HOMELESSNESS, EVICTIONS, AND RACE IN U.S. COMMUNITIES BEFORE AND DURING THE COVID-19 PANDEMIC

by

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ABSTRACT

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Vijaya Tamla Rai

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Under the Supervision of Professor Marcus L. Britton

This dissertation examines how community racial composition, area eviction filings, and the strength of COVID-19-related eviction moratoria were associated with racial gaps in homelessness in the United States before and during the COVID-19 pandemic. Past studies depicted homelessness solely as a housing problem, mostly reducing race to an individual-level determinant and obscuring the differential association community racial composition may have with racial gaps in the rates of homelessness. High rental costs, low rental vacancy rates, and high crowding rates in rental units create a difficult housing market for many residents, but they do not fully explain the racial gaps in homelessness. This dissertation examines how Black-White gaps in homelessness rates are associated with community racial composition, area eviction filing rates, and stronger state eviction moratoria during the COVID-19 pandemic using U.S. Department Housing and Urban Development (HUD) Point-In-Time (PIT) estimates of homelessness disaggregated by race.

Homelessness is obviously a housing problem, but race is an important factor because racial disparities in homelessness across U.S. communities are tangible. Using two competing theses, Blalock's group threat theory and embeddedness theory, and fixed effects regression models, I assessed whether increases in percent Black within communities would increase Black-White gaps in homelessness. The results supported embeddedness theory, which hypothesized

that percent Black would be negatively associated with racial gaps in homelessness rates. Minoritized racial groups present in large groups in an area may generate increased informal support, social capital, and care capital among these racial groups. Such social capital could lead to organization and mobilization of resources that might mitigate the risks of experiencing homelessness among lower income Black people.

Matching 2018's latest data on county-level evictions from the Princeton University Eviction Lab and 2019's HUD PIT estimates, I estimated a series of ordinary least square regressions and seemingly unrelated regressions to examine whether metro area eviction filing rates were positively associated with racial gaps in rates of homelessness. Results showed a significant association between eviction filing rates and Black-White gaps in homelessness rates. In areas with relatively high eviction filing rates, there were also high racial gaps in rates of homelessness. This finding extends the recently established positive relationship between evictions and homelessness by suggesting that areas with higher eviction filing rates are likely to disproportionately target Black renters, with the consequence that low-income Black renters are at greater risk of eviction-led homelessness. Thus, higher eviction filing rates are associated with higher gaps in Black-White rates of homelessness.

As the COVID-19 pandemic confronted U.S. communities with a looming public health crisis, states responded with policies such as eviction moratoria. However, given the polarized character of public policy regimes in the decentralized U.S. federal system, states varied in the strength of their eviction moratoria. Stronger state eviction moratoria were more relevant for low-income Black renters for prevention of homelessness for two major reasons. First, the COVID-19 pandemic precipitated unprecedented job loss, housing hardships, and SARS-CoV-2 infection and mortality among Black people. Second, low-income Black renters were historically

disproportionately targeted for eviction. I created the Eviction Moratoria Index as a proxy for the strength of state eviction moratoria. After accounting for racial power, rental market characteristics, and economic factors during the pandemic, there was no significant association between the Eviction Moratoria Index and change in rates of homelessness and change in racial gaps in homelessness rates. Irrespective of these null findings, the results were instructive for future research employing pre-pandemic landlord-tenant policy regimes that might have played a role in nullifying the association between the Eviction Moratoria Index and change in rates of homelessness before and during the pandemic. Moreover, future research should examine multi-level associations between the strength of state eviction moratoria and community-level change in racial gaps in homelessness rates.

Findings from this dissertation offer benefits to scholars across multiple disciplines, activists, service providers, advocates, and policy makers who are concerned about homelessness and who wish to effectively develop racially equitable interventions to prevent and reduce homelessness in communities across the United States. This study offers empirical evidence encouraging stakeholders to consider racial equity measures, racial power measures, and racial disparities in homelessness while collaborating and coordinating policies, programs, and practices to prevent and reduce homelessness in U.S. communities.

This study advances the sociology of homelessness using a lens of racial equity in housing outcomes. It has implications for research, policies, and practices in homelessness because it highlights the need to explicitly address racism and racial gaps in homelessness rates. Policies and practices to prevent and reduce homelessness at local, state, and federal levels will be most successful when stakeholders reconceptualize homelessness as a racial-equity and racial justice issue.

To Yurisa and Yugantar.

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ACS	American Community Survey
BIC	Bayesian Information Criteria
CoC	Continua of Care
GFGLS	General Feasible Generalized Least Square
GIS	Geographic Information System
GVIF	Generalized Variance Inflation Factor
HIC	Housing Inventory Count
HUD	U.S. Department of Housing and Urban Development
PIT	Point-In-Time
PLM	Panel Linear Models
SUR	Seemingly Unrelated Regressions
VIF	Variance Inflation Factor

ACKNOWLEDGEMENTS

I was born in a cowshed in a rural Nepali village. My early writings were scribbles on the floor of our country school. Today, I am scribbling an acknowledgement section for my doctoral dissertation in the Department of Sociology at University of Wisconsin-Milwaukee. “We are Kirant, children of mother earth. Where would you step if there was no earth?” my *muma* (grandma) often asked me when I quizzically observed her touching our courtyard floor with her both hands. Among 125 ethnic groups in Nepal, a Himalayan country in Asia, Rai is one of the minoritized indigenous peoples with over 30 sub-ethnic groups such as Thulung, Bantawa, Baying, Khaling, and Tamla. In my home village, I am the fourteenth generation of Tamla and the first one to earn a doctorate degree. Therefore, I would like to acknowledge people, places, and events that inspired me to initiate, persevere, and accomplish this doctoral degree!

First, my deepest respect to *muma*, *fupa*, and ancestors who showed me the first streak of light, taught me my first steps to tread on this earth, and filled me with infinite quantum energy to persevere. In addition, my fathomless love to Yurisa, Yugantar, and Asmita. Yurisa, our youngest but the brightest light in the family, I would like to thank you for bringing hope, strength, and beauty for the future. Yug, your kindness, optimism, and curiosity amaze and inspire me. Your one question, “How much does it cost to buy a house for a homeless person?” still haunts me. This dissertation is not yet an answer to your question, but an attempt to understand inequality in homelessness. Thank you, my best buddy, for your inquisitiveness. Thanks to your “good luck” yells from the window every time I left home for school. Asmita, my alter ego, this degree is as much as yours as it is mine. My words fail to thank you enough for your sacrifices, dedication, and incessant company during the thick and thin of our lives together. Mom, dad, Upama, and Ajay, I did it!

Second, I would like to acknowledge Milwaukee, "the good land," which is in traditional Potawatomi, Ho-Chunk and Menominee homelands along the southwest shores of Michigami, North America's largest system of freshwater lakes, where the Milwaukee, Menominee and Kinnickinnic rivers meet and the peoples of Wisconsin's sovereign Anishinaabe, Ho-Chunk, Menominee, Oneida, and Mohican nations remain present. In this good land of indigenous peoples, I felt at home. The view of lake Michigan, whether from the Bradford Beach or the seventh floor of my office in Bolton Hall, always calmed me, either during the moments of joy or moments of troubled water!

Third, on this good land, I met good people. My sincere gratitude to Professor Marcus L. Britton, my mentor since the first day in the University of Wisconsin-Milwaukee. It was Professor Britton's Social Inequality seminar where a sociological question triggered me: Why do we have inequality? As any ambitious first year doctoral student, I would propose to "solve" a complex societal problem. As a patient ocean of knowledge, Professor Britton would remind me to be focused on a specific research problem. Thank you, Professor Britton for tirelessly molding me into a scholar through extensive training in your coursework, independent studies, two-preliminary examinations, and finally, this doctoral dissertation!

I have ageless memories with many good people in the University of Wisconsin-Milwaukee. Professor Aki Roberts, thank you for believing that I could be a sociologist! A short final paper for your class on Advanced Statistical Methods turned into my dissertation. Professor Gordan Gauchat, thank you for your cognitively stimulating talks. I would always appreciate your energetic moves: holding a marker and writing conceptual models on the board. Professor John Roberts, I am inspired by your spontaneity in teaching advanced quantitative methodology and practical advice. Professor Jennifer Jordan, Professor Kent Redding, Professor Celeste

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Life has gifted me a solid circle of friends! I have a long list of friends who I met in the past and present, but I owe them all a heartfelt gratitude. While I express my thanks to all of my friends, I ought to name Dr. Yi Yin, Dr. Xiaoyu Liu, Dr. Rajeev Singh, Dr. Ganesh Baniya, Lok Gurung, Jewels Park, and Yuchen Zhao who either accompanied me in several dedicated dissertation writing sessions or periodically checked on my progress.

The people, place, and events that I acknowledged here are the tip of an iceberg. An infinitely large process has transformed me from a child born in a cowshed of rural Nepal to a promising global scholar. There were myriad possible life trajectories, but the inner spirit in me paved this path of academia for me to tread on. Thank you, my inner spirit! Let's keep learning!

Chapter 1

"Homelessness is not colorblind and unless we are willing to acknowledge the facts, engage in courageous conversations about race and racism, and work together to create equitable solutions, we will never end homelessness."

Jeff Olivet

Executive Director, United States Interagency Council on Homelessness

Ending homelessness has been on the policy agenda of the United States for the last four decades, yet visible homelessness in many U.S. communities persists. In 2010, the United States Interagency Council on Homelessness, representing 19 federal agencies, issued a comprehensive strategic plan, "Opening Doors," to end chronic and veteran homelessness by 2015 and to prevent and end homelessness for families, children, and youth by 2020 (U.S. Interagency Council on Homelessness 2010). However, on a single night in January 2022 more than 582,462 people, including individuals, people in families, children, youth, and veterans, experienced homelessness in the United States (U.S. Department of Housing and Urban Development [HUD] 2023). Since 2015, HUD's point-in-time (PIT) estimates of homelessness include data on homeless populations disaggregated by race, but this data is rarely analyzed in examining structural determinants of homelessness (Jones 2016). This dissertation is the first-ever study to draw on HUD's PIT estimates that include proportions of the homeless population belonging to Black and White racial groups and to assess whether race matters in understanding racial gaps in community-level homelessness in the United States.

From Jim Crow to the Fair Housing Act, race is at the center of housing discourse in the United States (Grigoryeva and Ruef 2015; Hwang 2020; Korver-Glenn 2018; Krysan and Crowder 2017; Lee et al. 2008; Massey 2016; Massey and Denton 1993; Sampson 2011; Squires

2018), but racial gaps in homelessness are often portrayed as an individual-level problem rather than a social phenomenon (Colburn and Aldern 2022; Olivet et al. 2021; Wagner and White 2015; Willse 2015). Such portrayals of racial disparities in homelessness as an individual-level failure is a form of colorblindness (Bonilla-Silva 2018; Olivet et al. 2021).

In 2022, more than 4 of every 10 people experiencing homelessness identified as Black. Black people accounted for 12.4% of the total United States population but accounted for 37% of all people experiencing homelessness (HUD 2023). Therefore, unhoused Black people in the United States are overrepresented. The vicious cycle of racial residential segregation, systemic racial inequality, and the disproportionate representation of Black people in homelessness beg an overarching question: How does community racial composition influence racial gaps in homelessness within U.S. communities?

Another issue closely interlinked with race and homelessness is eviction. Eviction is a direct cause of homelessness (Desmond 2016; Hepburn, Louis, and Desmond 2020; Rutan and Desmond 2021), but empirical research examining this causal relationship is in its infancy, in part because the association between forced housing displacement and homelessness may sometimes seem too obvious to investigate (Treglia, Byrne, and Tamla Rai 2023). However, tenant-landlord power imbalance, higher prevalence of eviction and eviction filing rates in communities of minoritized racial and ethnic people, and variation of homelessness in communities over time (Treglia et al. 2023) raise questions about the extent to which evictions may impact racial gaps in homelessness across U.S. communities.

The relationship between structural factors and homelessness has become even more complicated since the beginning of 2020, when the COVID-19 pandemic surfaced and exposed the extent of social and health disparities encountered by people experiencing homelessness. Individuals experiencing homelessness are more likely to live in crowded spaces such as

emergency shelters and tent encampments, so they have an increased risk of contracting and transmitting SARS-CoV-2 virus, and higher associated morbidity and mortality (Pixley et al. 2022; Puddu 2020). For instance, there were 331 deaths among unhoused people in San Francisco in the first year of the COVID-19 pandemic (i.e., between March 2020 and March 2021), which was more than twice the number in any previous year between 2016 and 2019, inclusive (Cawley et al. 2022).

The COVID-19 pandemic not only affected individual unhoused people, but also the communities in which they live. Communities that were severely cost-burdened before the pandemic were more likely to be affected by job losses and the subsequent inability to pay monthly rents or mortgages. Consequently, the increased risks of evictions and foreclosures likely exacerbated the homelessness crisis. Temporary measures such as the Coronavirus Aid, Relief, and Economic Security (CARES) Act and eviction moratoria may have moderated the structural risks of homelessness among ethnoracially minoritized renters, yet there was cross-state variation in the implementation of eviction moratoria (Benfer et al. 2022; Hepburn et al. 2021). Therefore, it is important for evidence-based research to examine the extent to which the strength of state eviction moratoria was associated with racial gaps in homelessness in the United States during the COVID-19 pandemic.

Research Questions

This dissertation aims to explain homelessness by stepping beyond the "affordable housing problem" argument. In so doing, I addressed the following major research questions:

1. To what extent did community racial composition influence racial gaps in homelessness within U.S. communities?
2. To what extent were area eviction filing rates associated with racial gaps in community-level homelessness?

3. To what extent did stronger state eviction moratoria prevent homelessness across U.S. states during the COVID-19 pandemic? To what extent were stronger state eviction moratoria associated with smaller racial gaps in state-level homelessness rates during the pandemic?

Answering these research questions fills an important gap in the existing research literature. Existing research has yet to investigate whether community racial composition predicts racial gaps in homelessness. Moreover, while there are a handful of studies that have examined the association between evictions and homelessness (Collinson and Reed 2018; Coulson, Le, and Shen 2020), no existing study has examined data released for 2017 and 2018 evictions by Princeton University Eviction Lab. There are a growing number of studies that account for the effects of the COVID-19 pandemic on unhoused people at the individual level, both inside and outside the United States. However, to my knowledge, this dissertation is one of the first studies to comprehensively examine pandemic-related state eviction moratoria's impact on homelessness in the United States.

The goal of this dissertation is to investigate the causes of homelessness within and across U.S. communities by observing evidence beyond the obvious variation in housing market conditions. High rental costs, low rental vacancy rates, and high crowded rates in rental units create a difficult housing market for many residents in a community (Colburn and Aldern 2022; Coulson et al. 2020; Gurstein, Larocque, and Macdonald 2018), but these rental market factors do not fully explain the association between racial gaps in homelessness and (a) large community-level Black populations, (b) community evictions (Desmond 2016; Hepburn et al. 2021, 2020; Leung, Hepburn, and Desmond 2021; Rutan and Desmond 2021), and (c) the strength of state eviction moratoria during the COVID-19 pandemic. For instance, Airgood-Obrycki and Hermann (2022) reported that in the first year of the COVID-19 pandemic, the

existing Black-White affordability gap between renter households widened (i.e., cost-burdened rates were 51% among Black renter households versus only 42% among White renter households in 2020), which is likely to have worsened the Black-White gap in homelessness. Similarly, the pandemic upended the housing market, potentially exacerbating housing inequities, affordability gaps, and homelessness gaps between White people and people of color (Park et al. 2022).

This dissertation accomplishes the above research goal by pursuing three specific aims.

- Aim 1: Assess the association of racial composition and within-community racial gaps in homelessness rates that are measured using the 2015-2020 U.S. Department of Housing and Urban Development (HUD) Point-In-Time (PIT) count and American Community Survey (ACS) 5-year estimates from 2010-2014 to 2015-2019.
- Aim 2: Offer new evidence on the association between eviction filing rates and community-level racial gaps in homelessness rates using as-yet-unexplored eviction data from 2018 and HUD PIT count estimates disaggregated by race for 2019.
- Aim 3: Explore the potential relationship between state eviction moratoria and change in racial gaps in homelessness across U.S. states during the COVID-19 pandemic by using HUD PIT counts in 2020 and 2022[1].

Findings and insights from this dissertation offer assistance to scholars across multiple disciplines, as well as to service providers, activists, advocates, and policymakers of homelessness to effectively collaborate and coordinate to prevent and reduce homelessness in

[1] Due to the COVID-19 pandemic, HUD PIT counts of unsheltered unhoused people were unavailable in several communities in 2021. Therefore, 2020 HUD PIT estimates and 2022 HUD PIT estimates were used to capture the change in homelessness rates before and during the pandemic. HUD PIT estimates are conducted on January, and the COVID-19 pandemic hit the United States in March 2020.

communities across the United States. The scientific contributions of this study include the expansion of structural theories of homelessness, new estimates of the association between community racial composition and racial gaps in homelessness, the association between evictions and homelessness, and unprecedented evidence of how the COVID-19 pandemic may have contributed to racial gaps in community-level homelessness across the United States over the past several years.

This study employs multiple advanced quantitative methodologies that assist methodologists in gaining a better understanding of how inequality measures vary within and across communities and how those variations are associated with racial gaps in homelessness; how, why and under what conditions evictions and racial gaps in homelessness are associated; and how the strength of state eviction moratoria is associated with racial gaps in homelessness during the COVID-19 pandemic.

The results of this study offer empirical evidence for multiple stakeholders to consider racial equity measures while collaborating and coordinating policies, programs, and interventions to reduce and prevent homelessness in communities across the United States. The results of the analyses presented below will be of interest to scholars who study affordable housing, urban development, segregation, race, and ethnicity, and public health. Lastly, this study provides evidence for service providers, activists, and advocates for people experiencing homelessness to revisit their services, activities, and lobbying from the perspectives of racial inequality and Black-White gaps in homelessness in the communities they serve.

Building This Study

I employ three empirical chapters to address the three broad research aims that I mention above. In each empirical chapter, I provide an overview of a unique research aim, the corresponding research questions and hypotheses, the relevant literature, and my methodological

approach. I draw upon different secondary data sources employing different quantitative research techniques to analyze associations between (a) community racial composition, (b) community evictions, and (c) state eviction moratoria strength and racial gaps in homelessness.

