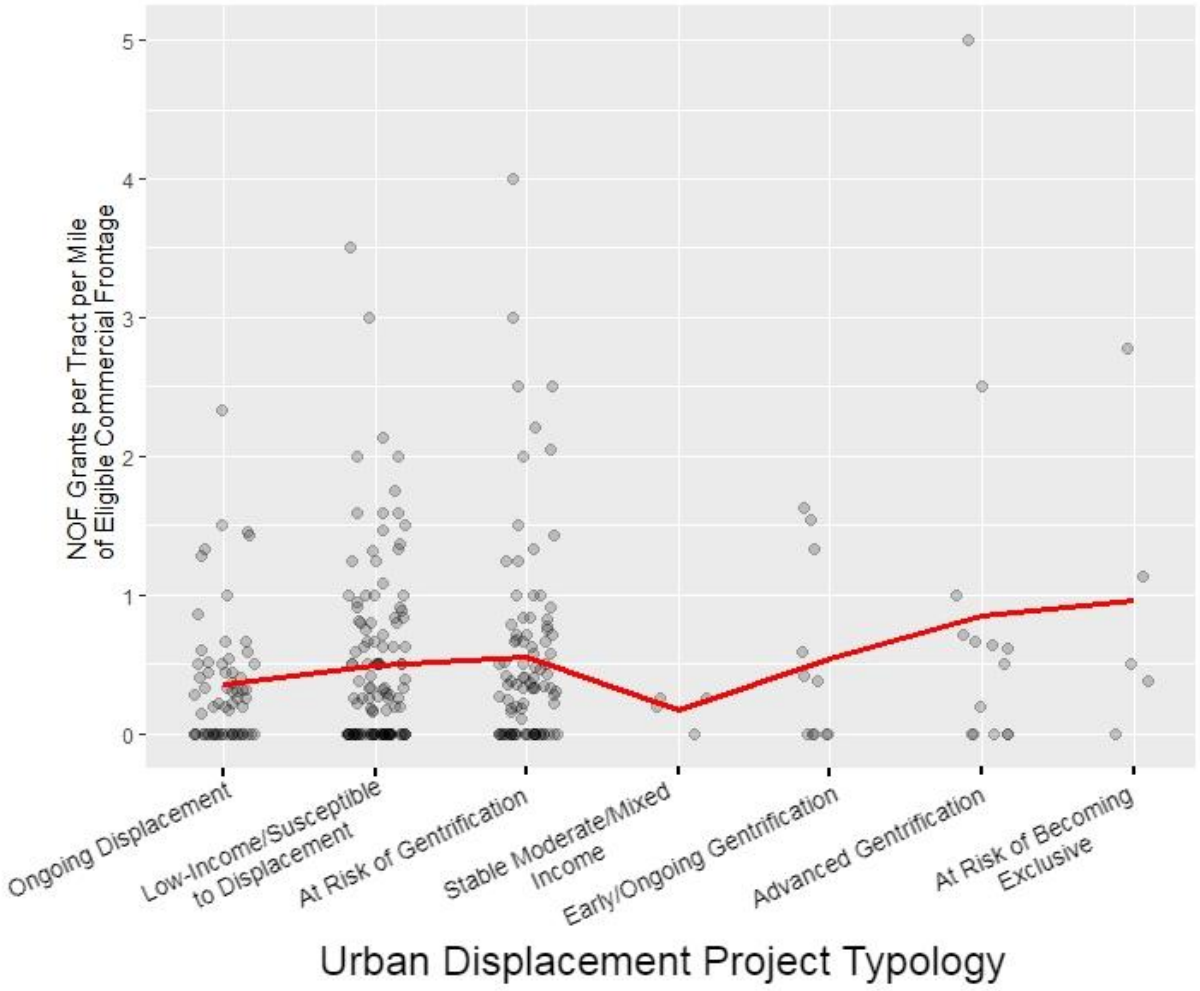

Figure 6: NOF grants against UDP typology. The red line connects the mean value of each group.

It may be futile to attempt to quantify exactly how much gentrification concern an NOF grant to each typology poses. It is even difficult to determine an ordinal ranking of typologies in this regard. For example, how do we compare middle-income typologies to gentrifying ones? For this reason, and because regression methods using ordinal independent variables are under-developed, I did not attempt to calculate a correlation here. Nonetheless, we do see that typologies with greater concern for gentrification tend to receive a greater quantity of NOF grants.

The Kruskal-Wallis test provides a more statistically robust way to determine if different typologies receive grants at different rates. The test returned a chi-squared value of 5.6386 with six degrees of freedom, corresponding to a P value of 0.4649. This is far above any commonly used

significance level, so we fail to reject the null hypothesis that the mean ranks of the groups are all the same. I.e., there is not enough statistical evidence to suggest that, globally, NOF grants are awarded to tracts with different gentrification typologies at different rates. This aligns with a finding in section 6.2: change in rent (a common proxy for gentrification) was not statistically different between areas receiving grants and eligible areas as a whole.

The failure of the Kruskal-Wallis test to return statistically significant findings suggests that the NOF does not consistently award grants to areas at high or low risk of gentrification. However, it does not necessarily mean that gentrification is not a concern for any neighborhood. Mapping the number of NOF grants per tract against the UDP typology of each tract gives greater insight into both the spatial distribution of typologies, and how funds are being disbursed across them.

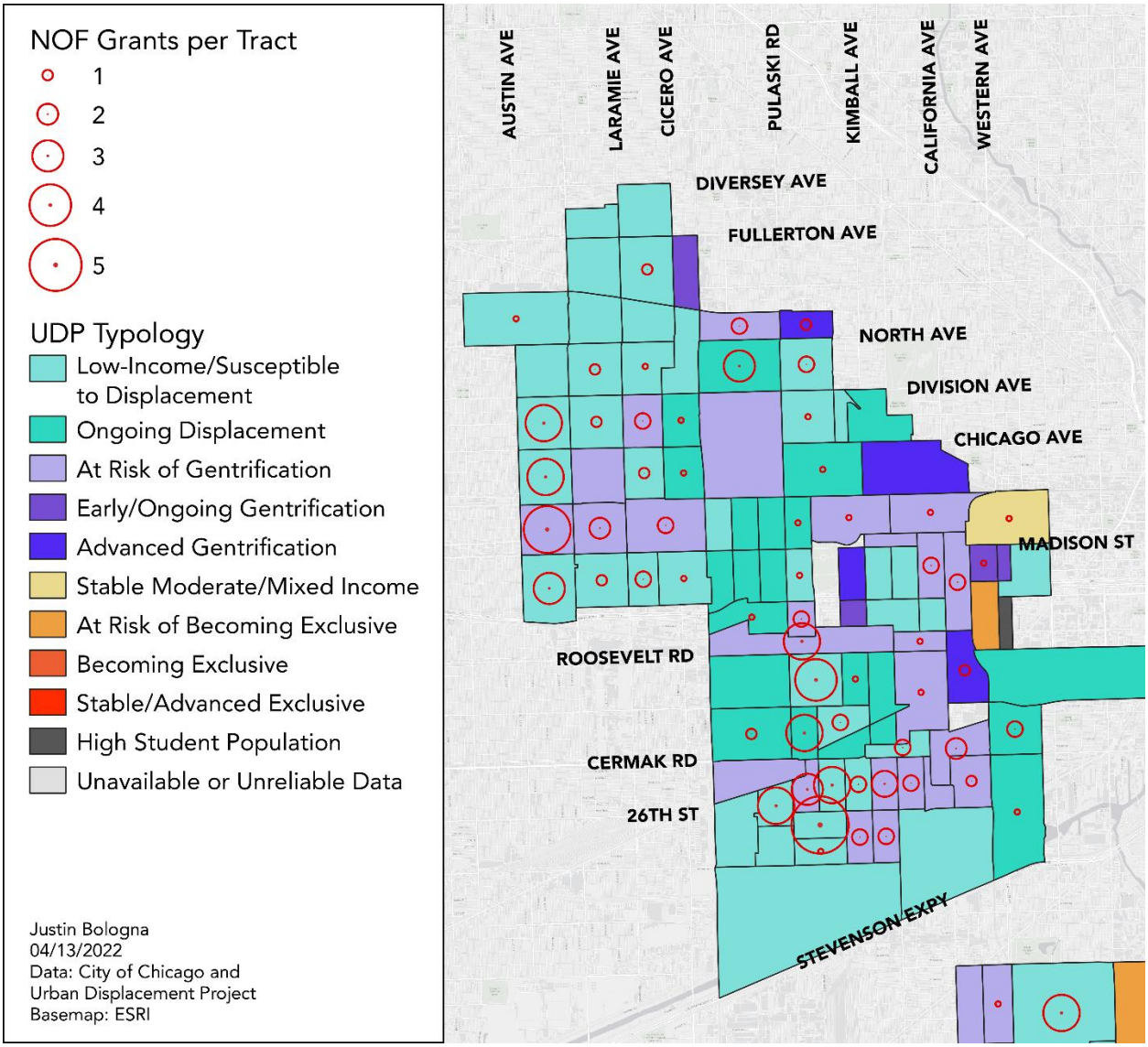

Figure 7: UDP typologies and concentrations of NOF grants on the West Side.

On the West Side, there are very few gentrifying or middle-income tracts eligible for NOF funding. Those that exist are mostly at the edges of the eligible geographies, and do not receive many grants. Thus, the spatial patterns of the three most common typologies are more edifying to examine. South Austin, around Madison St, has received a large number of NOF grants, and the three tracts north of Madison St are all classified as "At Risk of Gentrification." While gentrification is not an immediate concern in this neighborhood, I recommend that the City keep an eye on it over the next 5 years or so.

Moving east, the West Garfield Park neighborhood exhibits a high concentration of "Ongoing Displacement" tracts, the most distressed typology, and nearly no NOF grants. This is an area in need of revitalization funding but receiving none. I recommend that the City give extra weight to applicants from this neighborhood. One other neighborhood of note is Little Village. As I found in section 5.2, Little Village has the largest cluster of NOF grants in the city. Luckily, it does not appear to be seriously at risk of gentrification. However, some of the more eastern sections of the neighborhood are classified as "At Risk," so, much like western South Austin, the City should keep an eye on Little Village dynamics. With Pilsen gentrifying to the east, it is conceivable that gentrification risk in Little Village could grow over the coming years.

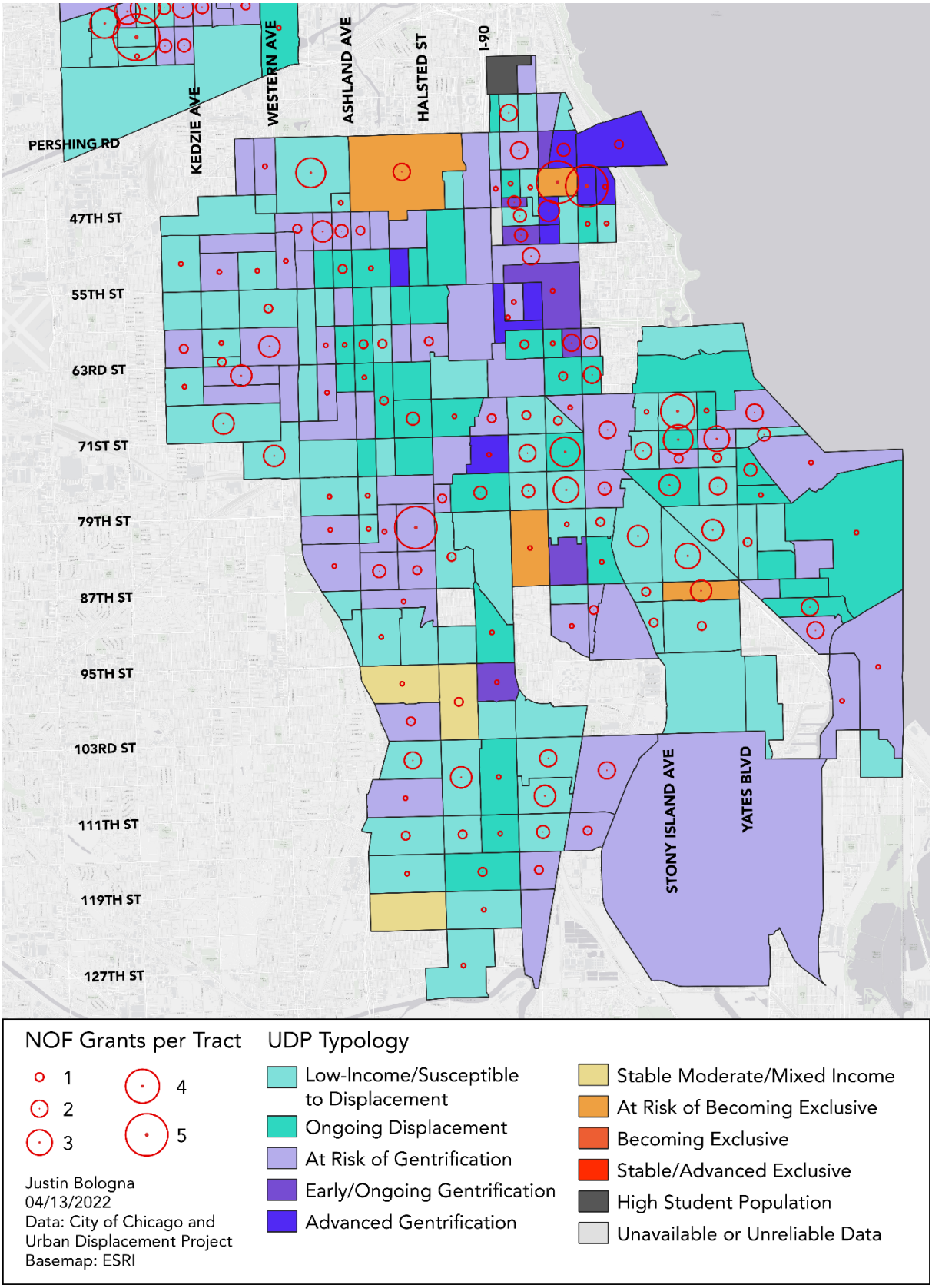

Figure 8: UDP typologies and concentrations of NOF grants on the South Side.

On the South Side, there is a greater number of gentrifying and middle-income tracts. The most immediate and alarming example of this in in Bronzeville. Of the 27 eligible tracts in the Bronzeville-Kenwood area, four are classified as "At Risk of Gentrification," three are experiencing "Early/Ongoing Gentrification," six are experiencing "Advanced Gentrification," and one is "At Risk of Becoming Exclusive." This is especially concerning since I found Bronzeville to have the third largest clustering of grants in the city.