This chapter provides an overview of my dissertation. Black people are overrepresented in the homeless population. There is a naïve assumption that communities with relatively larger size of Black population are likely to have greater rates of homelessness. Existing studies show mixed relationships between percent Black and community-level rates of homelessness (Byrne et al. 2013; Fargo et al. 2013; Lee, Price-Spratlen, and Kanan 2003; Muniz 2021). Likewise, racial disparities in evictions are well-established (Desmond 2016; Hepburn et al. 2021, 2020). Literature on the extent to which evictions are associated with community-level racial gaps in homelessness rates is sparse. States had varied eviction moratoria responses during the COVID-19 pandemic. Literature assessing the association between stronger state eviction moratoria and change in rates of homelessness as well as change in racial gaps in rates of homelessness is in a nascent phase.

In a nutshell, past studies do not fully explain the extent to which:

- relatively large racial gaps in homelessness are associated with relatively larger Black populations,
- community variation in evictions is associated with racial gaps in homelessness, and
- the strength of state eviction moratoria during the COVID-19 pandemic is associated with the state-level racial gaps in homelessness.

This study seeks to understand this puzzle about why, where, or under what circumstances homelessness rates are higher among Black Americans than among White Americans, evictions influence racial gaps in homelessness, and the strength of state eviction

moratoria during the COVID-19 pandemic impacted racial gaps in homelessness in the United States.

There is a limited understanding of how policy can be used to reduce racial gaps in homelessness (Jones 2016; Olivet et al. 2021). There can be no doubt that homelessness is an affordable housing problem, but simply emphasizing the role of affordable housing does not provide the full range of evidence and insights that can be drawn from examining associations among community racial composition, community evictions, the COVID-19 pandemic-related state eviction moratoria, and racial gaps in homelessness within and across communities and states in the United States. Thus, I present three empirical chapters that examine these associations. The findings of this study will assist scholars, service providers, activists, and policymakers concerned with homelessness at the federal, state, and local levels to resituate race at the core of any integrated and collaborative approach to reduce and prevent homelessness in the United States.

Chapter 2

Race and Homelessness Within U.S. Communities Before the Covid-19 Pandemic

"To be a poor man is hard, but to be a poor race in a land of dollars is the very bottom of hardships."

- W.E.B. Du Bois, The Souls of Black Folk

Homelessness continues to be a pressing social issue prevalent in U.S. society. In the United States, the number of unhoused people on a single night increased from 564,708 in 2015 to 580,466 in 2020. Unhoused Black people have consistently been overrepresented in the total unhoused population. In 2020, Black people accounted for 12.4% of the total population in the United States, but the unhoused Black people accounted for 39.4% of the total unhoused population. Research to explain racial gaps in homelessness remains in a nascent phase (Carter 2011; Fusaro, Levy, and Shaefer 2018; Jones 2016; Wagner and White 2015). The overrepresentation of Black people and underrepresentation of White people in the entire U.S. homeless population begs a question: Does the racial composition of a community matter for Black-White gaps in U.S. homelessness?

Although there is a naïve assumption in the literature that areas with higher proportions of Black residents have higher rates of homelessness, given this over-representation of Black people in the unhoused population, the results from prior research have been inconsistent (Byrne et al. 2013; Colburn and Aldern 2022; Elliott and Krivo 1991; Lee et al. 2003; Muniz 2021). For instance, Elliot and Krivo (1991) found a positive association between larger Black populations in metropolitan areas and the metro areas' homelessness rates. However, Lee et al. (2003) and Byrne et al. (2013) found no association between size of the Black population and rates of homelessness. Conversely, recent studies have found that homelessness was negatively associated with higher proportions of Black residents (Colburn and Aldern 2022; Muniz 2021).

Colburn and Aldern (2022) argue that, while race was an individual risk factor for homelessness, race failed to explain the community-level variation in homelessness.

At the individual level, some studies found a significant Black-White gap in risks of homelessness (Fusaro et al. 2018; Jones 2016; Paul et al. 2020), but, at the community level, it is unclear how the community-level share of Black population influences Black-White gaps in homelessness (Olivet et al. 2021; Wagner and White 2015). It is only since 2015 that the U.S. Department of Housing and Urban Development (HUD) has made available data on the homeless population disaggregated by race. To my knowledge, no studies have yet examined variation in race-specific homelessness rates within U.S. communities analyzing this data. Therefore, there is relatively little evidence about the degree to which racial gaps in homelessness rates vary within U.S. communities. This chapter raises as-yet unexplored questions about the extent to which racial gaps in rates of homelessness varies within U.S. communities and their relationship with community racial composition. I ask: To what extent does community racial composition influence racial gaps in rates of homelessness within U.S. communities?

Since Black people have been overrepresented among homeless persons in the United States and Black people predominantly reside in metropolitan areas, past studies often assume metropolitan communities with relatively larger size of Black populations are disproportionately at risk of high rates of overall homelessness (Burt 2001; Carter 2011; Elliott and Krivo 1991; HUD 2021; Lee, Tyler, and Wright 2010). Metropolitan areas with higher proportions of Black residents typically have higher levels of Black-White segregation (Logan and Stults 2022). Indeed, racial segregation remains a central stratifying mechanism in U.S. society. Moreover, communities in metropolitan areas such as Milwaukee, New York, Newark, and Detroit have particularly high levels of segregation between Black and White neighborhoods and dramatically

higher levels of concentrated poverty in the former compared to the latter (González-Pérez 2021; Massey 2016).

Black people in metro communities with higher levels of Black-White segregation are more likely to experience discrimination in the housing market, attend underfunded segregated schools, suffer from a spatial mismatch between skills and job market, and have weakened social supports, each of which increases their vulnerability to homelessness (Grigoryeva and Ruef 2015; Korver-Glenn 2018; Krysan and Crowder 2017; Lee et al. 2003; Massey 2016; Massey and Denton 1993; Otiniano Verissimo et al. 2021; Pattillo 2005; Sampson 2011; Wilson 2012). However, past empirical studies on structural determinants of homelessness have produced conflicting findings on the relationship between the racial composition of disadvantaged groups in metropolitan communities and the rates of homelessness (Byrne et al. 2013; Elliott and Krivo 1991; Lee et al. 2003; Muniz 2021).

This chapter addresses the inconsistencies in the existing research by examining the differential association between community racial composition and racial gaps in homelessness rates within U.S. communities. The study draws on the U.S. Department of Housing and Urban Development's (HUD) Point-In-Time (PIT) counts of the homeless population disaggregated by race between January 2015 and January 2020. Using this data, this study measures a set of homelessness rates that offer the most comprehensive examination of racial disparities among Black and White unhoused people in the United States to date.

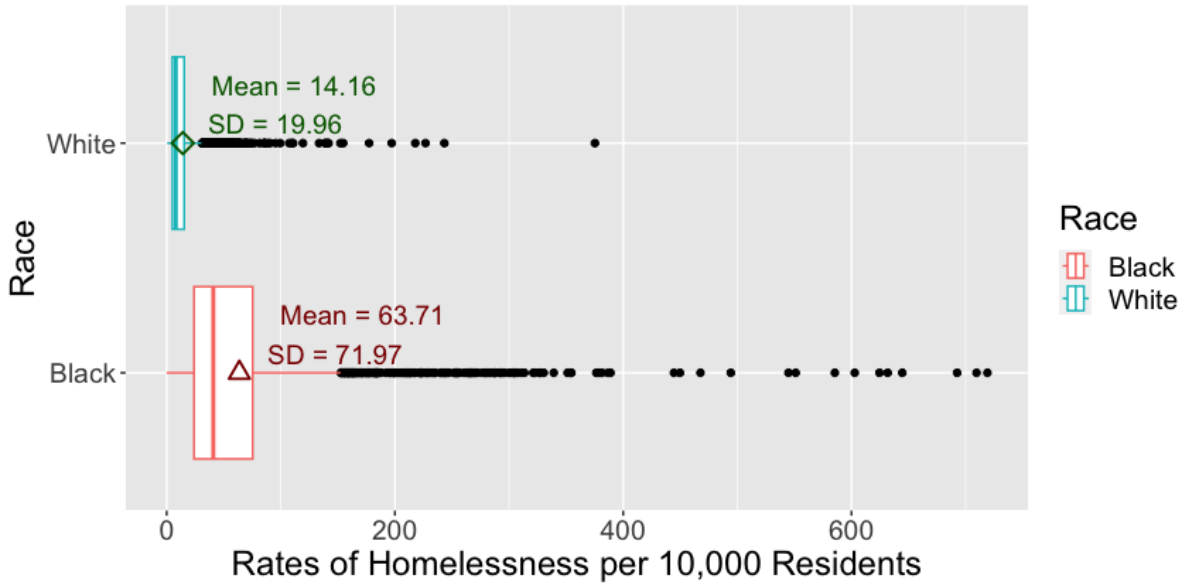
As the chapter dives deep to solve the puzzle posed in the central question, it is important to situate this question in the existing empirical context. In the next section, I review the development of a paradoxical association between racial composition and homelessness in the United States. Thereafter, I present two competing theories, group threat theory and embeddedness theory that guided how differentially community racial composition may

influence (a) homelessness rates disaggregated by race and (b) racial gaps in homelessness rates within U.S. communities.

The racial disparity in rates of homelessness was the primary motivation for writing this chapter. Figure 2.1 and Figure 2.2 show racial disparity in homelessness across Continua of Care (CoCs)[2], and how that disparity was driven by heterogeneity of the Black homelessness rates across CoCs, respectively. Between 2015 and 2020, the average CoC had a much higher Black homelessness rate than White homelessness rate (i.e., more than 63 Black people experiencing homelessness per 10,000 Black residents versus 14 White people experiencing homelessness per 10,000 White residents). Likewise, there was much greater variation in Black homelessness rates (s.d. = 71.07) than that in White homelessness rates (s.d. = 19.96). The higher average level of Black homelessness rates and the higher variation in Black homelessness rates indicate that Black-White gaps in rates of homelessness were primarily driven by Black homelessness rates.

Figure 2.1

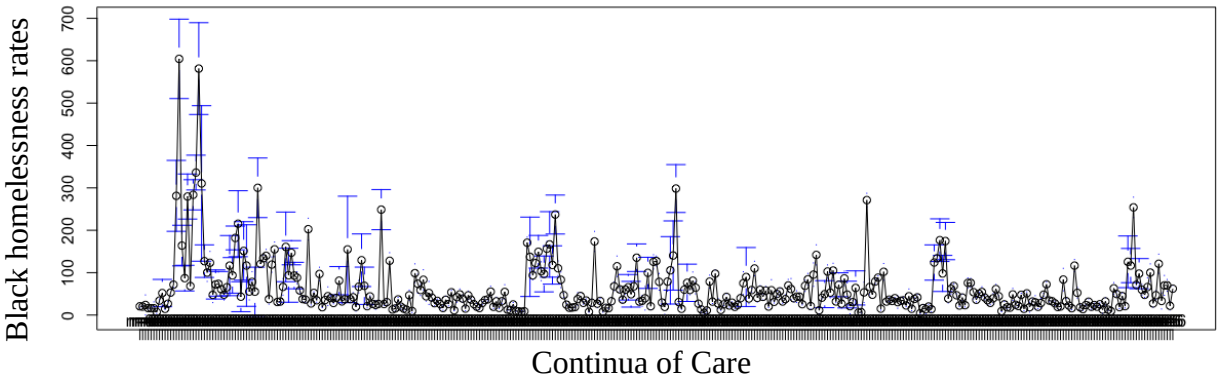
Boxplot with Mean and Standard Deviation of Homelessness Rates by Race



[2] Continua of Care (CoCs) are geographic units used by U.S. Department of Housing and Urban Development to coordinate its services to people experiencing homelessness, including taking Point-In-Time (PIT) estimates of people experiencing homelessness at least every other year.

Figure 2.2

Heterogeneity of the Black homelessness rates across Continua of Care



Literature Review

For nearly 60 years, racial discrimination in housing, education, employment, voting, and public services has been illegal in the United States. However, racial discrimination continues to negatively affect the housing, education, employment, and public health of ethnoracially minoritized populations within the United States, and many U.S. cities remain highly racially segregated (Jones 2016). Perhaps relatedly, variation in the ethno-racial composition of metropolitan areas may be related to the race-specific risk of homelessness.

U.S. cities and metropolitan areas with relatively larger Black populations tend to have higher levels of Black-White racial residential segregation (González-Pérez 2021; Grigoryeva and Ruef 2015; Lee et al. 2008; Massey 2016). Both larger Black population and higher levels of Black-White segregation are associated with racial disparities in housing, education, employment, and public health (Desmond 2023; Massey 2016; Massey and Denton 1993). Largely after deindustrialization, Black people have been more concentrated in major cities than in suburban communities (Wilson 2012). Such concentration of Black residents in certain communities that are infested by opportunity gaps poses a greater risk of homelessness among Black people (Byrne et al. 2013; Lee et al. 2003).

Historically, Black residents account for a disproportionate share of homeless people (Burt 1991, 2001; Elliott and Krivo 1991). For the past few years, 4 out of 10 people experiencing homelessness were Black, even though Black Americans account for only about 12% of the U.S. population (HUD 2020; 2021). Empirical studies examining the relationship between racial composition and homelessness have found inconsistent results. There are three distinct sets of findings that contribute to that inconsistency.

First, scholars studying structural determinants of homelessness in U.S. metro areas of the 1980s found empirical support for the hypothesis that areas with higher percentages of Black residents had higher rates of homelessness (Burt 1991; Elliott and Krivo 1991). For instance, Elliot and Krivo's (1991) study of homelessness in 60 U.S. metropolitan areas in 1984 showed that areas with larger Black and Hispanic populations had significantly higher homelessness rates.

Conversely, scholars examining structural factors that contributed to homelessness in larger samples of U.S. metropolitan areas in the 1990s and 2000s found no statistically significant relationship between the variation in racial composition (i.e., percent Black residents) and rates of homelessness. For instance, Lee et al.'s (2003) study in a sample of 335 U.S. metropolitan areas collected in the 1990 S-Night Census found no significant association between the share of Black residents and homelessness rates. Similarly, Byrne et al. (2013) also found no significant relationship between the percent Black residents and homelessness rates in metro areas.

Third, a counterintuitive inverse association has emerged in some prior studies of the relationship between the relative size of Black populations and rates of homelessness (Colburn and Aldern 2022; HUD 2021; Muniz 2021). For instance, Muniz (2021) found that percent Black residents in metro areas was significantly negatively associated with sheltered, unsheltered, and

total rates of homelessness. More recently, Colburn and Aldern (2022) found that the overall homelessness was lower in areas where the Black proportion of the population was higher and argued that race explained who might become homeless in a certain area, but it did not explain why there was a regional variation in homelessness. However, these studies neither study rates of homelessness disaggregated by race nor examine racial gaps in homelessness rates at the community level.

Lastly, studies have consistently found that Black people have been overrepresented in homeless populations since the 1980s in the United States. However, explanations for the relationship between the racial composition of communities and the rates of homelessness are inconsistent and counterintuitive (Carter 2011; Colburn and Aldern 2022; Jones 2016; Muniz 2021; Olivet et al. 2021). Thus, this chapter revisits the association between community racial composition and homelessness within U.S. communities asking: To what extent does the racial composition of communities influence the size of the racial gaps in homelessness within U.S. communities? I further expand this research question into two parts:

1. How does change in racial composition within a community influence the Black homelessness rate?
2. How does change in racial composition within a community influence Black-White gaps in homelessness rates?

Racial Composition and Black Homelessness Rates

Research has generally affirmed that community racial composition plays an important role in assessing structural determinants of homelessness (Burt 1991; Elliott and Krivo 1991; Lee et al. 2010). However, percent Black is often treated as a mere control variable in most community-level studies rather than a key predictor of homelessness (Byrne et al. 2013; Byrne, Henwood, and Orlando 2021; Colburn and Aldern 2022; Corinth and Lucas 2018; Fargo et al.

2013; Hanratty 2017; Muniz 2021). In addition, past studies frequently considered three types of homelessness rates, overall, sheltered, and unsheltered, as major predicted variables and did not disaggregate rates of homelessness by race. However, the relative size of a community's Black population may have differential associations with homelessness rates when disaggregated by race (Carter 2011; Freemark, Steil, and Thelen 2020; Hwang 2020; Massey and Denton 1993; Olivet et al. 2021; Wagner and White 2015).

Since the 1930s, neighborhood racial composition was a key factor in the evaluation of U.S. home values (Howell and Korver-Glenn 2021). Although such deliberate practices were outlawed in the 1960s, the association between racial composition and home values persisted in other forms. For instance, Howell and Korver-Glenn (2021) found that between 1980 and 2015, racial inequality in home values was not decreasing over time but was *increasing* because neighborhood racial composition at the end of the study period had a stronger association with current appraisals than those in 1980. Consequently, recent appraisers devalued Black neighborhoods, thereby exacerbating racial inequality in housing (Howell and Korver-Glenn 2021).

Decreases in housing values created debt and financial hardship for Black owners in majority Black neighborhoods, which further exacerbated racial disparities in wealth among Black neighborhoods and induced intergenerational barriers for Black residents in various forms such as disinvestment in education (Pattillo 2013). Pattillo (2013) argued that due to the decline of housing as a commodity resource, residents in areas with a greater proportion of people of color lacked a cushion against housing cost burden, foreclosure, eviction, and homelessness. Desmond's (2016) ethnography in Milwaukee, one of the most segregated cities in the United States, illuminated how low-income Black families, especially those led by Black women, experience discrimination in the rental market, evictions, and homelessness. Similarly, Logan

and Stults (2021) found that although Black-White neighborhood segregation has declined, the decline of segregation has been minimal in areas with relatively large Black populations.

Racial residential segregation coupled with deindustrialization spatially isolated and cut off majority-Black neighborhoods in inner cities from employment opportunities (Massey and Denton 1993). Deindustrialization was a contributing factor for racialized housing markets that fueled segregation, devalued communities of color, and concentrated Black residents into urban neighborhoods with housing that was less spacious and of lower quality (Howell and Korver-Glenn 2021; Hwang 2020; Korver-Glenn 2018; Massey and Denton 1993; Sampson 2011; Wagner and White 2015; Wilson 2012). Deindustrialization in the 1960s and 1970s shifted the U.S. labor market from manufacturing into the service sector, which in turn promoted out-migration of the affluent class alongside the working-class jobs from inner-city neighborhoods to suburban areas, leaving behind unskilled Black laborers within the urban enclaves of the "underclass" (Hunter 2014; Reardon and Bischoff 2011; Sugrue 1996; Wilson 2012). The economic restructuring led to prolonged joblessness, inadequate housing, and a decline in social welfare in the inner cities (Gottdiener 2019; Massey and Denton 1993; Pattillo 2005). Wilson ([1987] 2012) found that deindustrialization wiped out a large number of jobs in major cities such as New York, Chicago, Los Angeles, and Washington D.C., where Black Americans constituted a majority of the workforce. Sugrue (1996) also attributed the decline of manufacturing cities in the United States, such as Detroit, to the loss of jobs, persistence of workplace discrimination, and racial residential segregation. Deindustrialization transformed the urban heyday of American cities into an urban crisis (Sugrue 1996). Massey and Denton (1993) argued almost all the manufacturing cities facing the urban crisis had large ghettos characterized by hyper-segregation and spatial isolation, where almost all faces that appeared in the rundown houses, homeless centers, and urban wastelands belonged to people of color. Therefore, the

racial composition in inner city neighborhoods was a common correlate of deindustrialization, urban crisis, and rising homelessness among Black residents (Timmer, Eitzen, and Talley 1994).