UDP Typology	*Number of Tracts*	*Proportion of tracts*	*Total Grants*	*Mean Grants per Tract*	*Mean Grants per Tract per Mile of Eligible Commercial Frontage*
Low-Income/Susceptible to Displacement	8	0.296	4.5	0.562	0.561
Ongoing Displacement	3	0.111	1	0.333	0.244
At Risk of Gentrification	4	0.148	2.5	0.625	0.189
Early/Ongoing Gentrification	3	0.111	3	1	1.06
Advanced Gentrification	6	0.222	10.5	1.75	1.63
At Risk of Becoming Exclusive	1	0.0370	5	5	2.78
High Student Population	1	0.0370	0	0	0
Unavailable or Unreliable Data	1	0. 0370	0	0	0

Table 4: UDP typologies of eligible census tracts and the number of NOF grants in each for the Bronzeville area (bounded by 31st St to the north, Lake Michigan to the east, 51st St to the south, and I-90 to the west.) Only eight of the eleven UDP typologies described tracts eligible for an NOF grant. Some tracts contained "half" of a grant as a result of the cross-street mirroring process.

It is notable that within the Bronzeville area, in general, tracts classified as having a greater risk of gentrification received more grants than ones at lower risk. Of the two Bronzeville tracts which received the most NOF grants (five each,) one was classified as experiencing "Advanced Gentrification" and one was "At Risk of Becoming Exclusive." This area is clearly the greatest cause for concern when it comes to the NOF exacerbating gentrification.

There are not many other clusters of gentrifying areas on the South Side, except for, perhaps, the east Washington Park/west Woodlawn area, which has two tracts classified as experiencing "Early/Ongoing Gentrification," and two experiencing "Advanced Gentrification," likely as a result of the University of Chicago's slow but persistent encroachment into the

neighborhoods surrounding Hyde Park. Despite the small cluster of gentrifying tracts, few NOF awards have been awarded to this area. South Shore contains the second largest cluster of NOF grants in the City, but there is little reason for concern here, since the area is composed of a fairly even mix of the three most common typologies.

Other areas that warrant discussion include South Shore and Auburn Gresham. South Shore was one of the three areas identified in chapter 5 as containing a cluster of grants. Figure 8 reveals that South Shore is made up completely of the three least concerning typologies, with the "At Risk of Gentrification" typology making up fewer of the area's tracts than the other two. Thus, the neighborhood does not pose a great gentrification risk, although it may be wise for the City to monitor the situation in South Shore given the amount of grant money flowing there. Auburn Gresham (particularly near 79th St and Halsted St) received a high number of grants, despite the area not containing any clusters recognized by the DBSCAN. Given the concentration of "At Risk of Gentrification" tracts, the City may want to monitor this neighborhood as well.

8. Policy Recommendations

Given the results of both the critical analysis and the quantitative spatial analysis, two main policy recommendations for the City of Chicago are described below. They are based upon this study's foundational premise that the goal of urban planning, neighborhood commercial revitalization, and the Neighborhood Opportunity Fund should be the improvement of people's lives. The first recommendation aims to improve the ability of the NOF to improve lives. The second aims to mitigate harms that may potentially result from the program.

8.1 De-emphasize small businesses, use the NOF's funding mechanism to support other community resources, and democratize control over funding

This was a major takeaway from the qualitative section. The connections between neighborhood commercial revitalization and the improvement of lives of residents in surrounding areas are tenuous. The NOF is unlikely to create many high-quality jobs, advance community economic self-sufficiency, or benefit consumers by increasing access to affordable goods and services. There is some evidence that, in the long term, the NOF could aid in the retention of middle-income residents, but this requires a careful balancing act to avoid gentrification and displacement. The best argument for the NOF is not economic, but social. Research supports the hypothesis that revitalization initiatives and the improvement of the built environment creates spaces for social connection. Beautifying and placemaking are very worthwhile goals insofar as they support social and mental health.

Yet, even if supporting social and mental health is a goal of the NOF, there are likely more efficient ways to achieve it. An analysis of exactly what kinds of resources would yield the greatest economic and social benefits in various South and West side communities is far beyond the scope of this paper, but it is something that policymakers must take a critical and pragmatic look into. Social

services, health clinics, broadband internet, school supplies, after school activities, community gardens, and physical recreation spaces are all options worth exploring. This list is by no means exhaustive, and the community must be consulted and given democratic power over the uses of NOF funds. This is a very feasible goal as is demonstrated by the fact that community democratic control over public funds already exists in Chicago. Nine of the city's fifty wards currently use participatory budgeting to allocate public funds.[116]

Even without changing the guidelines for use of NOF funds, more democratic power should be afforded to community members. Nobody understands the needs and wants of community members better than they do, and nobody understands and feels the complex dynamics of neighborhood economics in as great detail. Community members ought to be given a say in which projects get funded in their neighborhood not only to maximize the good that projects will afford them, but also to mitigate some gentrifying effects.

The NOF's funding source is not infinite. There is a limited amount of land that can be developed in Chicago's downtown core, and we must also come to terms with the fact that with infinite growth is not possible in a world of finite natural resources. With humanity already barreling towards climate catastrophe, Chicago absolutely cannot take a "rising tides lift all boats" attitude towards equity. As the third largest city in the world's largest economy, Chicago has a responsibility to lead the way. We ought to be thankful for the NOF's clever funding mechanism, recognize that every NOF dollar is a precious opportunity to advance equity and combat structural racism, and attempt a more radical approach. Small businesses are a highly important part of the cultural and economic fabric of a neighborhood, but pragmatically speaking, they should not be the sole focus of the NOF.

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[116] UIC Great Cities Institute, "Participatory Budgeting Chicago."

8.2 Revoke eligibility in gentrifying neighborhoods, particularly Bronzeville

Under a capitalist housing market, gentrification and displacement are, unfortunately, always concerns when it comes to place-based initiatives. By seeking to catalyze private investment with highly visible commercial revitalization, the City must ensure that the NOF does not catalyze displacement. This is not a concern in many neighborhoods, as was indicated by the results of this study's quantitative analysis, but it certainly is in others. Bronzeville, in particular, is a neighborhood to be concerned about. With the UDP classifying the neighborhood as undergoing gentrification, a large cluster of NOF grants, an many of the characteristics associated with demand-driven gentrification (e.g., proximity to downtown, good transit access, proximity to the lakefront, rich cultural history, beautiful architecture, bordered to the south by wealthy Kenwood and Hyde Park), it may not be a wise move for the City to continue advancing NOF and ISW projects without very robust mechanisms in place to guard against displacement. NOF funding would do more good in neighborhoods with less risk.

Bronzeville may experience a dramatic resurgence in the next couple of decades, but it is irresponsible to push that resurgence along right now without first making sure that the neighborhood's residents will get to share in the wealth created. I recommend that Bronzeville's NOF eligibility be revoked, so more resources can be allocated to neighborhoods at less risk of gentrification and more in need of development. The quantitative analysis revealed that there are plenty of deeply economically depressed neighborhoods which are eligible for NOF grants but have hardly received any, e.g., West Garfield Park.

9. Conclusion

The Neighborhood Opportunity Fund is only about six years old, and its concrete impacts on South and West Side neighborhoods have yet to be seen. Yet, there is a lot that can be said about the program based on its structure, City documentation, and award data. In this study, I find that the NOF is not optimally structured to improve the lives of people living in the communities it targets, since commercial revitalization mainly through small businesses is unlikely to yield benefits for South and West Side residents, with the exception of improved social and mental health. The spatial distribution of NOF grants across the eligible areas is not random, and there are several clusters of grants, the largest of which are in Little Village, South Shore, and Bronzeville. Despite not being spatially random, the program does not disproportionately serve any particular group in terms of social, economic, demographic, housing, or transportation characteristics. There is also not evidence that NOF awards neighborhoods with different gentrification statuses differently, but in the case of Bronzeville, a significant amount of funding is flowing to a gentrifying neighborhood.

Since this study involves many quantitative operations, there are several limitations to note. First, the American Community Survey data used is only available at the census tract scale. When 2020 Census data is fully released, census block level data would be more accurate and more granular, potentially allowing for more significant results. This could also help address the modifiable areal unit problem (MAUP) that using area weighted averages creates. The MAUP arises because the real data about people's socioeconomic and other factors are aggregated to the census tract level. This study's area weighted average implies that each variable is distributed evenly across the residentially zoned areas of each census tract, but this is not actually true. Alternatively, a more sophisticated operation than an area weighted average could be performed to estimate the

distribution of variables across the census tract. This could involve using real estate data to estimate population density and economic characteristics.

The public transit data used does not capture the full nuance of transit accessibility. E.g., all bus stops are treated as equal contributors to transportation access, but some bus routes run more frequently and offer service earlier in the morning and later at night than others. Performing an analysis with more sophisticated transit data from Walk Score or Google would yield more accurate results. Additionally, the distance calculated for the rail raster was Euclidian distance. Using street network distance would provide a much more accurate representation of how people move in an urban environment.

There is great potential for further study of the NOF. Perhaps the most important research project that should be conducted on the NOF would involve a qualitative evaluation of the community engagement process and residents' wants and needs, and the subsequent generation of specific recommendations for recalibration of NOF funding uses. Alternatively, a qualitative project involving interviews with community members from NOF-served neighborhoods, interviews with City officials, and a more robust and systematic analysis of NOF and INVEST South/West documentation could do an excellent job of determining the City's theory of change for the program and the degree to which community members share that vision. Another avenue for qualitative research building upon this study would be interviewing NOF awarded business owners, especially in areas with high concentrations of grants, to determine if there was any coordination or communication about the program between them.

There is also great potential for further quantitative analysis. The resident characteristics section of the study may benefit from a more complex statistical model than the t-tests run in section 6.1.3. For the purposes of this study, the t-tests sufficed to draw conclusions about the

characteristics of populations being affected by NOF grants, but something like a binary logistic regression (as performed by Herndon[117]) would give more detailed and nuanced results.

This study does not fully explore the unique characteristics of each NOF awardee, often treating awards as the same despite variation in award amount and business type. One avenue for the further exploration in this sense would be an evaluation of the program based on neighborhood needs. I.e., analyzing the value added by each awardee based on the existing commercial makeup of the area and theories about what establishments contribute to neighborhood heath and how. Finally, the City is scheduled to update NOF eligibility criteria in 2022, so a new analysis based on the new criteria (and new awards) will be important.

Given the amount of funding it disburses, the Neighborhood Opportunity Fund is an important target of study, especially since other cities considering revitalization programs can learn from it. Taken at face value, the NOF is a laudably progressive first step in building back up communities that have borne the brunt of disinvestment, inequitable resource allocation, and structural racism. And indeed, this study finds that NOF awards are reaching the audiences they were intended to reach, and they are not disproportionally flowing to gentrifying neighborhoods. However, the literature review and critical analysis cast doubt on the ability of the NOF to improve quality of life in under-resourced communities. The NOF is not likely to produce high quantities or qualities of jobs for South and West side residents; it does not seriously contribute to community economic self-sufficiency; and City officials consider the inflow of capital from outside investors to be a major goal of the program, even though without community democratic control over investment, this comes with the very real and dangerous possibility of catalyzing gentrification in certain neighborhoods. My quantitative analysis finds that the NOF very well could be contributing

[117] Herndon, "A Spatial Analysis of Community Development in Arizona from Seed Grants."

to gentrification in Bronzeville. On the other hand, there is potential for the NOF to improve the lives of residents of targeted neighborhoods through the attraction and retention of middle-income residents and improved social and mental health.

Despite its inefficiency and its flaws, the NOF should inspire some degree of hope for those interested in advancing equity in Chicago. There is opportunity to recalibrate. Putting the funding mechanism into place should be seen as a political victory, and from here, refining the uses of that funding will be the next step.