The racial composition of neighborhoods shapes residential patterns in the United States, including how low-income minoritized neighborhoods gentrify (Carter 2011; Hwang 2020; Wagner and White 2015). Wagner and White (2015) argued that besides deindustrialization, gentrification eliminated many low-income housing units by converting affordable rental housing into high-cost condominiums and luxury apartments in central cities, which disproportionately negatively impacted Black Americans, given the demographics of the central cities. In addition, a longitudinal study of ethnoracial composition and gentrification in Seattle found that, while the share of all minorities was negatively associated with gentrification during the 1970s and 1980s, shares of Black people positively predicted gentrification in recent years (Hwang 2020). Therefore, the contemporary racialized housing market built on the foundation of discrimination, deindustrialization, and gentrification has contributed to generating opportunity gaps for communities of color, which led to racial disparities in homelessness across U.S. communities (Carter 2011; Wagner and White 2015).

A mixed methods study across eight sample communities in the United States found a lack of access to safe, decent, and affordable housing, the intersection of racism and discrimination in rental markets, economic mobility barriers, and involvement of the criminal justice system as major contributing factors to homelessness among low-income Black renters as opposed to their White counterparts (Olivet et al. 2021). Since the 1980s, the so-called "War on Drugs" and mass incarceration of Black men have increased the number of people experiencing homelessness (Wacquant 2009; Wagner and White 2015). The War on Drugs and mass incarceration denied Black men opportunities for employment, eligibility for loans for education, eligibility for housing, and voting rights, which dramatically impacted the stability of Black

communities (Olivet et al. 2021; Rosino 2021; Wagner and White 2015). Since felony convictions disqualified individuals from public housing for several years, communities with a larger Black population were likely to correlate with high rates of the incarcerated Black population and higher rates of Black homelessness (Wright 1997).

The relatively larger Black population does not just imply an increase in the number of Black people residing in an area; the racial composition invites complex human interactions and social processes within a community. To address the mixed findings between the association of racial composition and homelessness rates, I not only disaggregate homelessness rates by race but consider two competing theses that suggest different associations between racial composition and rates of homelessness disaggregated by race within U.S. communities.

Group Threat and Homelessness Rates by Race

Group threat provides a relevant theoretical lens to predict the association between racial composition and Black homelessness rates within U.S. communities. Relatively large Black populations may provoke perceived racial threat among the dominant racial group, which might activate privileged groups to adopt policies and practices that protect their racialized privileges from potential threat (Blalock 1967; Eitle, D'Alessio, and Stolzenberg 2002; Updegrove et al. 2020). Group threat theories suggest that when the size of the Black population is relatively large, the majority groups (i.e., typically White) react in ways that exacerbate racial inequality. For instance, the majority groups are likely to mobilize social controls in the form of racial stereotyping in the housing market, discrimination in employment, and metropolitan fragmentation to protect their interests (Blalock 1967; Freemark et al. 2020; Sugrue 1996; Updegrove et al. 2020; Wagner and White 2015). Consequently, group threat due to the greater percentages of Black people may activate insulating mechanisms among the dominant groups,

even among those subpopulations with low-socio-economic status, to mitigate risks of homelessness, while disadvantaging the minoritized racial groups.

Group threat theory is widely applied in criminology to investigate whether the relative size of the Black population was associated with various aspects of social control such as arrest rates, incarceration rates, and executions (Eitle et al. 2002). This "group threat" theory lies in the conflict paradigm that emphasizes on how dominant groups maneuver state apparatuses to control minoritized groups who threaten their interests (Blalock 1967). In places with relatively large Black populations, housing discrimination against Black people and Black-White segregation can be viewed as responses of dominant groups to minimize the threat posed when a minority population in an area increases in size. Segregation by race in the United States is an institutional apparatus that enables racial discrimination and processes of oppression in multiple social systems such as housing, schools, labor markets, health care, criminal justice, and politics to safeguard White privilege from any potential racial threat (Lee et al. 2008; Massey and Denton 1993; Wacquant 2008, 2009). As a result, housing discrimination and racial residential segregation disproportionately "push" Black people, as opposed to White people, into homelessness (Carter 2011; Jones 2016).

Therefore, I hypothesize that:

Hypothesis 1: An increase in the relative size of the Black population within a community will be associated with higher Black homelessness rates.

Racial Composition and White Homelessness Rates

Historically, dominant racial groups in the United States have established protective shells to access affordable housing and favorable labor market outcomes, drawing a clear color line. Sugrue (1996) noted that between January 1947 and July 1952, 37,382 Black families and 56,758 White families applied for public housing in Detroit, for which 41% of White applicants

and only 24% of Black applicants were shortlisted. White families moved off the waiting list faster, resulting in 9,908 White families and only 1,226 Black families getting public housing (Sugrue 1996). Similarly, Sugrue (1996) highlighted how the structure of the labor market disproportionately concentrated Black workers in low-paying secondary sector jobs or the worst unskilled jobs, not only to secure the skilled-labor positions for White workers but to eliminate their fear of potential strikes from White workers if the firms hired Black workers and breached the color line. In addition, in the 1970s a mythical narrative of the "welfare queen" was recurringly used to depict Black women as abusers of the welfare system, though primary beneficiaries of social welfare programs were White working-class families and low-income families (Edwards 2021).

In the United States, dominant groups still perceive a potential threat from an increase in the relative size of the Black population within a community. So, dominant groups continue to express power through exploitation in housing and employment (Desmond and Western 2018; Wright 1997). Such favorable treatment of White people in the housing market, public housing, and the employment sector lowers their cost of housing searches and housing cost burden and improves their access to better employment opportunities. In highly segregated cities in the United States, White residents had a lower probability of living in inadequate and/or crowded housing than Black residents (Carter 2011). Consequently, in communities with relatively large Black populations, with privileged access to housing and employment, the risk of homelessness falls for White residents from low-socioeconomic backgrounds (Edwards 2021; Jones 2016; Olivet et al. 2021).

Metropolitan fragmentation, either in the form of boundary drawing or restricting access to valuable resources, is another mechanism of dominant racial groups to insulate from the perceived threat posed by relatively large Black populations. Metropolitan fragmentation

generates interjurisdictional burden shifting, allowing predominantly White suburban jurisdictions in counties with relatively large Black populations to escape responsibility and displace homelessness to other municipalities. The institutional structure of local governance in the United States facilitates metropolitan fragmentation through jurisdictional proliferation and resource hoarding to protect the interests of affluent White homeowners. In doing so, White homeowners in communities with relatively large Black populations can still hoard their resources to keep their high-income and White racial isolation intact (Freemark et al. 2020), which consequently might lower White homelessness rates.

Since the late 19th and 20th centuries, wealthy White suburbs in the United States have resisted annexation to larger cities with socio-demographically heterogenous and lower-income households (e.g., Brookline suburb surrounded by the city of Boston). Between 2002 and 2017, there was an increase in the number of local government units by more than 2,500, and some of these new local governments formed wealthier and Whiter school districts (Freemark et al. 2020). According to Freemark and colleagues (2020), affluent White homeowners were able to influence de facto transitions by blocking efforts to update municipal boundaries into a larger metropolitan entity. In doing so, local governments of communities with affluent White homeowners were likely to avoid responsibility by reducing social welfare spending, including expenditure on homelessness services (Law 2001). Therefore, on one hand, communities with relatively larger Black populations may predict a negative association with White homelessness rates. On the other hand, White homelessness rates may increase in areas with relatively lower Black populations as those areas might lack safety net features designed to prevent or reduce homelessness.

Hypothesis 2: An increase in the relative size of the Black population within a community will be associated with lower White homelessness rates.

Racial Gaps in Rates of Homelessness

Community racial composition has differential racial outcomes among majority and minoritized groups. On the one hand, larger Black populations may exacerbate racial stereotyping, racial segregation, gentrification, and housing inequality (Carter 2011; Korver-Glenn 2018; Massey 2016; Wagner and White 2015). On the other hand, the size of Black populations alerts majority groups to perceived group racial threat, which leads to social controls such as segregation, gentrification, punitiveness, and metropolitan fragmentation for the protection of their privilege and power (Candipan et al. 2021; Freemark et al. 2020).

Structural factors that are central to the growing size of unhoused populations in the last four decades and differentially associated with Black and White Americans are deindustrialization, segregation, gentrification, mass incarceration, and metropolitan fragmentation. These factors correlate to the power threat posed by a large percent Black Americans against dominant groups, which motivated discriminatory policies and practices (Blalock 1967). For instance, deindustrialization seized an extensive number of jobs, affecting all people, but Black Americans were hit the hardest as they comprised a majority of working-class members of central cities such as New York, Los Angeles, Philadelphia, and Washington D.C., and racial segregation prevented them from accessing suburbs and areas outside cities where jobs were relocated (Wagner and White 2015; Wilson 2012). Likewise, residential segregation persists due to historical racism and discriminatory practices in the housing market as well as the contemporary sorting tendency of individuals to cycle between neighborhoods that are similar in racial composition and usually dominated by members of their racial groups (Krysan and Crowder 2017; Massey 2016; Massey and Denton 1993).

If segregation increases home values in neighborhoods of dominant groups and devalues housing in majority-Black neighborhoods, then gentrification destroys low-income housing units

by converting them into high-cost units, which disproportionately impacts working-class Black Americans who are often concentrated in central cities (Hwang 2020; Massey and Denton 1993; Sampson 2011; Wagner and White 2015). When central business districts undergo redevelopment, the gentrification of immediate and surrounding areas displace poor and often racial minority and local industries. Gentrification promotes dominant White mainstream cultural perspectives and displaces Black people from central cities to facilitate greater access to housing to White gentrifiers (Wagner and White 2015; Wright 1997). Therefore, residential segregation, housing discrimination, and gentrification are structural factors diminishing housing options for Black people, retaining housing opportunities for White people, and widening the Black-White gaps in homelessness.

Feeble positioning of race in community-level homelessness can be related to a racial blindness perspective in the War on Drugs debate because neither the dominant framing of the War on Drugs nor the dominant framing of structural determinants of homelessness acknowledges their implications for racial equity (Rosino 2021; Wagner and White 2015). Punitive measures such as the War on Drugs and mass incarceration of Black men in areas with relatively large Black populations were systemic responses to protect White privileges from perceived minority group threat (Updegrove et al. 2020; Wagner and White 2015).

Metropolitan fragmentation through jurisdictional proliferation and resource hoarding intends to retain the power and privilege of the dominant racial group while insulating the group from the perceived harm from the population size of minoritized racial groups (Freemark et al. 2020). Resource-hoarding opportunities for the majority group, and lack of adequate resources to meet basic needs (e.g., education, health, income, or housing) for minoritized racial groups, contribute to the disproportionate rates of homelessness among minoritized groups compared to the majority group (Olivet et al. 2021; Wagner and White 2015). Olivet et al. (2021) found that

young Black adults aged 18 to 24 were 69% more likely to exit back into homelessness than their White counterparts. Their findings suggested that multiple systems (e.g., child welfare, criminal justice, and behavioral health systems) failed to provide equal opportunity for all ethnoracial groups, which increased the risk of exiting back into homelessness among Black people as opposed to their White counterparts. Therefore, I expect that percent Black residents will be positively associated with increased gaps in Black-White homelessness rates within U.S. communities.

Hypothesis 3: An increase in the relative size of the Black population within a community will be associated with larger gaps in Black-White homelessness rates.

Embeddedness Theory and Homelessness Rates by Race

The naïve assumption in the literature that an increase in the relative size of the Black population would be associated with higher rates of homelessness depicts the sociology of homelessness that characterizes homelessness as a natural condition of Blackness (Willse 2015). Recent findings showing a negative association between percentages of Black people and homelessness rates, and embeddedness theory, widely applied in the economic sociology of immigrant and ethnic communities, inspired me to rethink both this naïve assumption and group threat theory. Therefore, I adopted embeddedness theory as a competing theoretical perspective that highlighted the potential increase in social capital and bounded solidarity when the population size of minoritized groups increases (Portes and Sensenbrenner 1993; Rodriguez 2022; Uzzi 1996).

Embeddedness theory captures the agency of ethnoracially minoritized groups. When there is a relative increase in the size of ethnoracially minoritized population, the minoritized groups experience a greater level of prejudice and discrimination, which may instigate stronger in-group solidarity among the minoritized group members (Portes and Sensenbrenner 1993). As

the size of racially minoritized populations increases within a community, there is an increase in their social capital. Portes and Sensenbrenner (1993) redefined social capital as expectations for action within a collectivity and further presented four expectations as the source of social capital. First, *value introjection*, as a source of social capital prompts individuals to value morality and collectivity as resources. Second, *reciprocity transactions*, as a source of social capital, draw on the dynamics of group affiliation. Third, *bounded solidarity*, as a source of social capital, highlights those situational circumstances that kindle group-oriented behavior quite different from any prior value introjection. Bounded solidarity arises from the situational reaction of a group of people experiencing common adversities, rather than value introjection or individual reciprocity exchanges. Lastly, *enforceable trust*, as the fourth source of social capital, focuses on particularistic rewards as well as sanctions related to group membership. These sources of social capital induce positive effects such as a preference for co-ethnics in economic activities, altruistic support for community members, flexibility in economic transactions through informal contracts, and trustworthy expectations regarding the effects of malfeasance (Portes and Sensenbrenner 1993). Nevertheless, these positive effects of embeddedness reach an optimum point, after which, these positive effects reverse (Uzzi 1996).

Housing movements of Black residents in some U.S. communities have led to the embeddedness of "care capital," i.e., an expansion of resources for care over time (Rodriguez 2022). Care capital is structured along four dimensions: "people capable of caring with; time to care for others; financial resources to arrange care; and a place to distribute and house this care" (Anttonen and Sipila 2007, as cited in Rodriguez 2022: 4). Rodriguez (2022) provided an account of different waves of housing movements of Black residents in Atlanta that demonstrated how care capital was collectivized, embedded (as well as disembedded), and placed for marginalized groups. Black women in Atlanta collectivized care capital in their

struggles against the Atlanta Housing Authority, including local, state, and federal administrators. Those struggles were in response to housing policies that favored suburbanization and expanded care capital for predominantly White households. The outcomes of those battles were the establishment of sites of care such as public sidewalks, transit, schools, and child-care centers within or adjacent to public housing developments, and accessibility of those sites of care to the wider Black communities. Thus, Black neighborhoods in Atlanta ensured comprehensive and sustainable access to the sites of care through collectivization, embeddedness, and placement of care capital (Rodriguez 2022). The strengthening of care capital for Black renters in Atlanta from the end of the 20th century until the COVID-19 pandemic resonates with the relative increase in the size of metro Atlanta's Black population, i.e., the percentage Black population was 24.4% in 1980 to 35% in 2020 (Diversity and Disparities 2020).

Embeddedness theory suggests that when there is an increase in the relative size of the Black population within a community, there would be a greater prejudice level among the dominant group, but the perceived prejudice would induce greater bounded solidarity as a source of social capital (Portes and Sensenbrenner 1993). Consequently, an increase in the relative size of the Black population will be associated with lower Black homelessness rates and reduced racial gaps in homelessness rates within a community.

Hypothesis 4: An increase in the relative size of a Black population within a community will be associated with lower Black homelessness rates.

Hypothesis 5: An increase in the relative size of a Black population within a community will be associated with lower Black-White gaps in homelessness rates.

Hypotheses 4 and 5 describe how an increase in the relative size of a Black population within a community depicts embeddedness that lowers Black-White gaps in homelessness rates, primarily through mitigating the risks of experiencing homelessness among low-income Black

residents. Blalock (1967) acknowledged that communities with sufficiently large size of Black population may demonstrate larger mobilization that may result into tangible gains in the form of reduced discrimination. However, as percent Black residents reaches a critical mass threshold that induces social capital and "care capital," then additional increases in percent Black people will have diminishing returns. Therefore, I hypothesize that a theoretic optimum exists such that, when the increase in the relative size of the Black population within a community continues beyond the optimum level, the additional benefits of embeddedness begin to decrease. Consequently, the association between percent Black population and Black-White gaps in homelessness rates will follow a negative curvilinear path with a decreasing slope.

Hypothesis 6: An increase in the relative size of the Black population within a community will be associated with smaller Black-White gaps in homelessness rates but with a decreasing slope at progressively higher levels of percent Black.

Data And Methods

On a single night in January, HUD requires each Continuum of Care (CoC) to conduct Point-in-Time PIT counts of sheltered and unsheltered persons experiencing homelessness. Continua of Care (CoCs) are local geographic units that implement the HUD CoC program and coordinate different services to the unhoused populations within their areas of jurisdiction. A CoC may comprise a city, a county, a combination of counties, or an entire state (Byrne et al. 2013; HUD 2021; Lee 2021). Since CoC geographic boundaries are distinct from the U.S. census tract boundaries, I used QGIS software to create a CoC geographic crosswalk to aggregate American Community Survey census tract characteristics into their respective CoCs. Byrne et al. (2013) and other scholars have used similar census tracts-to-CoC matching strategies.

This study drew a balanced panel sample of 369 CoCs from 2015-2020, i.e., N = 2214 (see Appendix I for a map of the 369 CoC included in the study area). The sample included 369 CoC communities that had information on the number of unhoused people by race for every year from 2015 to 2020. The sample excluded 23 CoCs, including Anchorage CoC, Alaska Balance of State CoC, Honolulu CoC, Hawaii Balance of State CoC, Virgin Islands CoC, Puerto Rico CoCs, Guam CoC, and Northern Mariana Islands CoC, because these CoCs were parts of the non-contiguous United States, and some communities from the contiguous United States such as Gadsden/Northeast Alabama, Southeast Arkansas, Tehama, Nevada, Fort Collins, Cumberland/Allegany, Cecil, Garrett, Hagerstown/Washington, Salem, New York Balance of State, and Polk, because of absence or changes in geographic boundaries during the study period. See Appendix II for a complete list of CoCs included and excluded in this study sample.