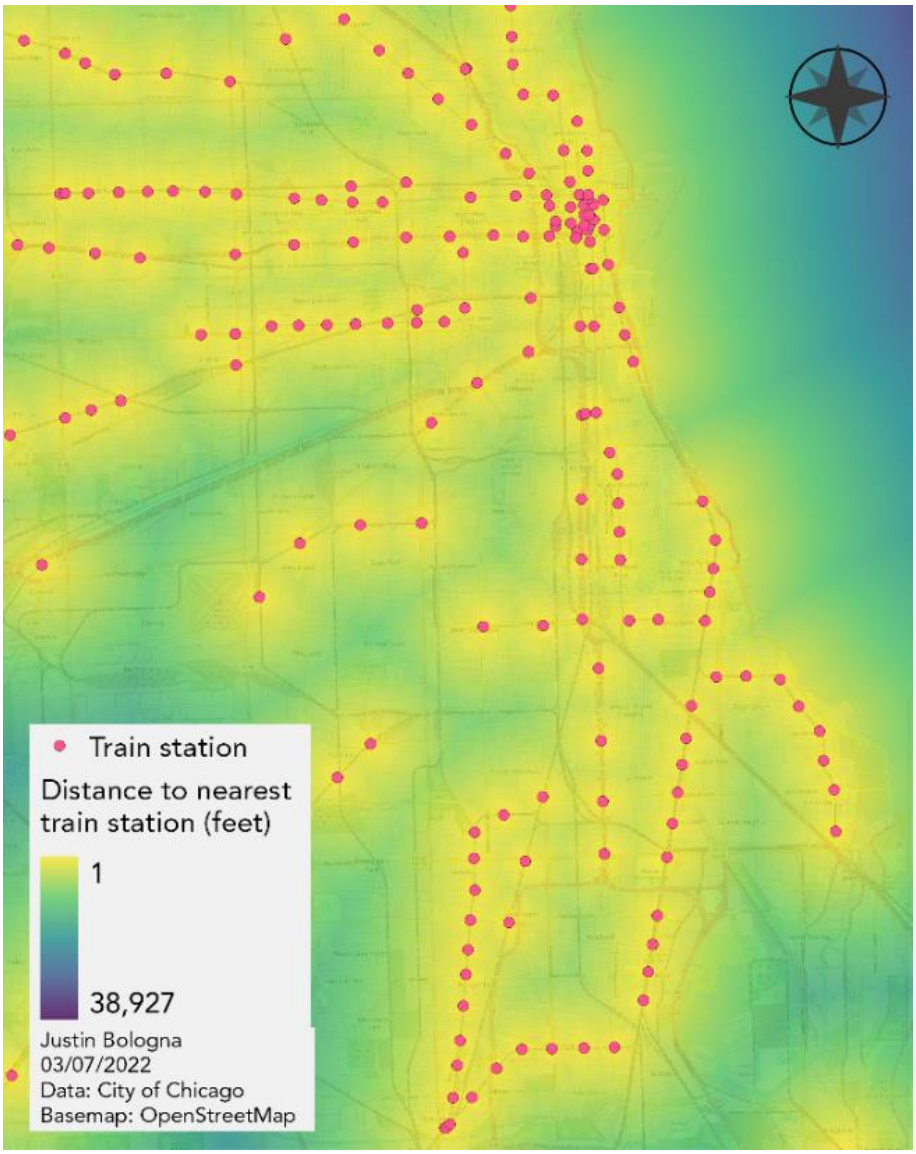
Appendix A: ACS Variables

Variable Name	*Description*	*ACS Code or Formula*	*ACS Source Table*	*Category*
single_parent	Percent of households with a single parent and children	(DP02_0007E+ DP02_0011E)/ DP02_0001E*100	DP02	Social
no_hs_diploma	Percent of residents with no high school diploma	DP02_0060PE+ DP02_0061PE	DP02	Social
veteran	Percent of residents who are veterans	DP02_0070PE	DP02	Social
disability	Percent of residents with a disability	DP02_0072PE	DP02	Social
foreign_born	Percent of residents who are foreign born	DP02_0093PE	DP02	Social
non_citizen	Percent of residents without US citizenship	DP02_0096PE	DP02	Social
low_eng	Percent of residents who speak English "less than very well"	DP02_0114PE	DP02	Social
internet	Percent of households with a broadband internet connection	DP02_0153PE	DP02	Social
unemployment	Unemployment rate of the civilian labor force	DP03_0009PE	DP03	Economic
comm_time	Mean commute time	DP03_0025E	DP03	Transportation
occ_mbsa	Percent of residents working in management, business, science, and arts occupations	DP03_0027PE	DP03	Economic
occ_service	Percent of residents working in service occupations	DP03_0028PE	DP03	Economic
occ_sales	Percent of residents working in sales/office occupations	DP03_0029PE	DP03	Economic
occ_nrcm	Percent of residents working in natural resources, construction, and maintenance occupations	DP03_0030PE	DP03	Economic
occ_ptm	Percent of residents working in production, transportation, and material moving occupations	DP03_0031PE	DP03	Economic
mhh_income	Median household income	DP03_0062E	DP03	Economic
uninsured	Percent of civilian noninstitutionalized population without health insurance coverage	DP03_0099PE	DP03	Economic
poverty	Percent of families and people below the poverty line	DP03_0128PE	DP03	Economic
vacant	Percent of housing units vacant	DP04_0003PE	DP04	Housing
renter	Percent of occupied housing units occupied by renters	DP04_0047PE	DP04	Housing
no_car	Percent of households without access to a vehicle	DP04_0058PE	DP04	Transportation
owner_occ_unit_val	Median value of owner-occupied housing units	DP04_0089E	DP04	Housing
med_rent	Median rent	DP04_0134E	DP04	Housing

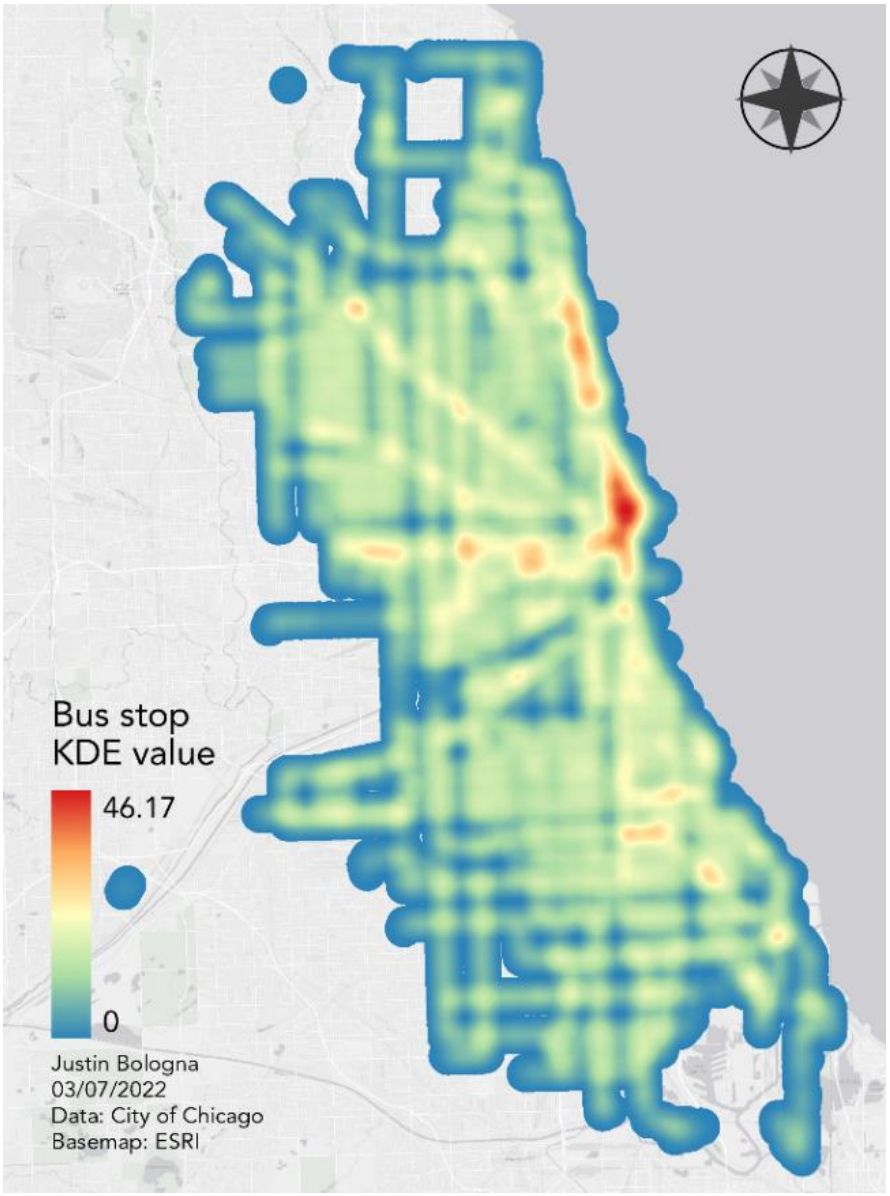
rent_burdened	Percent rent burdened (renters for whom gross rent as a percentage of income is 30% or more)	DP04_0141PE+ DP04_0142PE	DP04	Housing
over65	Percent of population over 65 years old	DP05_0015PE+ DP05_0016PE+ DP05_0017PE	DP05	Demographic
race_white	Percent of population that is White	DP05_0037PE	DP05	Demographic
race_black	Percent of population that is Black	DP05_0038PE	DP05	Demographic
race_nativeam	Percent of population that is Native American	DP05_0039PE	DP05	Demographic
race_asian	Percent of population that is Asian	DP05_0044PE	DP05	Demographic
race_latinx	Percent of population that is Hispanic or Latino	DP05_0071PE	DP05	Demographic
rentchange	Change in average median rent from 2010-2019	DP04_0134E-2010_DP04_0132E	DP04	Housing

ACS variables used for the resident characteristics analysis

Appendix B: Public Transit Density Maps



Train stations and distance from the nearest station across the extend of NOF-eligible areas



A kernel density estimation calculated with a point shapefile of every CTA bus stop in Chicago

Appendix C: UDP's "Ongoing Displacement" Typology

Variable	*P value*	*Sig.*	*Bon. Sig*	*95% Confidence Int.*	μ_{LI}	μ_{OD}
owner_occ_unit_val	0.007046	***	*	6036.499, 37531.958	164979.3	143195.1
vacant	1.74E-13	***	***	-13.419812, -8.337688	15.265	26.14375
unemployment	0.000519	***	**	-6.913171, -1.981412	15.49333	19.94063
mhh_income	0.000524	***	**	2535.318, 8890.080	36999.31	31286.61
poverty	2.01E-05	***	***	-11.287129, -4.314538	26.83667	34.6375

*Independent samples t-test results comparing tracts classified by the UDP as "Low-Income/Susceptible to Displacement" (LI) and those classified as "Ongoing Displacement" (OD). Sig. indicate the significance level, and Bon. Sig. indicates the significance level after the Bonferroni Correction. *$p \leq 0.5$, **$p \leq 0.1$, ***$p \leq 0.01$*

T-tests support the hypothesis that tracts classified as experiencing "Ongoing Displacement" by the UDP are the result of abandonment, and they are actually more distressed than those classified as "Low-Income/Susceptible to Displacement." This selection of indicators targets housing and economic conditions. The "Ongoing Displacement" tracts had significantly higher rates of vacancy, unemployment, and poverty, and significantly lower owner-occupied unit value and median household income.

Bibliography

2nd City Zoning. "Zoning Districts." 2nd City Zoning. Accessed March 10, 2022. https://secondcityzoning.org/zones/.

Aaronson, Daniel, Daniel A. Hartley, and Bhashkar Mazumder. "The Effects of the 1930s HOLC 'Redlining' Maps," February 2019. https://ssrn.com/abstract=3038733.

Alm, James, Trey Dronyk-Trosper, and Sean Larkin. "In the Land of OZ: Designating Opportunity Zones." *Public Choice* 188, no. 3 (September 1, 2021): 503–23. https://doi.org/10.1007/s11127-020-00848-9.

Alwitt, Linda F., and Thomas D. Donley. "Retail Stores in Poor Urban Neighborhoods." *Journal of Consumer Affairs* 31, no. 1 (1997): 139–64. https://doi.org/10.1111/j.1745-6606.1997.tb00830.x.

Appel, Ian, and Jordan Nickerson. "Pockets of Poverty: The Long-Term Effects of Redlining," 2016. https://doi.org/10.2139/ssrn.2852856.

Bates, Timothy, and Alicia Robb. "Blind Faith: Entrepreneurship and the Revitalisation of Inner-City Minority Communities." In *Enterprise, Deprivation, and Social Exclusion*, edited by Alan Southern, 39–57. New York, NY: Routledge, 2011.

Brown, Graham, Barbara B. Brown, and Douglas D. Perkins. "New Housing as Neighborhood Revitalization: Place Attachment and Confidence Among Residents." *Environment and Behavior* 36, no. 6 (November 1, 2004): 749–75. https://doi.org/10.1177/0013916503254823.

Carmichael, Stokely, and Charles V Hamilton. *Black Power: Politics of Liberation in America*. New York, NY: Random House, 1967.

Chapple, Karen, Tim Thomas, and Miriam Zuk. "Chicago – Gentrification and Displacement." Urban Displacement Project, 2021. https://www.urbandisplacement.org/maps/chicago-gentrification-and-displacement/.

———. "Urban Displacement Project." Urban Displacement Project, 2021. https://www.urbandisplacement.org/.

City of Chicago. "CTA - Bus Stops - Shapefile." Dataset. Chicago Data Portal, March 1, 2022. https://data.cityofchicago.org/Transportation/CTA-Bus-Stops-Shapefile/pxug-u72f.

———. "CTA - 'L' (Rail) Stations - Shapefile." Dataset. Chicago Data Portal, December 31, 2018. https://data.cityofchicago.org/Transportation/CTA-L-Rail-Stations-Shapefile/vmyy-m9qj.

———. "INVEST South/West." City of Chciago. Accessed November 24, 2021. https://www.chicago.gov/content/city/en/sites/invest_sw/home.html.

———. "INVEST SOUTH/WEST Two-Year Update." Chicago, IL, November 17, 2021. https://www.chicago.gov/content/dam/city/sites/invest_sw/ISW_TwoYear_Update_Nov17.pdf.

———. "Metra Stations." Dataset. Chicago Data Portal, September 7, 2012. https://data.cityofchicago.org/Transportation/Metra-Stations/nqm8-q2ym.

———. "Neighborhood Opportunity Fund." Neighborhood Opportunity Fund. Accessed November 25, 2021. https://neighborhoodopportunityfund.com/.

———. "Zoning Boundaries." Dataset. City of Chicago ArcGIS REST Services Directory. Accessed March 9, 2022. https://gisapps.cityofchicago.org/arcgis/rest/services/ExternalApps/Zoning/MapServer/1.

City of Chicago Department of Planning and Development. "About." Neighborhood Opportunity Fund. Accessed March 16, 2022. https://neighborhoodopportunityfund.com/about/.

———. "Apply for the Fund." Dataset. Neighborhood Opportunity Fund. Accessed December 9, 2021. https://neighborhoodopportunityfund.com/apply/.

———. *INVEST South/West: A New Collaboration for Chicago's South and West Sides*. Chicago, IL, 2020. https://www.youtube.com/watch?v=lM-O5M1GZjg.

———. *INVEST South/West Kickoff Celebration: Englewood, Auburn Gresham and New City*. Chicago, IL, 2019. https://www.youtube.com/watch?v=OtDfUKvv28Q.

———. "Neighborhood Opportunity Fund Small Grants Program Manual." Manual, November 2021. https://neighborhoodopportunityfund.com/about/.

City of Chicago Office of the Mayor. "Mayor Emanuel Introduces New Downtown Bonus System to Generate Funds for Neighborhood Commercial Development Projects." Press Release. Chicago, IL, April 13, 2016. https://neighborhoodopportunityfund.com/static/docs/april_2016_nof_press_release.pdf.

Collinson, Robert A. "Assessing the Allocation of CDBG to Community Development Need." *Housing Policy Debate* 24, no. 1 (January 2, 2014): 91–118. https://doi.org/10.1080/10511482.2013.854945.

Cooksey-Stowers, Kristen, Marlene B. Schwartz, and Kelly D. Brownell. "Food Swamps Predict Obesity Rates Better Than Food Deserts in the United States." *International Journal of Environmental Research and Public Health* 14, no. 11 (November 2017): 1366. https://doi.org/10.3390/ijerph14111366.

Dalinghaus, Martijn. "Reconstructing Independence on Sint Maarten: Rebuilding a Resilient Community with a Circular Neighborhood Intervention," 2020. https://repository.tudelft.nl/islandora/object/uuid%3Aceedfdd5-893a-45c5-a6c6-6792bacd8512.

Davis, Steven J., John Haltiwanger, and Scott Schuh. "Small Business and Job Creation: Dissecting the Myth and Reassessing the Facts." *Small Business Economics* 8, no. 4 (August 1, 1996): 297–315. https://doi.org/10.1007/BF00393278.

Delmelle, Elizabeth C. "Mapping the DNA of Urban Neighborhoods: Clustering Longitudinal Sequences of Neighborhood Socioeconomic Change." *Annals of the American Association of Geographers* 106, no. 1 (January 2, 2016): 36–56. https://doi.org/10.1080/00045608.2015.1096188.

Ellen, Ingrid Gould, Michael H. Schill, Amy Ellen Schwartz, and Ioan Voicu. "Housing Production Subsidies and Neighborhood Revitalization: New York City's Ten-Year Capital Plan for Housing." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, August 25, 2005. https://papers.ssrn.com/abstract=790725.

Fitzpatrick, Katie, Nadia Greenhalgh-Stanley, and Michele Ver Ploeg. "Food Deserts and Diet-Related Health Outcomes of the Elderly." *Food Policy* 87 (August 1, 2019): 101747. https://doi.org/10.1016/j.foodpol.2019.101747.

Fleming, David A., and Stephan J. Goetz. "Does Local Firm Ownership Matter?" *Economic Development Quarterly* 25, no. 3 (August 1, 2011): 277–81. https://doi.org/10.1177/0891242411407312.

Freeman, Lance. "Displacement or Succession?: Residential Mobility in Gentrifying Neighborhoods." *Urban Affairs Review* 40, no. 4 (March 1, 2005): 463–91. https://doi.org/10.1177/1078087404273341.