Dependent Variables

This study examined the association between community racial composition and measures of homelessness disaggregated by race. I included three separate regression models that use different definitions of the rates of homelessness to capture different homelessness components. These models included the Black homelessness rates, the White homelessness rates, and the Black-White gaps in homelessness rates. I obtained the estimates of the number of homeless persons disaggregated by race from HUD PIT counts as described above, and aggregated American Community Survey 5-year estimates of racial composition at the census tract level to construct the racial composition in each CoC community. These population estimates of Black residents and White residents in each CoC community were then used to estimate the denominator of the dependent variables, i.e., the number of Black homeless persons per 10,000 Black residents and the number of White homeless persons per 10,000 White residents.

$$Black\ Homelesness\ Rate\ = \frac{Number\ of\ Homeless\ Black\ People\ in\ CoC_{it}}{Total\ Number\ of\ Black\ Residents\ in\ CoC_{it}} \times 10{,}000$$

$$White\ Homelesness\ Rate = \frac{Number\ of\ Homeless\ White\ People\ in\ CoC_{it}}{Total\ Number\ of\ White\ Residents\ in\ CoC_{it}} \times 10{,}000$$

For robustness, I further disaggregated the rates of homelessness by racial groups and their sheltered versus unsheltered status. Therefore, there were four additional regression models that included the White sheltered homelessness rates, the White unsheltered homelessness rates, the Black sheltered homelessness rates, and the Black unsheltered homelessness rates.

Lastly, to measure racial gaps in homelessness rates using a single model, I took a difference between the Black homelessness rates and the White homelessness rates as a dependent variable.

$$BW\ Gap_{it} = Black\ Homelessness\ Rates\ in\ CoC_{it} - White\ Homelessness\ Rates\ in\ CoC_{it}$$

Independent Variables

The primary goal of this study was to untangle counterintuitive findings that showed a negative association between percent Black residents in a CoC and overall homelessness rates (Byrne 2013; Colburn and Aldern 2022; Muniz 2021) by examining homelessness rates disaggregated by race. Therefore, I used percent Black residents of CoC *i* in year *t*, as the primary independent variable of interest in each of the fixed effects models. Since the HUD PIT counts disaggregated by race were collected from 2015, I used ACS 2010-2014 to 2015-2019, 5-year estimates for independent variables to better capture the association between racial composition and rates of homelessness disaggregated by race within CoC over time, i.e., 2015-2020.

Control Variables

Table 2.1 summarizes the variables I used in this study. I used control variables to reflect community-level structural determinants of homelessness established in existing literature

(Byrne et al. 2013, 2021; Byrne, Montgomery, and Fargo 2016; Fargo et al. 2013; Hanratty 2017; Lee et al. 2003). Each model included controls for area housing dynamics (i.e., residential segregation and rental market dynamics) and labor market conditions (i.e., unemployment rate, poverty rate, and labor market index), which are identified as key structural determinants of homelessness. I used the dissimilarity index for the CoC segregation measure, i.e., shown below:

$$\text{CoC Dissimilarity Index} = \frac{1}{2}\sum_{i=1}^{N}\left|\frac{Blacks\ in\ i^{th}\ census\ tract}{Total\ Blacks\ in\ CoC} - \frac{Whites\ in\ i^{th}\ census\ tract}{Total\ Whites\ in\ CoC}\right|$$

Measures of CoC rental market conditions included the rental vacancy rates, the percentage of crowded rental units, and the percentage of rent-burdened units. Measures of CoC labor market conditions included the percentage of the labor force that was unemployed, the percentage of the population by race living in poverty, and the labor market index. The poverty and unemployment measures were consistent with past studies, except Byrne et al. (2013) used the share below 50% of poverty as the poverty threshold, whereas I will use the share below 100% of poverty as the poverty measure, following Hanratty (2017).

Labor market condition measured through location quotient indicates whether a community has accessible employment opportunities or spatial mismatch (i.e., geographic separation of the location of employment from the place of residence). Historically, inner-city residents who are predominantly Black people have suffered from spatial mismatch due to deindustrialization, movement of jobs to suburbs, and residential segregation (Levy 2022; Massey and Denton 1993; Wilson 2012). Community labor market index was an innovative measure I constructed by taking a sum of location quotients, which measured a CoC's industrial specialization relative to the nation. Since I calculated location quotients for 10 sectors such as agriculture, construction, manufacturing, wholesale, retail, transportation, information, services, government, and FIRE (i.e., Finance, Insurance, and Real Estate), the labor market index ranged

between 0 and 10. 0 indicated that a CoC had no specialized labor market sector, versus 10 indicated that a CoC had specialization in all 10 labor market sectors. Following is the formula for the calculation of the CoC location quotient:

$$Location\ Quotient_{mit} = \left(\frac{\frac{Number\ of\ Employees\ in\ Sector_m\ in\ CoC_{it}}{Total\ Number\ of\ Employees\ \ in\ CoC_{it}}}{\frac{Number\ of\ Employees\ in\ Sector_m\ in\ US_t}{Total\ Number\ of\ Employees\ \ in\ US_t}} \right)$$

$$Labor\ Market\ Index_{it} = \sum Location\ Quotient_{it}$$

The model included additional controls for other CoC demographic characteristics, D_j, which were identified as structural determinants of homelessness in past literature. Since percent Black was the key predictor variable, I also included other demographics such as the percentages of populations that were Hispanic and single-person households.

The models included CoC social safety nets, $\boldsymbol{S_j}$, such as public supportive housing per 10,000 CoC total population, and percentage of Public Assistance recipients, which may help to prevent homelessness (Byrne et al. 2013; Hanratty 2017; Lee et al. 2003). In addition, the models controlled for CoC transience, T_j, i.e., high residential mobility that may influence homelessness. Residential mobility was measured as the share of population who moved in past year from another county, state, or country aggregated to the CoC level. Lastly, the model included CoC mean temperature for January 2015- 2020, C_j, because past studies argued temperature to be an important structural factor of homelessness (Corinth and Lucas 2018; Lee, Shinn, and Culhane 2021; Muniz 2021).

Data Construction

CoC was the unit of analysis in this study. For the dependent variables, homeless counts by race were available through HUD PIT estimates. Since only HUD uses the CoC jurisdictions, I followed prior studies (Byrne et al. 2013; Hanratty 2017) to create CoC variables using ACS

census tracts data. For instance, to retrieve CoC characteristics I developed a CoC crosswalk using the HUD 2020 CoC nationwide geodatabase (https://www.hudexchange.info/programs/coc/gis-tools/), and the TIGER geodatabase for 2019 census tracts (https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-geodatabase-file.html). Using QGIS, a Geographic Information System software, I generated centroids of the 2019 census tracts and overlaid the 2020 CoC boundaries on those centroids to create a CoC crosswalk. Using the CoC crosswalk, I aggregated the ACS 5-year estimates from the census tract level to create a CoC-level characteristics.

For CoC-level climate data, I obtained climate data for January 2015 - January 2020 from PRISM Climate Group (https://prism.oregonstate.edu/) and used QGIS to average the 4 km grid resolution data into respective CoC geographic boundaries. Along with QGIS, I used R version 4.2.2 for data construction and management.

Data Analysis

First, I observed the descriptive statistics of dependent and independent variables. Second, I explored the data distribution of each variable. I applied natural logarithmic transformation for the variables that show high positive skewness (i.e., skewness > 0) and leptokurtosis[3] (i.e., kurtosis > 3). Third, I employed general feasible generalized least square fixed effects models using plm package in R (Croissant and Millo 2008). These models are robust to issues of serial correlation, heteroskedasticity, and contemporaneous correlation (Croissant and Millo 2019).

[3] Leptokurtic distribution has kurtosis greater than the normal distribution (i.e., > 3). Kurtosis measures how peaked a distribution is. If the distribution of a variable (i.e., percentage Black here) has skewness and leptokurtosis, then it is more meaningful to focus on multiplicative rather than additive differences in its value. Therefore, I applied logarithmic transformation of percentage Black so that additive changes in the transformed percentage Black corresponded to multiplicative changes in the original percentage Black (see Roberts and Roberts 2021 for more information on logged variables in regression).

As a robustness check, I ran a series of models with (a) sheltered versus unsheltered homelessness rates disaggregated by race, (b) fixed effects models using unbalanced panel data, and (c) random effects models (although the Hausman test favored for fixed effects rather than random effects). Sheltered versus unsheltered homelessness rates models assessed whether the patterns of association between community racial composition and homelessness rates disaggregated by race within a CoC over time was retained when further disaggregating the homeless subpopulations as sheltered versus unsheltered.

Results

Descriptive Characteristics

Table 2.1 presents information on each of the variables I included in the analysis. The first part includes information on the number of unhoused people by race per 10,000 people of the corresponding race, and racial gaps in homelessness rates in each community. The second, third, and fourth sections include measures of community housing conditions, labor market conditions, and demographic characteristics. The fifth, sixth, and last sections include measures of community safety net, transience, and climate.

The descriptive statistics of rates of homelessness disaggregated by race in U.S. communities between 2015 and 2020, as detailed in Table 2.1 and Figure 2.1, show that the average community had greater Black homelessness rates than White homelessness rates. The average community had 63.71 unhoused Black people per 10,000 Black residents, versus 14.16 unhoused White people per 10,000 White residents. In addition, the average gap in Black-White homelessness rates was 49.55. There was a greater heterogeneity, including larger outliers, in the Black homelessness rates across communities (sd = 71.97 per 10,000 Black people, and see Figure 2.2) than the White homelessness rates (sd = 19.96 per 10,000 White people).

The Black homelessness rates increased, on average, by 10.93% within communities between 2015 and 2020, but this masks substantial variation (see Figure 2.2), with about 63% of communities in the sample experiencing a decrease in the Black homelessness rate between 2015 and 2020. Similarly, the share of the Black population in an average community over the entire study period reflected the national share of the Black population, i.e., mean = 12.2%. Between 2015 and 2020 percent Black residents increased, on average, within communities by about 4.51% over the study period masks heterogeneity across communities: about 38% of the 369 communities experienced a decrease in their share of the Black population between 2015 and 2020. This heterogeneity allows us to identify the influence of community racial composition on rates of homelessness by race within communities over time.

The dissimilarity index, the most common measure of segregation, showed moderate segregation in the average community of this sample. In the average community, about 50% of the Black or White residents would need to move in order to achieve a uniform distribution of the population by race. years.

The average permanent supportive housing beds across all communities and years was about 11 per 10,000 general population. The rental market conditions showed that, on average, nearly 45% of rental households across all communities and years were rent burdened. Economic conditions showed that, on average, 26.76% of Black people were below the poverty line versus 10.59% of White people, and 12.41% of Black people were unemployed versus 5.92% of White people unemployed, across all communities and years. Likewise, an average community specialized in about four labor market sectors during the entire study period.

Table 2.1

Description of Variables and Descriptive Statistics (N = 2214)

Variable	Description	Source	Mean	SD
Homelessness				
Black Homelessness Rates	$\frac{\text{Number of Homeless Black People in CoC}_{it}}{\text{Total Number of Black Residents in CoC}_{it}} \times 10{,}000$	HUD PIT /ACS	63.71	71.97
White Homelessness Rates	$\frac{\text{Number of Homeless White People in CoC}_{it}}{\text{Total Number of White Residents in CoC}_{it}} \times 10{,}000$	HUD PIT /ACS	14.16	19.96
Black-White Gap	Black Homelessness Rates – White Homelessness Rates	HUD PIT /ACS	49.55	62.17
Independent Variables				
Percent Black	% Black People in total population	ACS	12.2	12.57
Housing Conditions				
Dissimilarity Index	$\frac{1}{2}\sum_{k=1}^{N}\left\lvert\frac{\text{Blacks in k}^{th}\text{ census tract}}{\text{Total Blacks in CoC}} - \frac{\text{Whites in k}^{th}\text{ census tract}}{\text{Total Whites in CoC}}\right\rvert$	HUD PIT /ACS	49.91	9.96
Permanent Supportive Housing	$\left(\frac{\text{Total Number of PSH beds}}{\text{Total CoC Population}}\right) \times 10000$	HUD HIC /ACS	11.18	13.04
Percent Crowded	% Housing units with more than one occupant per room	ACS	2.75	1.99
Rental Vacancy Rate	$\left(\frac{\text{Vacant units for rent}}{\text{vacant for rent} + \text{rented but not occupied} + \text{renter occupied units}}\right) \times 100\%$	ACS	6.39	2.66
Percent Rent Burdened	% Rental units paying > 30% of household income on rent	ACS	44.89	5.57
Economic Conditions				
Black Poverty Rate	% Black People below the poverty line	ACS	26.76	9.08
Black Unemp	Black unemployment rate	ACS	12.41	4.56
White Poverty Rate	% White People below the poverty line	ACS	10.59	3.94
White Unemp	White unemployment rate	ACS	5.92	1.99
Labor Market Index (0-10)	Sum of Location Quotients $LQ = \left(\frac{\frac{Number\ of\ Employees\ in\ Sector_m\ in\ CoC_{it}}{Total\ Number\ of\ Employees\ in\ CoC_{it}}}{\frac{Number\ of\ Employees\ in\ Sector_m\ in\ US_t}{Total\ Number\ of\ Employees\ in\ US_t}}\right)$	ACS	4.16	1.2
Other Demographics				
Percent Hispanic	% Hispanic People in total population	ACS	13.26	13.26
Single Persons	% Single person occupied housing units	ACS	28.27	4.47
Safety Net				
PA recipients	% Households receiving Public Assistance (PA)	ACS	2.69	1.25
Transience				
Residential Mobility	% Total population residing in the county who moved in past year	ACS	15.12	3.52
Climate				
Mean Temperature	Average temperature for January (in Degree Celsius)	PRISM	2.26	6.87

Demographic characteristics showed that in the sample, the average percentage of Hispanic people was about 13%, and the average share of single-person households was about 28% across all communities and years. Similarly, the average percentage of households receiving public assistance was 2.69% across all communities and years. In addition, the average percentage of residents who moved in the past year within the same county, from a different county same state, from a different state, or from abroad was 15.12% across all communities and years. Lastly, the average mean temperature for January was about 2 degrees Celsius across all communities and years, but there was a greater variability with a standard deviation of more than 6 Degree Celsius.

Main Results

Table 2.2 presents the association between the area racial composition and different measures of Black homelessness rates: overall, sheltered, and unsheltered. All models include community fixed effects and controls for the community-level characteristics shown in Table 2.1. Model fitness was determined using Bayesian Information Criteria (BIC). For instance, between models estimating Black homelessness rates, the model with logged % Black (BIC = 20060.26) was a better fit than the model with % Black (BIC = 20167.71) as the key independent variable.

To test whether community racial composition positively or negatively influenced Black homelessness rates within U.S. communities, the three models presented in Table 2.2 were computed. All three models consistently failed to support Hypothesis 1, which predicted a positive association between area racial composition and Black homelessness rates, as suggested by the group threat theory. In contrast, the results supported Hypothesis 4, which predicted a negative association between area racial composition and Black homelessness rates, as suggested by embeddedness theory.

As shown in the first column of Table 2.2, the overall Black homelessness rate was negatively related to the logged % Black. The estimates suggested that a 1-percentage-point increase in the size of the Black population would decrease the Black homelessness rate by $133.816\times logC$, where C is the rate of change in % Black. For instance, in a community with a 25% share of the Black population (e.g., New York City CoC or Boston CoC), a 1-percentage-point increase would raise the share of the Black population to 26% or share of Black population change by C times, i.e., $C = 1 + \frac{26\%-25\%}{25\%}$ = 1.04 ($\therefore 25\% \times 1.04 = 26\%$). Therefore, a 1-percentage-point increase in a community with 25% Black residents would decrease the Black homelessness rate by more than 5 per 10,000 Black residents ($133.816\times logC = 133.816 \times \log 1.04 = 5.25$, 95% CI [4.14, 6.35]). Likewise, in a community with a 5% share of the Black population (e.g., San Diego City and County CoC or San Francisco CoC), a 1-percentage increase would mean, the share of the Black population is multiplied by $C = 1 + \frac{6\%-5\%}{5\%}$ = 1 + 0.2 = 1.2. Therefore, in a community with 5% share of the Black population, a 1-percentage increase would decrease the Black homelessness rates by more than 24 per 10,000 Black residents ($133.816 \times \log 1.2 = 24.4$, 95% CI [19.26, 29.54]).

The second and third columns of Table 2.2 disaggregate the Black homelessness rates into sheltered versus unsheltered. As shown, the relative change in community racial composition significantly influences both sheltered and unsheltered Black homelessness rates within a community over time. The annual homeless assessment reports show that 90% of people experiencing homelessness in families with children were sheltered (HUD 2021, HUD 2022b). Thus, considering the larger estimated effect of increases in the relative size of the Black population on sheltered (as opposed to unsheltered) Black homelessness rates, this finding

suggests that the increases in social and care capital associated with increases in percent Black especially contributed to lower rates of homelessness among Black families with children.

Table 2.3 presents the association between the area racial composition and different measures of White homelessness rates: overall, sheltered, and unsheltered. All models include community fixed effects and controls for the community-level characteristics shown in Table 2.1. Model fitness was determined using Bayesian Information Criteria (BIC). For instance, between models estimating White homelessness rates, the model with percentage Black (BIC = 14282.25) was slightly better fit than the model with logged percentage Black (BIC = 14283.11) as the key independent variable.

To test whether community racial composition influenced White homelessness rates, the three models presented in Table 2.3 were estimated. All three models, as shown in column 1, column 2, and column 3 of Table 2.3, consistently failed to support Hypothesis 2, which predicted a negative association between the area percentage of the Black population and White homelessness rates. There was no significant association between the percentage of the Black population and White homelessness rates: overall, sheltered, or unsheltered.

Table 2.4 presents the association between the area racial composition and different measures of Black-White gaps in homelessness rates; overall, sheltered, and unsheltered. All models include community fixed effects and controls for the community-level characteristics. To test whether community racial composition influenced racial gaps in homelessness rates, the three models shown in Table 2.4 were computed.

All three models failed to support Hypothesis 3, which suggested an increase in the percentage of the Black population would increase racial gaps in homelessness rates. In contrast, all three models supported Hypothesis 5, which suggested an increase in the percentage of the

Black population would decrease racial gaps in homelessness rates within U.S. communities over time.

The estimates shown in the first column of Table 2.4, suggested that a 1-percentage-point increase in the size of the Black population would decrease the Black-White gaps homelessness rate by 136.257× $logC$, where C is the rate of change in % Black. For instance, in a community with a 20% share of the Black population (e.g., Huntsville, North Alabama CoC, Miami-Dane County CoC in Florida, or Louisville-Jefferson County CoC in Kentucky), a 1-percentage-point increase would make the share of the Black population to be 21% or share of Black population changes by C times, i.e., $C = 1 + \frac{21\%-20\%}{20\%}$ = 1.05 ($\therefore 20\% \times 1.05 = 21\%$). Therefore, a 1-percentage-point increase in a community with 20% Black residents would decrease the Black-White gaps in homelessness rate by nearly 7 per 10,000 Black residents ($136.265\times \log C = 136.265 \times \log 1.05 = 6.65$, 95% CI [5.36, 7.93]). Likewise, in a community with 10% share of the Black population (e.g., Florence, Northwest Alabama CoC, or Sacramento City and County CoC in California), 1-percentage increase would mean, the share of the Black population is multiplied by $C = 1 + \frac{11\%-10\%}{10\%}$ = 1 + 0.1 = 1.1. Therefore, in the community with 10% share of Black population, 1-percentage increase would decrease the Black-White gaps in homelessness rates by about 13 per 10,000 Black residents ($136.265\times \log C = 136.265 \times \log 1.1 = 12.99$, 95% CI [10.5, 15.5]).

Figures 2.2 and 2.3 summarize the decrease in the Black homelessness rates, and the Black-White gaps in homelessness rates when there is 1-percentage-point increase in the share of Black homelessness within a community, respectively. Figure 2.3 suggested that Black homelessness rates per 10,000 Black residents decreased as % Black increased by 1-percentage-point within a community overtime.

Figure 2.3

Change in Black Homelessness Rates Within a Community With 1% -Point Increase in Percent Black Residents Over Time.

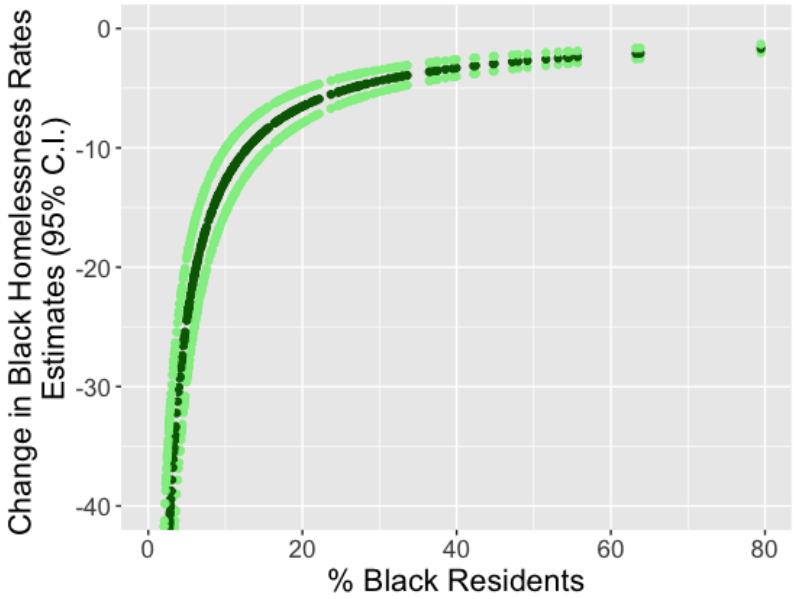


Figure 2.4

Change in Black-White Homelessness Rates Within a Community With 1-%-Point Increase in Percent Black Over Time.

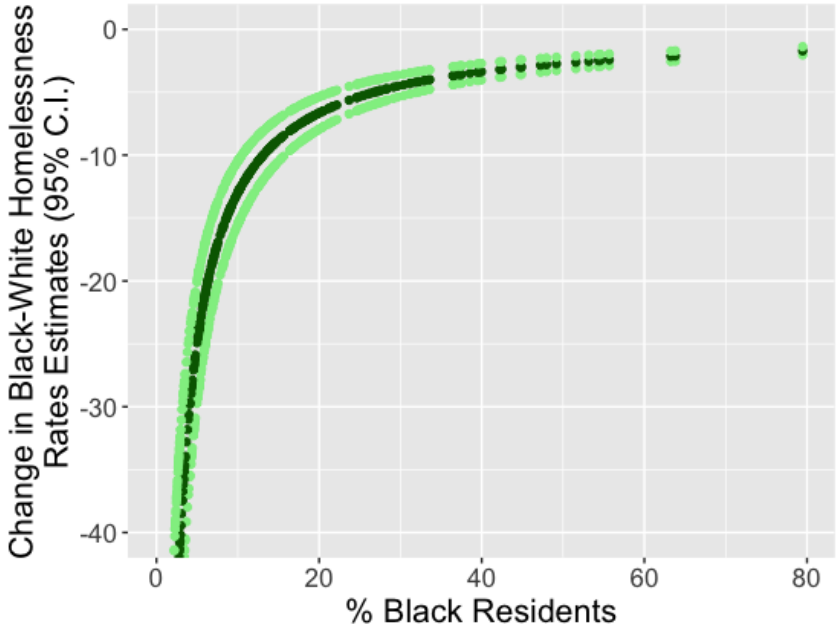


Figure 2.4 suggested when % Black increased by 1-percentage point, Black-White gaps in homelessness rates decreased over time. This finding is consistent with Hypothesis 6 that suggested an increase in the relative size of the Black population within a community is associated with smaller Black-White gaps in homelessness rates but with a decreasing slope at progressively higher levels of percent of Black people.

Findings from the general feasible generalized least square fixed effects failed to support Hypothesis 1, Hypothesis 2, and Hypothesis 3, which were based on the group threat theory, which suggested that an increase in the size of the Black population within communities would be positively associated with Black homelessness rates and greater racial gaps in homelessness rates. Results showed that an increase in percent Black within a community was negatively associated with Black homelessness rates, was not associated with White homelessness rates, and was negatively associated with racial gaps in homelessness rates. These results supported embeddedness theory-based Hypothesis 4 and Hypothesis 5.

Lastly, it is important to note that 1-percentage-point increase in share of Black population is the maximum change in percent Black over one year. Only Fall River CoC, MA and Charleston/Kanawha, Putnam, Boone, Clay Counties CoC, WV had percent Black increased by more than 1-percentage-point over one year. However, the average increase in percent Black over the study period in these two CoCs was about 0.41 only. Therefore, there was a small variation (i.e., often < 1-%-point) in percent Black within a CoC over time. Yet, the association between percent Black and racial gaps in homelessness rates was meaningful because the above findings were robust in fixed effects models with unbalanced panel data, random effects models, and cross-sectional models. See Appendix III for results from the supplement models using the fixed effects and the random effects.

Housing Conditions

Table 2.2 shows that residential segregation was marginally negatively associated with Black homelessness rates, and the association of residential segregation was significantly negative with unsheltered Black homelessness rates within communities. Table 2.3 shows no significant association between racial residential segregation and overall White homelessness rates. However, racial residential segregation was positively associated with sheltered White homelessness rates but negatively associated with unsheltered White homelessness rates.

As shown in Table 2.2, at least one measure of area housing market conditions, i.e., the percentage of crowded rental units, was significantly related to all three models. Rental vacancy rate had no association with Black homelessness rates, while the percentage of rent-burdened rental units had a marginally positive association with the sheltered homelessness rate within communities over time ($p < 0.10$). In contrast, rental market dynamics had no significant association with White homelessness rates.

As shown in Table 2.3, rental market conditions had a differential association with homelessness rates disaggregated by race. For instance, the percentage of crowded rental units showed no association with White homelessness rates in all three models: overall, sheltered, or unsheltered. An increase in the percentage of rent-burdened households and an increase in unsheltered White homelessness rates were marginally associated ($p < 0.10$).

An increase in the rental vacancy rate failed to influence a reduction in the White homelessness rate. An increase in permanent supportive housing beds per 10000 general residents was negatively associated with overall White homelessness rates and sheltered White homelessness rates, but not associated with Black homelessness rates (see Table 2.2).

Table 2.2

Fixed Effects General Feasible Generalized Least Square (GGLS) Models on Black Homelessness Rates, 2015-2020.

	Black Homelessness		Sheltered Black Homelessness		Unsheltered Black Homelessness	
	Per 10,000 Black residents		Per 10,000 Black residents		Per 10,000 Black residents	
	b	s.e.	b	s.e.	b	s.e.
Logged % Black	-133.816***	14.385	-78.690***	9.772	-32.896***	8.762
Dissimilarity Index	-0.617^{+}	0.332	0.353	0.226	-0.752***	0.205
PSH per 10,000 residents	0.228	0.154	-0.021	0.107	0.225*	0.094
% Crowded	15.212***	2.903	6.799***	1.978	5.910***	1.719
Rental vacancy rate	0.139	0.794	0.167	0.534	0.006	0.481
% Rent burdened	0.53	0.522	0.693^{+}	0.354	-0.079	0.317
Black below poverty	-0.807***	0.239	-0.186	0.163	-0.526***	0.142
Black unemployment rate	1.361***	0.289	0.733***	0.195	0.468**	0.179
Labor Market Index (0-10)	-2.124*	1.031	-1.044	0.714	-1.298*	0.617
% Hispanic	3.300^{+}	1.885	4.959***	1.277	-1.39	1.127
% 1-person household	2.635*	1.286	0.965	0.875	1.25	0.784
% Public Assistance recipient	-3.269	2.365	-1.808	1.585	-2.348	1.461
Residential mobility rate	-0.585	1.037	0.151	0.701	-0.3	0.621
Mean temperature	-0.014	0.229	-0.102	0.167	0.126	0.145
CoC-Year Observations	2214		2214		2214	

*$^{+}$p<0.10. *p<0.05. **p <0.01. ***p<0.001.*

Note. All models include Continuum of Care (CoC) fixed effects. The standard errors clustered at CoC are shown in the parentheses. All are balanced panel models.

Table 2.3

Fixed Effects General Feasible Generalized Least Square (GGLS) Models on White Homelessness Rates, 2015-2020.

	White Homelessness		Sheltered White Homelessness		Unsheltered White Homelessness	
	Per 10,000 White residents		Per 10,000 White residents		Per 10,000 White residents	
	b	s.e.	b	s.e.	b	s.e.
% Black	-0.039	0.565	0.237	0.303	-0.132	0.424
Dissimilarity Index	0.094	0.064	0.127***	0.035	-0.151**	0.048
PSH per 10,000 residents	-0.076**	0.026	-0.06***	0.016	-0.017	0.019
% Crowded	0.779	0.594	0.392	0.323	0.115	0.427
Rental vacancy rate	0.279	0.174	0.022	0.092	0.261*	0.129
% Rent burdened	-0.049	0.119	-0.007	0.064	0.162^{+}	0.086
White below poverty	1.057***	0.292	0.307*	0.152	0.499*	0.214
White unemployment rate	-0.143	0.219	0.104	0.123	-0.554***	0.160
Labor Market Index (0-10)	0.067	0.187	0.05	0.106	0.034	0.138
% Hispanic	1.121*	0.442	0.682**	0.236	-0.379	0.341
% 1-person household	0.596*	0.266	0.266^{+}	0.145	0.033	0.196
% Public Assistance recipient	-0.343	0.514	0.04	0.272	-0.794*	0.387
Residential mobility rate	-0.3	0.221	-0.097	0.119	-0.177	0.162
Mean temperature	-0.091*	0.045	-0.136***	0.024	0.025	0.026
CoC-Year Observations	2214		2214		2214	

*$^{+}p<0.10$. *$p<0.05$. **$p<0.01$. ***$p<0.001$.*

Note. All models include Continuum of Care (CoC) fixed effects. The standard errors clustered at CoC are shown in the parentheses. All are balanced panel models.

Table 2.4

Fixed Effects General Feasible Generalized Least Square (GGLS) Models on Gaps in Homelessness Rates, 2015-2020.

	Black-White Homelessness Rates Gap		Sheltered Black-White Homelessness Rates Gap		Unsheltered Black-White Homelessness Rates Gap	
	b	s.e.	b	s.e.	b	s.e.
% Black	-136.265***	13.453	-90.579***	9.430	-31.198***	7.706
Dissimilarity Index	-0.859**	0.317	-0.088	0.225	-0.548**	0.185
PSH per 10,000 residents	0.316*	0.149	0.039	0.106	0.211*	0.089
% Crowded	13.792***	2.784	6.384**	1.964	4.896**	1.537
Rental vacancy rate	0.099	0.753	-0.049	0.529	0.089	0.422
% Rent burdened	0.977*	0.463	1.088***	0.327	-0.085	0.261
Black/White below poverty ratio	-5.802*	2.302	-1.412	1.626	-4.116**	1.314
Black/White unemployment ratio	6.668***	1.589	3.649**	1.126	3.381***	0.951
Labor Market Index (0-10)	-1.579	0.999	-0.470	0.716	-1.248*	0.570
% Hispanic	1.258	1.707	3.863**	1.189	-1.856^{+}	0.955
% 1-person household	1.014	1.217	-0.538	0.856	1.117	0.694
% Public Assistance recipient	-3.584	2.211	-1.963	1.546	-1.052	1.271
Residential mobility rate	0.22	0.980	0.397	0.688	-0.031	0.546
Mean temperature	0.066	0.231	0.033	0.167	0.114	0.137
CoC-Year Observations	2214		2214		2214	

$^{+}p<0.10$. *$p<0.05$. **$p<0.01$. ***$p<0.001$.

Note. All models include Continuum of Care (CoC) fixed effects. The standard errors clustered at CoC are shown in the parentheses. All are balanced panel models.

As shown in Table 2.4, the percentage of crowded rental units had a positive association with all three models of Black-White gaps in homelessness rates. The rental vacancy rate had no association with Black-White gaps in homelessness rates. Likewise, the percentage of rent-burdened households had a positive association with Black-White gaps in sheltered homelessness rates. Permanent supportive housing beds per 10,000 general population were positively associated with Black-White gaps in (a) overall homelessness rates, and (b) unsheltered homelessness rates.

Economic Conditions

Economic conditions have a differential association with homelessness rates disaggregated by race. An increase in the percentage of White residents below the poverty level was positively associated with White homelessness rates within U.S. communities, whereas an increase in the percentage of Black residents below the poverty level was negatively associated with overall Black homelessness rates and unsheltered Black homelessness rates. In addition, an increase in the unemployment rate of Black people was positively associated with the Black homelessness rate (see Table 2.2), including sheltered versus unsheltered Black homelessness rates. But there was no such association between the unemployment rate of White people and White homelessness rates (see Table 2.3).

Table 2.4 indicates that rather than racial disparities in poverty, Black-White racial disparities in the unemployment rate were positively associated with Black-White gaps in homelessness rates. The positive association between the Black-White unemployment ratio and Black-White gaps in homelessness rates was consistent across all three models, i.e., shown in the first, the second, and the third columns in Table 2.4.

Tables 2.2 and 2.3 show, an increase in the labor market index, i.e., the number of labor market specializations within a CoC relative to their respective specialization in the country, was negatively associated with overall and unsheltered Black homelessness rates over time but was not associated with White homelessness rates. In addition, Table 2.4 shows that the labor market index was negatively associated with Black-White racial gaps in unsheltered homelessness rates only.

The above pattern of findings is widely consistent with the literature about racial disparities in income and wealth (Levy 2022; Shapiro 2017). Compared to the modest Black-White disparities in income, the racial gap in wealth is stark. Since unemployment is often a short-term phenomenon, White people that are likely to have a reserve of wealth as a private safety net may be less likely to experience homelessness. In contrast, Black people are less likely to have wealth to fall back on, therefore, unemployment is more predictive of greater rates of homelessness among Black people as opposed to their White counterparts. In addition, unemployment impacts Black renters more than White renters because of the existing Black-White affordability gap (Airgood-Obrycki and Hermann 2022).

While poverty is obviously related to income, falling below the poverty lines is also an indicator of failing to accumulate wealth. Therefore, poverty is more predictive of White homelessness rates. In contrast, the negative association between poverty and Black homelessness rates is suggestive of embeddedness and Black resilience, which may mitigate experiencing homelessness among Black people (Desmond 2023; Rodriguez 2022). Likewise, greater labor market index suggests lesser spatial mismatch between jobs and place of residence, which matters relatively more for Black people who historically suffered from spatial mismatch of jobs after deindustrialization (Wilson 2012).

Past studies using community fixed effects estimations showed either insignificant relationship between area economic conditions (i.e., unemployment and poverty rates) and rates of homelessness (Hanratty 2017) or negative relationship between area poverty rates and rates of homelessness (Byrne et al. 2021). This study offers how economic conditions as structural determinant of homelessness have differential association with rates of homelessness disaggregated by race, which is an extension to past literature.

Other Community Characteristics

Other community characteristics controlled in fixed effects regressions in this study were demographic characteristics (e.g., percent Hispanic, percent single-person-household), safety net (e.g., percent Public Assistance recipients), transience (i.e., residential mobility), and climate (i.e., the mean temperature in January). Tables 2.2 and 2.3 indicate that an increase in the percentage of the Hispanic population was marginally positively associated with Black homelessness rates, and significantly positively associated with White homelessness rates respectively. Similarly, the percentage of single-person households was positively associated with both Black homelessness rates and White homelessness rates. Nevertheless, neither the percentage of the Hispanic population nor the percentage of the single-person household was significantly associated with overall Black-White gaps in homelessness rates. But the percentage of the Hispanic population was significantly positively associated with Black-White sheltered homelessness rates and marginally negatively associated with Black-White unsheltered homelessness rates.

Tables 2.2 and 2.4 show the percentage of Public Assistance recipients was not significantly associated with Black homelessness rates or with Black-White gaps in homelessness rates. But, as shown in column 3 of Table 2.3, the percentage of Public Assistance

recipients was significantly negatively associated with unsheltered White homelessness rates. Residential mobility had no association with Black homelessness rates, White homelessness rates, or Black-White gaps in homelessness rates.

Lastly, the mean temperature of January had no association with Black homelessness rates and Black-White gaps in homelessness rates, but a negative association with overall White homelessness rates and White sheltered homelessness rates. Past studies on overall homelessness rates show that warm places have on average higher unsheltered homelessness compared to cold places, but the relationship between sheltered homelessness rates and temperature was not discernable (Corinth and Lucas 2018; Muniz 2021). Corinth and Lucas (2018) as well as Muniz (2021) found a negative association between sheltered homelessness rates and temperature. Although this finding seems to be consistent for White sheltered as well as overall homelessness rates, lacking a statistically significant effects of temperature on Black homelessness rates and racial gaps in homelessness rates begs future research to carefully account for climate when estimating homelessness rates disaggregated by race.

Discussion

This study provides clear evidence of a link between the share of the Black population and racial gaps in homelessness rates within U.S. communities. The results show that the percentage of the Black population was (a) negatively associated with community-level Black homelessness rates, (b) insignificantly associated with community-level White homelessness rates, and (c) negatively associated with Black-White gaps in homelessness rates within U.S. communities.