Galster, George, Christopher Walker, Christopher Hayes, Patrick Boxall, and Jennifer Johnson. "Measuring the Impact of Community Development Block Grant Spending on Urban Neighborhoods." *Housing Policy Debate* 15, no. 4 (January 1, 2004): 903–34. https://doi.org/10.1080/10511482.2004.9521526.

Gelfond, Hilary, and Adam Looney. "Learning from Opportunity Zones: How to Improve Place-Based Policies." The Brookings Institution, October 2018. https://www.brookings.edu/wp-content/uploads/2018/10/looney_opportunity-zones_final.pdf.

Greenbaum, Robert T. "Siting It Right: Do States Target Economic Distress When Designating Enterprise Zones?" *Economic Development Quarterly* 18, no. 1 (February 1, 2004): 67–80. https://doi.org/10.1177/0891242403259999.

Harger, Kaitlyn, and Amanda Ross. "Do Capital Tax Incentives Attract New Businesses? Evidence across Industries from the New Markets Tax Credit." *Journal of Regional Science* 56, no. 5 (November 1, 2016): 733–53. https://doi.org/10.1111/jors.12286.

Harvey, David. "The Right to the City." *New Left Review*, no. 53 (October 1, 2008): 23–40.

Herndon, Carly. "A Spatial Analysis of Community Development in Arizona from Seed Grants." Master's Report. Tucson, AZ: The University of Arizona, 2017. http://hdl.handle.net/10150/626246.

Jacobs, Jane. *The Death and Life of Great American Cities*. New York, NY: Random House, 1961.

Joseph, Mark L. "Is Mixed-income Development an Antidote to Urban Poverty?" *Housing Policy Debate* 17, no. 2 (January 1, 2006): 209–34. https://doi.org/10.1080/10511482.2006.9521567.

Joseph, Mark L., Robert J. Chaskin, and Henry S. Webber. "The Theoretical Basis for Addressing Poverty Through Mixed-Income Development." *Urban Affairs Review* 42, no. 3 (January 1, 2007): 369–409. https://doi.org/10.1177/1078087406294043.

Kasinitz, Philip, and Jan Rosenberg. "Missing the Connection: Social Isolation and Employment on the Brooklyn Waterfront*." *Social Problems* 43, no. 2 (May 1, 1996): 180–96. https://doi.org/10.2307/3096997.

Kolko, Jed, and David Neumark. "Does Local Business Ownership Insulate Cities from Economic Shocks?" *Journal of Urban Economics*, Special Issue: Cities and Entrepreneurship, 67, no. 1 (January 1, 2010): 103–15. https://doi.org/10.1016/j.jue.2009.08.006.

Krimmel, Jacob. "Persistence of Prejudice: Estimating the Long Term Effects of Redlining," March 2, 2018. https://doi.org/10.31235/osf.io/jdmq9.

Landis, John D. "Tracking and Explaining Neighborhood Socioeconomic Change in U.S. Metropolitan Areas Between 1990 and 2010." *Housing Policy Debate* 26, no. 1 (January 2, 2016): 2–52. https://doi.org/10.1080/10511482.2014.993677.

Lens, Michael C. "The Limits of Housing Investment as a Neighborhood Revitalization Tool: Crime in New York City." *Journal of the American Planning Association* 79, no. 3 (July 3, 2013): 211–21. https://doi.org/10.1080/01944363.2014.893803.

Lynch, Kevin. *The Image of the City*. Cambridge, MA: The MIT Press, 1960.

Maranion, Danielle. "The Power of Place: An Analysis of Chicago's Neighborhood Opportunity Funds." *Advocates' Forum*, no. 2021 (2021): 27–38.

Mazumdar, Soumya, Vincent Learnihan, Thomas Cochrane, and Rachel Davey. "The Built Environment and Social Capital: A Systematic Review." *Environment and Behavior* 50, no. 2 (February 1, 2018): 119–58. https://doi.org/10.1177/0013916516687343.

Milder, N. David. *Niche Strategies for Downtown Revitalization: A Hands-on Guide to Developing, Strengthening, and Marketing Niches*. New York, NY: Downtown Research & Development Center, 1997.

Mujahid, Mahasin S., Elizabeth Kelley Sohn, Jacob Izenberg, Xing Gao, Melody E. Tulier, Matthew M. Lee, and Irene H. Yen. "Gentrification and Displacement in the San Francisco Bay Area: A Comparison of Measurement Approaches." *International Journal of Environmental Research and Public Health* 16, no. 12 (January 2019): 2246. https://doi.org/10.3390/ijerph16122246.

Nathalie P. Voorhees Center for Neighborhood and Community Improvement. "The Socioeconomic Change of Chicago's Community Areas (1970-2010)." Chicago, IL: University of Illinois Chicago, October 2014. https://voorheescenter.red.uic.edu/wp-content/uploads/sites/122/2017/10/Voorhees-Center-Gentrification-Index-Oct-14.pdf.

National Main Street Center. "State of Main." Chicago, IL: National Main Street Center, Spring 2020. https://www.mainstreet.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=971eaf82-a0ea-a6e8-0c74-016da91c41c6&forceDialog=0.

———. "The Movement." Main Street America. Accessed January 9, 2022. https://www.mainstreet.org/mainstreetamerica/themovement.

Neumark, David, and Jed Kolko. "Do Enterprise Zones Create Jobs? Evidence from California's Enterprise Zone Program." *Journal of Urban Economics* 68, no. 1 (July 1, 2010): 1–19. https://doi.org/10.1016/j.jue.2010.01.002.

Newton, Huey. "Intercommunalism." Viewpoint Magazine, 1974. https://viewpointmag.com/2018/06/11/intercommunalism-1974/.

Nowak, Jeremy. "Neighborhood Initiative and the Regional Economy." *Economic Development Quarterly* 11, no. 1 (February 1, 1997): 3–10. https://doi.org/10.1177/089124249701100101.

Nuraini, Hikmah. "Building Village Economic Independence Through Village-Owned Enterprises (BUMDes)," 168–73. Atlantis Press, 2020.

Oi, Walter Y., and Todd L. Idson. "Chapter 33 Firm Size and Wages." In *Handbook of Labor Economics*, 3:2165–2214. Elsevier, 1999. https://doi.org/10.1016/S1573-4463(99)30019-5.

Porter, Michael E. "The Competitive Advantage of the Inner City." *Long Range Planning* 4 (1995). https://doi.org/10.1016/0024-6301%2895%2994327-u.

Portland State University, and Lisa Bates. "Gentrification and Displacement Study: Implementing an Equitable Inclusive Development Strategy in the Context of Gentrification." Portland State University Library, May 18, 2013. https://doi.org/10.15760/report-01.

Rautio, Nina, Svetlana Filatova, Heli Lehtiniemi, and Jouko Miettunen. "Living Environment and Its Relationship to Depressive Mood: A Systematic Review." *International Journal of Social Psychiatry* 64, no. 1 (February 1, 2018): 92–103. https://doi.org/10.1177/0020764017744582.

Rothstein, Richard. *The Color of Law: A Forgotten History of How Our Government Segregated America*. New York, NY: Liveright, 2017.

Rupasingha, Anil. "Locally Owned: Do Local Business Ownership and Size Matter for Local Economic Well-Being?" *FRB Atlanta Community and Economic Development Discussion Paper*. FRB Atlanta Community and Economic Development Discussion Paper. Federal Reserve Bank of Atlanta, 2013. https://ideas.repec.org/p/fip/fedacd/2013-01.html.

Ruthhart, Bill. "Emanuel: Charge Downtown Developers More, Spend Money in Struggling Neighborhoods." *Chicago Tribune*. February 18, 2016. https://www.chicagotribune.com/politics/ct-rahm-emanuel-neighborhood-development-20160217-story.html.