My finding that the percentage of the Black population was negatively associated with the Black homelessness rates challenges the naïve assumption about the positive association

between the percentage of the Black population and homelessness rates. One reason this study found increases in the relative size of the Black populations negatively related to the increases in the Black homelessness rates may be that percent Black was correlated with increases in social capital from bounded solidarity and informal social support systems (Portes and Sensenbrenner 1993; Rodriguez 2022). Such positive correlation between increase in the relative size of the Black population and social capital may have mitigated the risk of experiencing homelessness among low-income Black residents.

The nonlinear relationship between percent Black and the Black homelessness rate suggests that, as the relative size of the Black population continued to increase, the bounded solidarity might become weaker, and the informal support system might not be available for every low-income Black resident within the community who could be at risk of experiencing homelessness. In a different context from embeddedness, even scholars of minority threat thesis acknowledge that as the relative size of a minoritized population reaches a critical mass threshold, then the size of the minoritized population beyond the threshold would have diminishing benefits (Blalock 1967; Eitle et al. 2002). In addition, a relative increase in the size of the Black population within U.S. communities cannot be treated as a sociological monolith (Wacquant 2008). Since 38% of the communities in the sample witnessed a decrease in the percentage of the Black population over time, the nonlinear relationship also indicates that the embeddedness might weaken starkly such that there might be increased risk of Black homelessness within those communities.

The overrepresentation of Black people among the unhoused population is plausibly related to persistent discrimination in the housing and job markets (Edwards 2021; Olivet et al. 2021; Paul et al. 2019; Timmer et al. 1994). However, an increase in the size of the Black

population within communities also suggests an expansion of what Pierre Bourdieu called "social capital," i.e., resources provided by family, friends, community organizations, and advocacy groups, or what Rodriquez (2022) framed as "care capital" that might prevent homelessness among low-income Black people at risk of experiencing homelessness.

My first hypothesis was motivated by Blalock's group threat theory that suggested that as percent Black increases, the Black homelessness rates increase because the dominant group would perceive potential minority threat and activate discriminatory practices in jobs and housing (Blalock 1967). Although the group threat theory arguments of elevated prejudice and discrimination against minority populations when the relative share of minority increased were plausible (Blalock 1960, 1967; Eitle et al. 2002), the findings failed to support the hypothesized relationship between minority percentage and Black homelessness rates. Blalock recognized the possibility of minority mobilization as minority numbers increase, but the social controls posed by the dominant groups and the vulnerability of Black people against discrimination maneuvered through those social controls were central to the group threat theory.

Embeddedness theory highlights the agency of ethnoracially minoritized populations. The findings supported embeddedness hypotheses that suggested a negative association between the increase in percent Black and changes in Black homelessness rates. There is a plethora of literature on racial discrimination in housing, demolitions of public housing, and displacement of Black households across the United States. Nevertheless, there are narratives of social movements and historical mobilization of Black communities for housing justice. For instance, in the 1980s Black women-led tenants created seventeen cooperatives in Washington DC that bought landlord-neglected-run-down properties and rehabilitated them for affordable living. Similarly, Black women in public housing tenant associations in Atlanta collectivized care

capital and battled against the Atlanta Housing Authority and public administrators to place public funds into public sidewalks, transit, schools, and child-care centers near public housing developments. Prior to the housing movements, housing policies prioritized suburban development, including predominantly white, private, and individual households (Rodriguez 2022). Another example of embeddedness is activism in Black churches. Black churches in Southern California build on the legacy of advocacy, social change, and community outreach, a including supporting the Southern California's communities struggling with homelessness (Lindberg 2022).

A recent example of embeddedness among racially minoritized populations is mobilization of groups such as Inquilinxs Unidxs por Justica (United Renters for Justice) also known as IX, a tenants' rights organization in Minneapolis. IX members protested neglectful landlord who issued eviction notices instead of fixing leaks in the apartments. The IX tenants, raised money to purchase their apartment buildings at a fair market price, fought back eviction cases in the court, won their cases, and later convinced the landlord to sell five apartment buildings to Land Bank Twin Cities (i.e., a collection of real estate investors whose goal is to preserve affordable housing), which would resell the buildings back to the tenants at zero interest. The tenant-owned cooperative is known as the Sky Without Limits Community (Desmond 2023).

Conclusion

The implicit association between a relative increase in the size of the Black populations and an increase in homelessness within U.S. communities is an outcome of the constant pairing of Black people with negative circumstances and outcomes such as crime, violence, welfare use,

and drug addiction (Massey 2007). Holding such negative stereotypes of Black Americans leads to colorblind homeless policies (Edwards 2021; Massey 2007).

This study suggests that broader policy efforts to prevent and reduce homelessness rates within U.S. communities ought to be reconceptualized through a racial equity lens. Colorblind homeless policies exacerbate the overrepresentation of the Black people among the unhoused populations, and increase aversion to welfare programs, including shelters, especially in non-White areas, where low-income Black residents would be at greater risk of homelessness (Edwards 2021). In addition, the persistent stereotypes about the "underclass" further expand criminalization and shaming of the unhoused Black people (Edwards 2021; Massey 2007; Paul et al. 2019).

According to naïve assumptions, communities with relatively large Black populations should have more issues with homelessness. However, recent studies presented results that showed a negative association between the size of Black populations and rates of homelessness. Existing literature either interpreted the contrasting relationship as counterintuitive (Muniz 2021) or reduced the significance of race in structural analysis of homelessness (Colburn and Aldern 2022). The findings of this chapter offer an incremental understanding to the literature that showed a negative association between percent Black and rates of homelessness. When I examined the associations between percent Black and the rates of homelessness disaggregated by race at the community level, I found that increase in percent Black was associated with lower rates of Black homelessness. Therefore, the findings not only challenged the naïve assumptions but also provided insights on the mechanism for negative association between percent Black and overall rates of homelessness: It was due to lowering of Black homelessness rates when percent Black increased. The relative increase in the size of Black population might mitigate the risks of

experiencing homelessness among poor Black people through embeddedness and social capital. Thus, future research examining structural determinants of homelessness will have to rethink why the percent Black may be a predictor when homelessness is disaggregated by race.

This study has important policy implications for practitioners, policy makers, and advocates of homelessness as it recenters racial justice and racial equity lenses while aiming to prevent and reduce homelessness within U.S. communities. This study suggests that when the relative population size of minoritized racial groups within a community increases, the minoritized racial group may increase their social capital and enhance bounded solidarity to form an informal social support system that may further help in reduction and prevention of homelessness. In addition, there might be growing pressures on vulnerable Black residents within a community where either Black residents were a minority in number or where Black residents were concentrated. Therefore, efforts aimed at preventing and reducing homelessness need to detach implicit associations between relative size of the Black population and homelessness rates.

The results suggest that race-sensitive policy and policy interventions are needed more robustly in areas where racial gaps in homelessness rates are high. Likewise, addressing racial inequality in employment rates and increasing labor market specialization would help to reduce Black-White racial gaps in homelessness rates within U.S. communities. Policies expanding the safety nets, such as public assistance and public supportive housing targeted to ethonoracially minoritized groups, are critically important to prevent and reduce racial gaps in homelessness.

CHAPTER 3

More Than an Affordable Housing Problem: Association Between Evictions and Racial Gaps in Homelessness

"Because Black men were disproportionately incarcerated and Black women disproportionately evicted, uniformly denying housing to applicants with recent criminal or eviction records still had an incommensurate impact on African Americans."

- Matthew Desmond, Evicted (p. 252)

With the publication of *Evicted*, Matthew Desmond's award-winning ethnography of low-income housing in Milwaukee, urban sociologists in the United States have begun paying scholarly attention to issues of residential evictions (Desmond 2016; see also, Desmond and Kimbro 2015; Hepburn et al. 2021; Hepburn, Louis, and Desmond 2020; Himmelstein and Desmond 2021; Leung, Hepburn, and Desmond 2021; Rutan and Desmond 2021). Residential evictions are linked to a range of adverse outcomes, from homelessness to suicide (Desmond and Kimbro 2015; Hepburn et al. 2020). An estimated 1.6 million renter households are evicted nationwide annually (Hepburn et al. 2020). Black and Latinx renters, especially women, bear a disproportionate share of eviction filings and evictions (Hepburn et al. 2021, 2020). Given racial disparities among evicted Americans and the key role of eviction as a cause of homelessness, to what extent are evictions associated with racial gaps in homelessness?

Eviction is one of the tractable sources of homelessness in the United States (Burt 2001; Desmond 2016; Treglia et al. 2023). Existing research univocally argues that access to affordable housing – irrespective of one's ability to pay – is a way to combat homelessness

(Colburn and Aldern 2022). But even with increased housing availability through housing vouchers or permanent supportive housing, evictions still occur in areas with predatory landlords, who contribute to a greater likelihood of homelessness in those communities (Cohen and Noble 2020; Collinson and Reed 2018; Desmond and Kimbro 2015). There are racial disparities in eviction filing rates. Between 2012 and 2016, Black renters experienced the highest average eviction filing rates (6.2%) as opposed to their White counterparts (3.4 %) (Hepburn et al. 2020). Although there is a growing literature on racial disparities in evictions, the extent to which evictions are associated with racial gaps in homelessness is unclear.

This chapter fills this research gap by directly measuring the relationship between eviction filing rates and racial gaps in community-level homelessness. Empirical evidence on the extent to which evictions contribute to racial gaps in homelessness is crucial for scholars, tenant rights activists, government agencies, and policymakers interested in formulating policy interventions that may prevent and reduce racial disparities in eviction-led homelessness.

Theoretical Review

Building on approaches developed to study poverty, the theoretical camps that try to explain the causes of homelessness can be categorized into three broad categories: behavioral, structural, and political contexts (Brady 2019). Behavioral theories attribute homelessness toindividual failings and cultural deficits, such as those related to alcoholism, mental health, and drug abuse (Baker et al. 2010; Graffy et al. 2019; Muentner et al. 2019; Otiniano Verissimo et al. 2021). Structural theories attribute homelessness to the housing market, labor market, and socio-demographic context (Avramov 1996; Bohanon 1991; Byrne et al. 2013, 2021; Colburn and Aldern 2022; Coulson et al. 2020; Elliott and Krivo 1991; Fargo et al. 2013; Hatch 2017; Lee et al. 2003, 2010; Muniz 2021). Likewise, political theories attribute

homelessness to policy decisions taken by powerful actors and institutions, such as those implicated in shrinking safety nets, restricted eligibility for public housing, deinstitutionalization, and criminalization of homelessness (Baker et al. 2010; Bassuk, Hart, and Donovan 2019; Beharie, Leonard, and Gwadz 2020; Brady 2019; Cheyne 2009; Hatch 2017; Parolin 2021; Warren, Drazen, and Curtis 2017). Beyond these three broad theoretical paradigms of homelessness, some scholars argue for integrating behavioral, structural, and/or political approaches while examining homelessness (Lee et al. 2021, 2010; Main 1996).

Recent studies on evictions and homelessness attempt to account for external factors (e.g., housing prices, income inequality, and housing market competition) as well as internal factors such as institutional frameworks, including local, state, and federal housing policies on tenant rights such as the eviction moratoria during the COVID-19 pandemic (Byrne et al. 2021; Coulson et al. 2020; Desmond and Kimbro 2015; Hatch 2017; Hepburn et al. 2021; Hurley et al. 2018; Merritt and Farnworth 2021; Rutan and Desmond 2021). Those studies resonated with the new institutional economic approaches that accounted for the complex interaction between economic and political markets, transaction costs, and other institutional factors (Coase 1992; North 2016; Williamson 2000) while examining evictions and homelessness. Therefore, it is important to build on prior research focused on those internal and external structural factors to better elucidate the nature of the associations between evictions and homelessness in the United States (Brady 2019; Lee 2021; Steinmo and Watts 1995).

Domains of structural determinants of homelessness have expanded over time. Elliot and Krivo's (1991) pioneering structural approach to understanding the determinants of homelessness in the United States focused on four factors: inadequate low-cost housing,

poverty, poor economic conditions, and absence of community mental health care facilities. Lee et al. (2003) expanded those four structural factors into six domains: housing market, economic conditions, demographics, safety net, climate, and transience. Thereafter, with the availability of Point-In-Time PIT estimates of homelessness counts through the U.S. Department of Housing and Urban Development (HUD) since 2007, both at the Continuum of Care level and aggregated at the state level, there are a substantial number of studies, each univocally presenting homelessness as a housing market problem (Byrne et al. 2013, 2021, 2016; Colburn and Aldern 2022; Donley et al. 2017; Fargo et al. 2013; Hanratty 2017; Muniz 2021).

While past literature considered eviction as a path to homelessness (Avramov 1996; Crane and Warnes 2000; Timmer et al. 1994), it was Desmond's (2016) *Evicted*, based on ethnographic research in Milwaukee, which brought the eviction crisis to the attention of researchers, policymakers, and the public (Coulson et al. 2020; Desmond and Kimbro 2015; García and Kim 2020; Hatch 2017; Hepburn et al. 2020; Leung et al. 2021; Merritt and Farnworth 2021). The total homeless population in the United States decreased from 647,258 in 2007 to 568,000 in 2019 (a decline in total homeless population by more than 12%), despite growth in the size of the U.S. population from 302 million in 2007 to more than 328 million in 2019 (an increase in total U.S. population by about 9%). But homelessness rates did not decrease uniformly in all Continua of Care (CoCs). For example, some CoCs in New York and Los Angeles saw increasing trends in their homelessness rates, whereas CoCs in Oregon saw declines in homelessness. Even within a state, CoCs had divergent trends of homelessness. For instance, between 2011 and 2019 homeless populations decreased in Houston, Texas, by 54%, but the homeless population in Dallas, Texas, increased during the same period (Garnham Juan

Pablo 2019). Therefore, given the heterogeneity in community-level evictions and homelessness, it is important to examine if variability in evictions is associated with that in homelessness.

Evictions and Racial Gaps in Homelessness Rates

Despite the logical association between evictions and homelessness (Burt 2001; Cohen and Noble 2020; Desmond and Kimbro 2015; Timmer et al. 1994), only a handful of studies examine the empirical association between evictions and homelessness (Collinson and Reed 2018; Richter et al. 2021; Treglia et al. 2023). Literature on the correlates of eviction filing and racial gaps in rates of homelessness is at a nascent phase.

Most studies providing evidence of a relationship between eviction and homelessness do so at an individual or family level. For example, The National Survey of Homeless Assistance Providers and Clients, conducted in 1996, found that 28% of men with children and 8% of women with children referred to "landlord made us leave" as the reason of homelessness (Burt 2001: 66). Similarly, in a randomized survey of 399 homeless individuals in Santa Cruz, California in 2019, 18 % of the respondents reported eviction as the cause of their homelessness (Applied Survey Research 2019). Likewise, Collinson and Reed's (2018) study in the New York City found that in the year after filing, eviction caused a 19-percentage point increase in applications to homeless shelters.

Treglia et al. (2023) assessed the relationship between evictions and homelessness at the aggregate level. Using the community level of homelessness between 2007-2017, Treglia and colleagues found a positive association between eviction filing rates and the rates of sheltered homelessness. However, there is a gap in literature about whether areas with higher rates of eviction filing are associated with larger racial gaps in homelessness rates. This

chapter addresses this gap by merging as-yet-unexplored data on county-level eviction filings for 2018 and Black-White estimates of homelessness across U.S. communities in 2019.

In this chapter, I ask:

1. To what extent do the community eviction filing rates influence racial gaps in homelessness rates?

Most renters have been historically evicted for rent non-payment rather than disorderly conduct (Cohen and Noble 2020; Crane and Warnes 2000; Cusack and Montgomery 2017; Desmond 2016; Hepburn et al. 2021; Rutan and Desmond 2021). For instance, in 1988, 21,000 renter households in New York City were evicted, "almost always for nonpayment of rent" (Timmer et al. 1994, p. 91-92). As of July 2022, approximately 8.5 million households were behind in rent payments, and 4.2 million households were at risk of evictions in the United States. Millions of low-income renting households spend most of their income on rents, and millions are estimated to experience evictions and eviction-led homelessness each year (Desmond and Kimbro 2015; Donley et al. 2017).

Although renters who are behind on rent payments are at some risk of eviction regardless of race, there are racial disparities in evictions, which may lead to racial differences in the consequences of evictions for homelessness. Hepburn et al. (2020) found that Black renters experienced the highest average rates of eviction filing and eviction judgments. According to Hepburn and colleagues, one in four Black renters lived in a county where the Black eviction rate was more than twice the White eviction rate. Likewise, Desmond's (2016) ethnographic study in two low-income neighborhoods in Milwaukee, a majority-White trailer park and a majority-Black inner-city neighborhood, illuminated how in Milwaukee's poor Black neighborhoods, Black people disproportionately received eviction judgments compared to

their White counterparts. Therefore, in areas with higher eviction rates, Black renters were at greater risk of eviction judgments, since evictions targeted Black people (Desmond 2012, 2016; Desmond and Kimbro 2015; Hepburn et al. 2020).

When Black renters received eviction judgments, it was likely that structural impediments such as racial discrimination in rental market triggered their journey of downward mobility (Desmond 2016, 2023). More specifically, these factors often prevented formerly evicted Black renters from escaping disadvantaged neighborhoods (Desmond 2016). Consequently, Black renters with records of eviction judgments are likely to experience a spiral of being deprived, often including job loss, poor health, serial eviction, and homelessness (Leung et al. 2021; Rutan and Desmond 2021). Studies found that even after two years of eviction, households were likely to stay at the shelter and remain for a longer period than their non-evicted counterparts (Collinson and Reed 2018; Rutan and Desmond 2021).

We know that pronounced Black-White disparities exist in eviction filing and eviction judgments, and Black-White gaps in homelessness rates are also well-established. However, no prior studies have directly examined the extent to which area eviction filings contributed to community-level racial disparities in homelessness. Therefore, this chapter employs a series of regression models to examine the association between community-level evictions and racial gaps in homelessness rates across U.S. communities.

Eviction Filings

Eviction filings occur at an early stage of the eviction process. Once the court holds a hearing, the judge issues an eviction judgment and orders a writ of possession. Finally, the sheriff or a third party removes the tenant based on the writ of possession (Hepburn et al. 2021).

Not all eviction filings turn into actual eviction judgments. Yet, an eviction filing alone may have detrimental effects on the housing stability of tenants. Eviction filings increase displacement because when an eviction is filed, many tenants choose to move rather than make it to court (Desmond 2016). Even if a renter makes it to court, wins their eviction filing case, and protects themselves from a formal judgment, the process is costly, and the filing record would still ruin their future rental prospects (Hepburn et al. 2021). Consequently, some tenants are compelled to rent the same unit even after their landlords file an eviction case in court. For instance, a study in Minneapolis found that 30% of tenants receiving eviction filings still lived in the home where a filing occurred, suggesting that the filing limited housing choices for tenants (Cohen and Noble 2020).

To my knowledge, Treglia et al. (2023) conducted the most comprehensive study examining the association between evictions and rates of homelessness within U.S. communities. Treglia and colleagues found that the area eviction filing rate was positively associated with the area sheltered homelessness rate. Although treading a comparative path between individual-level and aggregate-level analyses should be done with additional caution to avoid the ecological fallacy, Treglia et al.'s (2023) results partly echoed Collinson and Reed's (2018) and Richter et al.'s (2021) findings on the association between eviction processes and homelessness. Their study added to the earlier evidence that eviction filings were potentially harmful to tenants even without an actual eviction judgment because tenants were often unfamiliar with their rights to dispute the eviction; partly as a consequence, many tenants leave a property even before an eviction is actually ordered. Therefore, efforts to prevent eviction filings could potentially reduce homelessness within U.S. communities (Treglia et al. 2023).

Hypotheses

It is important to estimate the association between an eviction filing and racial gaps in homelessness rates because an eviction filing often stays in the records of tenants, which could disproportionately affect future rental options for minoritized ethnoracial groups compared to their White counterparts (Richter et al. 2021). On the one hand, Black and Latinx and low-income renters are at higher risk of eviction filings, including serial eviction filings (Hepburn et al. 2020). On the other hand, property owners often considered prior eviction filing history as an important dimension of screening potential tenants (Cohen and Noble 2020). Such screenings disproportionately impact Black women and Latinx households in predominantly White neighborhoods (Desmond 2016).

Seemingly neutral deployment of technologies for tenant screening perpetuates and legitimates discrimination against Black people (So 2022). Even in instances where landlords may not have the intent to discriminate, the algorithmic judgments, i.e., based on court records, provided by tenant screening services, perpetuate racial discrimination. Therefore, eviction filings feed records into tenant screening systems that create a structure of racial injustices that could reproduce housing discrimination against Black renters and may contribute to Black-White racial gaps in homelessness.

Past studies showed that Black renters were disproportionately threatened with eviction filings, so they were exposed to adverse consequences such as homelessness (Hepburn et al. 2021, 2020; Medina et al. 2020). In addition, Black renters were more rent burdened and had high-income volatility compared to White renters. In the rental market, landlords were likely to employ differential treatment against Black renters in the eviction process (Hepburn et al. 2020). Likewise, low-income Black renters lacked resources to cope with an unforeseen crisis due to

pronounced racial disparities in wealth (Chun et al. 2022; Desmond 2023). Therefore, Black renters were likely to have less cushion than White renters and were more likely to experience eviction-led homelessness.

Since there are variations in area eviction filings and variations in community-level racial gaps in homelessness, I hypothesize that eviction filing rates are positively associated with Black-White gaps in homelessness rates.

Hypothesis 1: Higher area eviction filing rates are associated with larger Black-White gaps in homelessness rates.

Methods

Data and Measures

I retrieved data from (a) the U.S. Department of Housing and Urban Development (HUD) Continuum of Care (CoC) level Point-in-Time (PIT) estimates of homelessness disaggregated by race and Housing Inventory Count (HIC) of Permanent Supportive Housing (PSH) beds for 2019 (https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/), (b) Princeton University Eviction Lab county-level eviction filings for 2018 (https://evictionlab.org/get-the-data/), (c) the U.S. Census Bureau American Community Survey (ACS) 2014 – 2018, 5-year estimates, for county-level housing, economic, and demographic characteristics, and (d) the Oregon State University PRISM Climate Group (https://prism.oregonstate.edu/) for January 2019's climate data.

The measure of racial gaps in homelessness is slightly different from what I described in Chapter 2. Since the distributions of Black homelessness rates (skewness = 4.20, kurtosis = 24.45) and White homelessness rates (skewness = 2.99, leptokurtosis = 13.11) were positively skewed (skewness > 0) and leptokurtic (kurtosis > 3), I did logarithmic transformation of the

homelessness rates. Therefore, the racial gap in homelessness rate in a CoC_j was a difference between logarithmic transformed Black homelessness rate and logarithmic transformed White homelessness rate in the CoC. Therefore, mathematically, racial gap in homelessness rate was logarithmic transformation of the ratio of Black homelessness rate and White homelessness rate.

$$Racial\ Gaps\ in\ Rate\ of\ Homelessness_j$$

$$= Logged\ Black\ Homelessness\ Rate_j - Logged\ White\ Homelessness\ Rate_j$$

$$= Logged\left(\frac{Black\ Homelessness\ Rate_j}{White\ Homelessness\ Rate_j}\right)$$

To construct CoC characteristics, I obtained county-level data because the Eviction Lab data for the key independent variable, i.e., eviction filings, was available at the county level. Likewise, since 2018 is the latest data available in the Eviction Lab for eviction filings across counties in the United States, I used 2018's eviction filing rates as the key independent variable.

I calculated the eviction filing rate for a CoC using the following formula:

$$Eviction\ filing\ rate\ of\ COC_j = \frac{Total\ number\ of\ eviction\ filings\ in\ CoC_j}{Total\ number\ of\ renter\ occupied\ households\ in\ CoC_j} \times 100$$

The Princeton University Eviction Lab compiles county-level eviction filings data from different sources, such as court records and proprietary records. The Eviction Lab considered the court-issued eviction filing records to be self-validating because they were processed through the case management systems of courts. The proprietary data undercounted the court-issued filings. Because of practical, legal, and technological barriers, all counties did not have complete electronic repositories of eviction filing records. Therefore, in addition to the court-issued records and proprietary records of the eviction filing aggregated at the county

level, the Eviction Lab estimated eviction filing rates using Bayesian models. They generated a full set of county-level eviction filing estimates in 2018. I included CoCs with eviction filing estimates and court-issued eviction filing data in my analytic sample. As a robustness check, I also estimated my models using only the CoCs with court-issued filings, i.e., subset of the full sample of this study that consisted self-validating eviction cases.[4] The Eviction Lab has detailed information about data collection strategies, data cleaning, and data validation (Gromis et al. 2022).

I used the above-mentioned data sources to construct several covariates. As for eviction filing rates, I obtained data at the county level. In contrast, the PIT estimates of homelessness were available at the CoC level. Although CoCs are nested within state boundaries, CoC boundaries and county boundaries do not always overlap. I identified CoCs that overlapped with county boundaries, CoCs that were nested within a county, and CoCs that comprised multiple counties. Multiple CoCs nested within a county (e.g., multiple CoCs in California and Massachusetts) were combined and treated as a single pseudo-CoC (see Appendix IV for details about the CoCs that were combined to create pseudo CoCs). In so doing, other CoC characteristics were rendered compatible with the corresponding county-level characteristics. Similarly, in the case of a CoC comprising multiple counties, I aggregated the data to the CoC from the nested counties. Therefore, using a similar strategy described by Byrne and colleagues (2013) and implemented in Chapter 2, I created CoC-level measures of eviction filing rates and other covariates from the corresponding county-level measures.

I followed the suggestion of Byrne et al. (2013) that the determinants of homelessness likely differ across metro and non-metro settings. Therefore, although the HUD PIT

[4] The results from these supplementary analyses (n = 115) were consistent with the primary analytic sample (n = 247)

homelessness estimates disaggregated by race in 2019 were available for 397 CoCs, I only included metro CoCs in the contiguous United States in my study sample. I excluded 2 CoCs because their geographic boundaries were missing in the HUD CoC geodatabase for 2019, 117 rural CoCs, 4 "Balance of State[5]" CoCs, 16 Maryland[6] CoCs, and 6 noncontiguous United States CoCs (i.e., 2 Alaska CoCs, 2 Hawaii CoCs, 1 Virgin Islands CoC, and 1 Northern Mariana Islands CoC). Lastly, I created 8 pseudo-CoCs out of 21 metro CoCs by aggregating nested CoCs into a single CoC as I described earlier. Consequently, there were 247 metro CoCs in the sample. These metro CoCs in the sample represented 42 states and Washington, D.C., and included more than 76% of the total homeless population in a single night in January 2019 (i.e., 431,778 out of 567,715). I have included a complete list of the 397 CoCs indicating whether each CoC was included in the analytic sample (see Appendix VI). Figure 3.1 shows the map of the 247 CoCs included in this study sample.

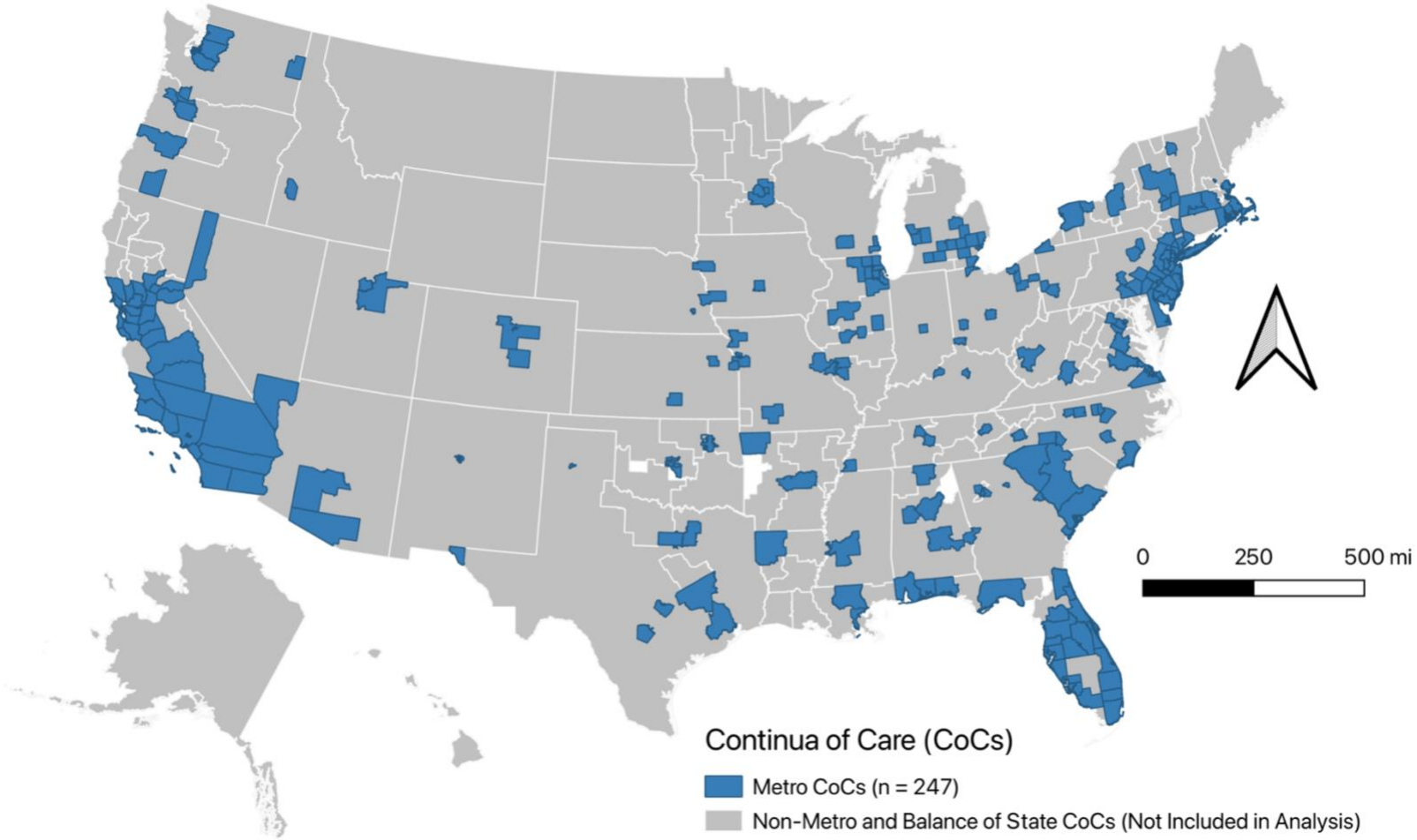
I included covariates related to structural factors of homelessness such as: rental market dynamics (i.e., the median rent for a 2-bedroom apartment, share of rent-burdened households, rental vacancy rate, and share of crowded rental units), socio-economic racial inequality (i.e., Black/White below poverty ratio, Black/White unemployment rate ratio), demographic characteristic (i.e., Black rental rate, percent Black population), social safety nets (i.e., permanent supportive housing beds per 10,000 residents, percent public assistance

[5] "Balance of State" CoCs typically include large geographic areas of states that are not part of other CoC. Unlike other "Balance of State" CoCs that were typically categorized as Largely Rural CoCs, the four "Balance of State" CoCs that I additionally excluded were categorized as Largely Suburban CoCs. They were: Connecticut Balance of State CoC, Louisiana Balance of State CoC, Massachusetts Balance of State CoC, and Utah Balance of State CoC. For robustness measure, I ran regression models including these four "Balance of State" CoCs. However, those models had slightly lower R-squared and higher Bayesian Information Criteria (BIC) values compared to the regression models omitting the four "Balance of State" CoCs.

[6] The eviction filing records in Maryland are uniquely inflated. In 2019, the average estimated eviction filing rates in Maryland CoCs was almost 7 times the average estimated eviction filings rates in the sample CoCs (n = 251). The 16 CoCs in Maryland also included 3 Largely Rural CoCs.

Figure 3.1

Continua of Care in the Study Sample.



Note. The map scale is only true for CoCs in the contiguous United States.

recipients), South (i.e., a dummy variable to control for regional differences), and climate (i.e., mean January temperature).

Data Analysis

First, I obtained the descriptive statistics of dependent variables, independent variables, and covariates. Second, I explored the data distribution of each variable. I applied natural logarithmic transformation for the variables that showed high positive skewness (i.e., skewness > 0) and leptokurtosis[7] (i.e., kurtosis > 3).

For robustness, I disaggregated the Black-White gaps in homelessness rates as sheltered versus unsheltered. Since unsheltered homelessness rates for both Black and White people were zero in some CoCs, I slightly adjusted the data by adding 0.01 to each CoC's value of homelessness rates to eliminate the zero values (Roberts and Roberts 2021).

Consistent with previous research, this study estimates the association between community-level eviction filing rates and the community-level Black-White gaps in homelessness rates using linear regression models described in equation (i).

For each measure of racial gaps in homelessness rates (i.e., overall, sheltered, or unsheltered), I used eviction filing rates as my primary independent variable. I estimated models controlling for covariates consistent with the structural factors of community-level homelessness. Table 3.1 presents a description of each covariate along with its descriptive statistics.

[7] Leptokurtic distribution has kurtosis greater than the normal distribution (i.e., > 3). Kurtosis measures how peaked a distribution is. If the distribution of a variable (i.e., Black-White gaps in rates of homelessness here) has skewness and leptokurtosis, then it is more meaningful to focus on multiplicative rather than additive differences in its value. Therefore, I applied logarithmic transformation of Black-White gaps in rates of homelessness so that additive changes in the transformed Black-White gaps in homelessness rates corresponded to multiplicative changes in the original Black-White gaps in homelessness rates, (see Roberts and Roberts 2021 for more information on logged variables in regression).

$$Logged\ Black\ Homelessness\ Rate_j - Logged\ White\ Homelessness\ Rate_j =$$

$$Logged\left(\frac{Black\ Homelessness\ Rate_j}{White\ Homelessness\ Rate_j}\right) = b_1 +$$
$$b_2 Logged\ eviction\ filing\ rate_j +$$
$$b_3 Logged\ median\ rent_j +$$
$$b_4 Percent\ rent\ burdened_j +$$
$$b_5 Logged\ rental\ vacancy\ rate_j +$$
$$b_6 Logged\ percent\ crowded\ rental\ units_j +$$
$$b_7 Black/White\ below\ poverty\ ratio_j +$$
$$b_8 Black/White\ unemployment\ rate\ ratio_j +$$
$$b_9 Black\ renter\ rate +$$
$$b_{10} Logged\ \%\ Black_j$$
$$b_{11} Logged\ PSH\ beds\ rate_j +$$
$$b_{12} Logged\ PA\ recipient\ rate_j +$$
$$b_{13} South_j +$$
$$b_{14} Mean\ temperature_j +$$
$$e_j \quad \text{(i)}$$

Where,

$$Black\ Homelesness\ Rate_j = \frac{Number\ of\ Homeless\ Black\ People\ in\ CoC_j}{Total\ Number\ of\ Black\ Residents\ in\ CoC_j} \times 10{,}000$$

$$White\ Homelesness\ Rate_j = \frac{Number\ of\ Homeless\ White\ People\ in\ CoC_j}{Total\ Number\ of\ White\ Residents\ in\ CoC_j} \times 10{,}000$$

Using ANOVA testing (i.e., partial F tests), I selected the best-fitting regression models. I started with bivariate models with two measures, racial gaps in homelessness rates and eviction filing rates, added covariates of each structural domain and performed the ANOVA test that uses F-statistics to examine whether the complex model better captured the data than the preceding simpler model.

As a robustness check, I ran seemingly unrelated regression models (SUR) examining the association between eviction filing rates and Black-White gaps in homelessness rates disaggregated by sheltered versus unsheltered. SUR allows simultaneous estimations of Black-White gaps in rates of sheltered versus unsheltered homelessness that account for estimated correlations in the error terms across equations, thereby accounting for measured (e.g., eviction filing rate, median rent) and unmeasured (e.g., rental assistance) factors shaping both (Zellner 1962).

I used QGIS version 3.4, a geographic information system software, and R version 4.3, a statistical software, to perform all data management and data analysis.

Multicollinearity and Regression Diagnostics

The multicollinearity diagnostics using Pearson correlation (see Appendix VI), and Variance Inflation Factor (VIF) scores revealed there was no highly correlated predictor variable. Regression diagnostics examining the association between eviction filing rates and Black-White homelessness rates flagged CA-517 Napa City and County CoC, California and IL-503, Champaign, Urbana, Rantoul/Champaign County CoC, Illinois as two potentially influential CoCs. However, since their leverage and discrepancy measures were borderline (see Appendix VII), I included all 247 CoCs to examine the association between eviction filing rate and racial gaps in homelessness. Re-estimating the models without these observations (not shown) left the results substantively unchanged.