Sabino, Pascal, and Heather Cherone. "After Rahm's 'Smoke And Mirrors,' Lightfoot Claims Neighborhood Opportunity Fund As Her Own." *Block Club Chicago*. February 11, 2020. https://blockclubchicago.org/2020/02/11/after-emanuels-smoke-and-mirrors-lightfoot-claims-neighborhood-opportunity-fund-as-her-own/.

Sadler, Richard Casey, and Don J. Lafreniere. "Racist Housing Practices as a Precursor to Uneven Neighborhood Change in a Post-Industrial City." *Housing Studies* 32, no. 2 (February 17, 2017): 186–208. https://doi.org/10.1080/02673037.2016.1181724.

Satcher, David, Martha Okafor, and LeConté J. Dill. "Impact of the Built Environment on Mental and Sexual Health: Policy Implications and Recommendations." *ISRN Public Health* 2012 (June 14, 2012). https://doi.org/10.5402/2012/806792.

Seattle Office of Planning & Community Development. "2021 Round Equitable Development Fund Guidelines." Seattle, WA, 2021. https://www.seattle.gov/Documents/Departments/OPCD/OngoingInitiatives/EquitableDevelopmentInitiative/EDI2021RFPguidance.pdf.

———. "Seattle 2035 Growth and Equity." Seattle, WA, May 2016. http://www.seattle.gov/documents/departments/opcd/ongoinginitiatives/seattlescomprehensiveplan/finalgrowthandequityanalysis.pdf.

Simons, Robert, and John Brennan. "Development of Inner-City Retail Niche Markets." In *Megatrends in Retail Real Estate*, edited by John D. Benjamin, 295–313. Dordrecht: Springer Netherlands, 1996. https://doi.org/10.1007/978-94-009-1802-3_15.

Smith, Neil. "Toward a Theory of Gentrification A Back to the City Movement by Capital, Not People." *Journal of the American Planning Association* 45, no. 4 (October 1979): 538–48. https://doi.org/10.1080/01944367908977002.

Spielman, Fran. "Emanuel Moves to Shed 'Mayor 1%' Label with Neighborhood Development." *Chicago Sun-Times (IL)*, June 7, 2017. Access World News – Historical and Current. https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/164E4104C755A3C8.

Teitz, Michael B. "Neighborhood Economics: Local Communities and Regional Markets." *Economic Development Quarterly* 3, no. 2 (May 1, 1989): 111–22. https://doi.org/10.1177/089124248900300204.

The Obama White House. *Eliminating Food Deserts in America*, 2010. https://www.youtube.com/watch?v=8My-iWjTBQ8.

Theodos, Brett, Eric Hangen, Brady Meixell, and Prasanna Rajasekaran. "Neighborhood Disparities in Investment Flows in Chicago." Research Report. Washington, D.C.: Urban Institute, May 2019. https://www.urban.org/sites/default/files/publication/100261/neighborhood_disparities_in_investment_flows_in_chicago_1.pdf.

Triyanto, Triyanto, Chux Gervase Iwu, Tichaona Buzy Musikanvanhu, and Rif'ati Dina Handayani. "Rural Tourism as a Way to Build Economic Independence," August 31, 2018. http://repository.unej.ac.id/xmlui/handle/123456789/105223.

UIC Great Cities Institute. "Participatory Budgeting Chicago." Participatory Budgeting Chicago. Accessed April 5, 2022. http://www.pbchicago.org/.

Urban-Displacement/Displacement-Typologies: Release 1.1 (version v1.1). Berkeley, CA: University of California Berkeley Urban Displacement Project, 2020. https://doi.org/10.5281/zenodo.4356684.

U.S. Census Bureau. "2006-2010 American Community Survey 5-Year Estimates Data Profiles: DP04 | Selected Housing Characteristics." Dataset, 2010. https://data.census.gov/cedsci/table?g=0500000US17031%241400000&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2010.DP04.

———. "2015-2019 American Community Survey 5-Year Estimates Data Profiles: DP02 | Selected Social Characteristics in the United States." Dataset, 2019. https://data.census.gov/cedsci/table?g=0500000US17031%241400000&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2019.DP02.

———. "2015-2019 American Community Survey 5-Year Estimates Data Profiles: DP03 | Selected Economic Characteristics." Dataset, 2019.

https://data.census.gov/cedsci/table?g=0500000US17031%241400000&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2019.DP03.

———. "2015-2019 American Community Survey 5-Year Estimates Data Profiles: DP04 | Selected Housing Characteristics." Dataset, 2019. https://data.census.gov/cedsci/table?g=0500000US17031%241400000&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2019.DP04.

———. "2015-2019 American Community Survey 5-Year Estimates Data Profiles: DP05 | ACS Demographic and Housing Estimates." Dataset, 2019. https://data.census.gov/cedsci/table?g=0500000US17031%241400000&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2019.DP05.

Varady, David P. "Neighborhood Confidence: A Critical Factor in Neighborhood Revitalization?" *Environment and Behavior* 18, no. 4 (July 1, 1986): 480–501. https://doi.org/10.1177/0013916586184004.

Walker, Renee E., Christopher R. Keane, and Jessica G. Burke. "Disparities and Access to Healthy Food in the United States: A Review of Food Deserts Literature." *Health & Place* 16, no. 5 (September 1, 2010): 876–84. https://doi.org/10.1016/j.healthplace.2010.04.013.

Waxman, Andy. "Utilizing Economic Theories of Retail to Revitalize Inner-City Neighborhood Business Districts : The Case of Uphams Corner Main Street." Master's Thesis, Massachusetts Institute of Technology. Dept. of Urban Studies and Planning., 1999. https://dspace.mit.edu/handle/1721.1/42819.

———. "WHY IMPROVE NEIGHBORHOODS? Shifting the Goals of Inner City Neighborhood Commercial Revitalization." *Projections MIT Student Journal of Planning: Remaking Crisis Cities* 1, no. Spring (2000): 31–57.

Wiley, Jonathan A. "The Impact of Commercial Development on Surrounding Residential Property Values." Atlanta, GA: Georgia State university, April 2015. https://www.gamls.com/images/jonwiley.pdf.

Wilson, William Julius. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. University of Chicago Press, 1987.

Wilson, W.J. *When Work Disappears: The World of the New Urban Poor*. Vintage. Knopf Doubleday Publishing Group, 1996. https://books.google.com/books?id=-ZqSuhVz0voC.

Wrigley, Neil, Daniel Warm, and Barrie Margetts. "Deprivation, Diet, and Food-Retail Access: Findings from the Leeds 'Food Deserts' Study." *Environment and Planning A: Economy and Space* 35, no. 1 (January 1, 2003): 151–88. https://doi.org/10.1068/a35150.

X, Malcolm. Remembering Malcolm X: Rare Interviews and Audio. Interview by Eleanor Fischer. Transcript, 1961. https://www.wnyc.org/story/87636-remembering-malcolm-x-rare-interviews-and-audio/.

Zhen, Chen. "Food Deserts: Myth or Reality?" *Annual Review of Resource Economics* 13 (October 2021): 109–29. https://doi.org/10.1146/annurev-resource-101620-080307.

Zipp, John F. "The Quality of Jobs in Small Business." *Economic Development Quarterly* 5, no. 1 (February 1, 1991): 9–22. https://doi.org/10.1177/089124249100500102.

Zulkarnaini, Zulkarnaini, and Dadang Mashur. "Development Of Local Economic Independence Through Optimizing Of Village Fund Management." *Iapa Proceedings Conference*, October 15, 2019, 298–302. https://doi.org/10.30589/proceedings.2018.203.