Results

Across 247 Continua of Care in this data, there were more than 1 million court eviction filings in 2018. Similarly, on a single night in January 2019, there were 202,679 homeless Black people and 193,172 homeless White people. Table 3.1 presents information on each variable that

I included in my analysis. In the first part, I included information on the Black-White gaps in homelessness rates in each community, based on the three definitions of gaps in homelessness rates described above. In the second part, I included information on the prior year's eviction filing rates based on the Eviction Lab's estimates of eviction filings. In the final section, I included information on covariates: local rental market, labor market conditions, demographic characteristics, social safety nets, geographic location (North or South) and mean temperature.

The descriptive statistics in Table 3.1 shows that in the sample CoCs, the average CoC had both overall and sheltered Black homelessness rates more than 6 times overall and sheltered White homelessness rates respectively. The average gap in unsheltered Black-White homelessness rates was 3.84 times. Likewise, the average CoC had an eviction filing rate of 8.36% (n = 247). In addition, the average rate of Black renter households in the study was about 61% versus White renter rates of 29%.

The overrepresentation of Black people in their share of homeless population as well as their share of the renter population was more apparent in highly populated communities. In Table 3.2, I listed the 10 largest Continua of Care (CoCs) in my sample by total renter population. Each CoC had disproportionate rates of Black renters and Black homelessness rates compared to their White counterparts. Moreover, the proportion of Black-White rates of homelessness was greater than the proportion of Black-White renter rates. For instance, in Miami-Dade County CoC, Florida, where the renter population was more than 1.2 million, the Black renter rate was 22.57 percentage point more than the White renter rate. However, the Black-White gaps in homelessness rates was far greater in the CoC, as Black homelessness rate was more than 6 times the White homelessness rate.

Table 3.3 presents the results of regression models examining the association between area eviction filing rates and Black-White gaps in rates of homelessness. The bivariate analysis presented in the first column shows no relationship between eviction filing rate and racial gaps in homelessness rates. However, when the regression model included controls for the rental market, labor market, demographic, social safety nets, region, and winter temperature as shown in the second column, there was a significant positive association between logged area eviction filing rates and logged community-level racial gaps in rates of homelessness ($b = 0.104$, 95% CI [0.021, 0.187], $p < 0.05$). As I hypothesized, higher area eviction filing rates were associated with larger area racial gaps in rates of homelessness.

The most important covariates that suppressed the association between the logged eviction filing rate and the logged Black-White gaps in homelessness rates were logged median rent for 2-bedroom apartment, and Black/White below poverty ratio. For instance, when I controlled for logged median rent for two-bedroom apartment, the nonsignificant relationship between eviction filing rate and racial gaps in rates of homelessness transformed into a significant one ($b = 0.094$, $p < 0.05$; F-statistic = 27.14, $p < 0.001$). Likewise, controlling for additional covariates improved the model estimations. Controlling all covariates in the full model, the relationship between the logged median rent and racial gaps in homelessness continued to be significant ($b = 1.006$, 95% CI [0.660, 1.352], $p < 0.01$).

The full model presented in Table 3.3 explained more than 55% of variance in the racial gaps in rates of homelessness. See Figure 3.2 for an effect plot of the relationship between eviction filing rates and Black-White gaps in rates of homelessness. As shown in the figure, the relationship between eviction filing rate and Black-White gaps in rates of homelessness was curvilinear, with a decreasing slope.

Table 3.1

Description of Variables and Descriptive Statistics (n = 247)

	Description	Mean	SD	Min	Max
Black-White Gaps in Homelessness Rates					
Overall	$\left(\frac{\text{Black Homelessness Rate}}{\text{White Homelessness Rate}}\right)$	6.02	3.47	1.02	20.17
Sheltered	$\left(\frac{\text{Sheltered Black Homelessness Rate}}{\text{Sheltered White Homelessness Rate}}\right)$	6.74	3.76	0.15	22.14
Unsheltered	$\left(\frac{\text{Unsheltered Black Homelessness Rate}}{\text{Unsheltered White Homelessness Rate}}\right)$	3.84	3.29	0	22.67
Eviction Filing Rate		8.36	6.95	0.74	32.99
Covariates					
Median Monthly Rent	Median Monthly Rent for 2-bed apartment ($100s)	10.87	30.82	6.77	23.59
Crowded Rental Units	% Housing units with more than one occupant per room	5.27	3.34	1.23	17.08
Rental Vacancy Rate	$\left(\frac{\text{Vacant units for rent}}{\text{vacant for rent} + \text{rented not occupied} + \text{renter occupied units}}\right) \times 100\%$	5.95	2.54	1.96	21.89
Percent Rent Burdened		44.1	5.54	22.15	57.64
Black/White Below Poverty Ratio	$\left(\frac{\%\text{ Black People below the poverty line}}{\%\text{ White People below the poverty line}}\right)$	2.72	0.75	0.63	5.38
Black/White Unemployment Ratio	$\left(\frac{\text{Black unemployment rate}}{\text{White unemployment rate}}\right)$	2.23	0.67	0.64	5.16
Black Renter Rate	$\left(\frac{\text{Black renter households}}{\text{Total Black households}}\right) \times 100\%$	61.06	10.53	27.92	92.44
Percent Black Population	$\left(\frac{\text{Number of Black people}}{\text{Total CoC population}}\right) \times 100\%$	13.63	12.06	0.59	56.53
Permanent Supportive Housing (PSH) Beds	$\left(\frac{\text{Total Number of PSH beds}}{\text{Total CoC population}}\right) \times 10000$	13.01	14.15	0	124.1
PA Recipients	% Households receiving Public Assistance (PA)	2.49	1.24	0.69	8.7
South	% CoCs in South geographic region	34	-	0	1
Mean Temperature	Average temperature for January (in Degree Celsius)	2.75	6.87	-10.72	19.24

Table 3.2.

Ten Largest Continua of Care (CoCs), by the Total Renter Population.

Continuum of Care Name	Renter Population	Renter Rates		Eviction Filing Rate (%)	Rates of Homelessness	
		Black	White		Black	White
New York City CoC, NY	5327412	73.15	56.97	11.40	283.84	40.90
Los Angeles City & County CoC, CA	5096297	66.70	45.83	2.35	301.95	53.28
Houston, Pasadena, Conroe/Harris, Ft. Bend, Montgomery, Counties CoC, TX	2203381	58.74	29.07	8.33	20.47	4.28
Cook County CoC, IL	2035686	60.18	31.97	2.90	37.51	4.68
Phoenix, Mesa/Maricopa County CoC, AZ	1607568	68.18	30.93	10.64	71.47	11.89
San Diego City and County CoC, CA	1488396	69.76	39.07	1.74	115.68	23.02
Dallas City & County, Irving CoC, TX	1460777	64.24	34.50	8.32	38.65	7.28
Santa Ana, Anaheim/Orange County CoC, CA	1348112	66.70	34.42	1.77	140.32	25.54
Miami-Dade County CoC, FL	1204176	57.37	34.80	4.12	42.26	6.67
Metropolitan Denver CoC, CO	1050196	62.03	31.11	8.91	79.75	13.01

Note. The column labeled "Renter Rates" refers to the share of the renter households belonging to the given racial group (i.e., the percentage of Black households who are renters and the percentage of White households who are renters). The column labeled "Rates of Homelessness" refers to the overall rates of homelessness (per 10,000 people) belonging to the given racial group.

Table 3.3

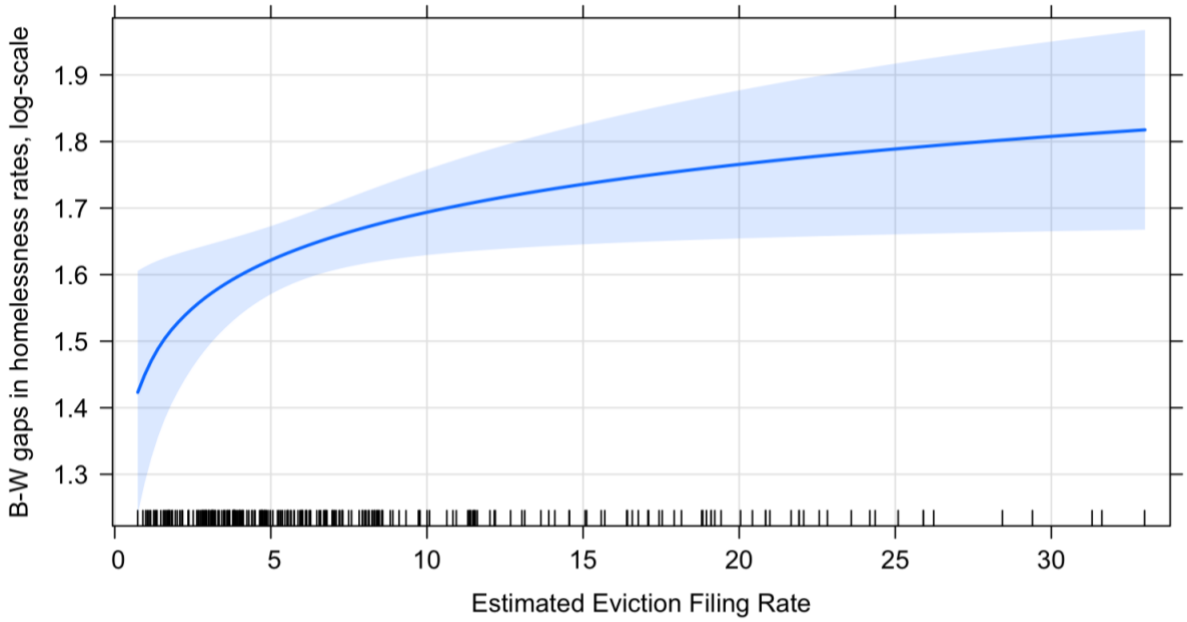
Regression Results Examining Evictions and Racial Gaps in Homelessness.

	Dependent variable:	
	Logged Black-White Gaps in Homelessness Rates	
	b (95% C.I.)	b (95% C.I.)
Logged eviction filing rate	0.029	0.104*
	(-0.056, 0.114)	(0.021, 0.187)
Logged median rent for 2-bedroom apartment		1.006**
		(0.660, 1.352)
Rent burdened households		0.012+
		(-0.001, 0.025)
Logged rental vacancy rate		-0.146
		(-0.335, 0.044)
Logged % crowded rental units		-0.201**
		(-0.324, -0.077)
B/W below poverty ratio		0.125**
		(0.038, 0.212)
B/W unemployment ratio		0.115*
		(0.015, 0.214)
Black renter rate		0.008*
		(0.002, 0.014)
Logged % Black population		-0.111**
		(-0.195, -0.028)
Logged PSH beds		-0.086**
		(-0.136, -0.036)
Logged PA recipients		-0.174*
		(-0.322, -0.026)
Location (South)		-0.127
		(-0.315, 0.062)
Mean temperature		-0.022**
		(-0.035, -0.009)
Intercept	1.590**	-5.926**
	(1.422, 1.758)	(-8.798, -3.053)
Observations	247	247
R^2	0.002	0.552

+ p<.10; * p < .05; ** p < .01; *** p < .001

Figure 3.2

Effect Plot Showing Relationship Between Eviction Filing Rates and Black-White Gaps in Rates of Homelessness.



Results from Seemingly Unrelated Regressions (SUR) are shown in Appendix VII. The SUR results suggest that the association seen in the primary analytic model with overall Black-White gaps in homelessness rates was driven by the association between eviction and racial gaps in sheltered homelessness. A Wald's test, however, (Henningsen and Hamann 2007) showed a non-significant difference between the coefficients of eviction filing rates in the SUR models estimating the racial gaps in homelessness rates disaggregated by sheltered versus unsheltered ($\chi^2 = 2.42$, $p = 0.12$).

There were several covariates that showed significant association with community-level racial gaps in rates of homelessness. Two rental market factors, median rent of two-bedroom apartments, and crowded rate in rental units, had significant positive and significant negative associations with Black-White gaps in rates of homelessness, respectively. Racial disparities in

economic conditions (i.e., Black/White below poverty ratio and Black/White unemployment ratio), each had positive association with Black-White gaps in rates of homelessness. Demographics of Black renters and Black population had significant relationship with the racial gaps in rates of homelessness. Black renter rates had positive association whereas percent Black had a negative association with Black-White gaps in rates of homelessness.

The social safety net measures (i.e., permanent supportive housing beds rate and percentage of public assistance), each had negative association with Black-White gaps in rates of homelessness. Lastly, mean temperature as the climate measure had a negative association with Black-White gaps in rates of homelessness.

Discussion

Although there is a growing literature focusing on the causes and consequences of evictions, studies examining the association between area evictions and area homelessness are still emerging. Some early works on eviction-homelessness draw on the individual level or family level (Applied Survey Research 2019; Burt 2001; Collinson and Reed 2018; Richter et al. 2021). To my knowledge, Treglia et al. (2023) is the first study to quantitatively examine the causal link between evictions and community-level homelessness within U.S. communities. Though the earlier individual-level studies helped in answering important questions related to differences in experiences of individuals or families, and the recent community-level study helped in answering the impacts of structural factors on homelessness (O'Flaherty 2019; Treglia et al. 2023), this study examined the community-level eviction-homelessness relationships through a racial equity lens.

Results from the analyses supported Hypothesis 1, which anticipated a positive association between area eviction filing rates and racial gaps in homelessness rates. Using

ordinary least square regression models (see Table 3.3), I found a significant association between the area eviction filing rate and community-level racial gaps in homelessness rates. This finding suggests that there are not only pronounced racial disparities in eviction filings (Desmond 2016; Hepburn et al. 2021, 2020; Leung et al. 2021), and there is not only a positive association between eviction filings and rates of homelessness (Treglia et al. 2023), but areas with higher eviction filings also are associated with larger racial gaps in rates of homelessness.

Past studies showed that Black renters were disproportionately threatened with eviction filings, so they were exposed to adverse consequences such as homelessness (Hepburn et al. 2021, 2020; Medina et al. 2020). In addition, Black renters were more rent burdened and had more high-income volatility compared to White renters. In the rental market, landlords were likely to employ differential treatment against Black renters in the eviction process (Hepburn et al. 2020). Likewise, low-income Black renters lacked resources to cope with an unforeseen crisis due to pronounced racial disparities in wealth (Chun et al. 2022; Desmond 2023). Therefore, Black renters were likely to have less cushion than White renters and were at greater risks of experiencing homelessness. This result supports the study hypothesis by finding a positive association between eviction filings and Black-White gaps in rates of homelessness.

A Curvilinear Relationship: Evictions and Racial Gaps in Homelessness

Results show that the positive association between eviction filing rates and Black-White gaps in homelessness rates become weaker as eviction filing rates became progressively greater. One reason behind the curvilinear relationship is statistical. The distribution of "cviction filing rates" was right skewed (skewness = 1.39), and that of "Black-White gaps in homelessness" rates was right skewed (skewness = 4.54) with leptokurtosis (kurtosis = 28.24). Therefore, as explained in the data and measures section above, these variables underwent logarithmic

transformation. In other words, on analyzing the distribution of these two variables, their multiplicative change made better sense than additive change. Therefore, the relationship between eviction filing rates and Black-White gaps in homelessness rates was curvilinear, with decreasing slope.

Besides the statistical reason for the curvilinear relationship between evictions and racial gaps in homelessness, there could be two practical explanations: areas of high eviction filing rates include serial evictions, especially against minoritized racial groups; and areas of high eviction filings might witness more instances of racially diverse response from evicted tenants.

First, some evictions may lead to homelessness, whereas some may not (Desmond and Kimbro 2015). Evicted tenants may first explore alternatives before being displaced, for instance, payment of rent and associated fines, despite the risks of serial evictions. Past studies showed that areas with high eviction filing are likely to have cases of serial evictions against ethnoracially minoritized tenants as they have limited rental options due to landlords' deployment of tenant screening and the racial discrimination embedded therein (Garboden and Rosen 2019; Hepburn et al. 2020; Leung et al. 2021; So 2022). Although higher eviction filing rates were associated with higher rates of homelessness (Treglia et al. 2023), due to disproportionate serial evictions among poor Black renters, the eviction induced racial gaps in homelessness rates might be smaller.

Second, areas with high eviction filing rates may have relatively high displacement from rental units, but the pathway to homelessness might take different forms such as doubling up, living in vehicles, and living on streets, before taking refuge in shelter or being officially counted as unsheltered homeless persons (Desmond and Kimbro 2015; Richard et al. 2022). Richard et al. (2022) argued that race was significantly related to doubling up. They measured doubled-up

situations as estimates of literal homelessness and found that White individuals had the lowest rates of doubling up whereas Black individuals had the highest rates of doubling up among racial groups. Therefore, in areas with relatively larger eviction filings, Black tenants are likely to disproportionately receive eviction filing and/or double up, which might temporarily mitigate eviction-led homelessness among Black renters. Thus, the relationship between eviction filing rates and racial gaps in rates of homelessness might have been curvilinear, i.e., positive with a decreasing slope.

Community-level Racial Composition Revisited

Majority-Black communities have significantly higher eviction filing rates than other communities (Merritt and Farnworth 2021). Likewise, entry into homelessness appears to be one of the obvious outcomes of eviction (Desmond and Kimbro 2015). Therefore, the naïve assumption that I discussed in Chapter 2 about the racial composition of communities and the anticipated positive association with higher homelessness rates, might also mislead one into the anticipation of higher homelessness rates in majority Black communities because those communities disproportionately experience eviction filings.

The significant negative association between percent Black and racial gaps in homelessness rates consistently challenges the naïve assumption and complements the previous chapter's finding. The finding in Chapter 2 showed that increases in the relative size of Black populations mitigated increases in racial gaps in homelessness rates within U.S. communities. This study confirms that the negative association between greater percent Black and larger racial gaps in homelessness remained consistent not only within communities, but across U.S. communities as well.

Implications

One limitation to this chapter is in the measure of homelessness as the HUD-PIT takes a snapshot of the homeless population in January of each year, which is likely to underestimate the counts of homeless youths in transitory phase (Morton et al. 2017; Richard et al. 2022). In addition, this is a cross-sectional study that assesses the association between prior year eviction filing rate and racial gaps in rates of homelessness across U.S. communities in 2019. Therefore, the generalization of the study findings should be cautiously done. Future research could more precisely estimate the association between racial disparities in eviction filing and racial disparities in rates of homelessness by developing the eviction filing data disaggregated by race. Future research may also examine these associations longitudinally to establish a causal link between racial disparities in eviction and racial disparities in homelessness.

This study builds on Treglia et al. (2023) by assessing the association between eviction filing rates and racial gaps in homelessness rates across U.S. communities. This study offers valuable implications for policy, as the findings recenter the importance of race in understanding racial disparities in causes and consequences of homelessness (Hepburn et al. 2020; Olivet et al. 2021). Although these models do not necessarily measure the causal link between evictions and racial gaps in homelessness rates, they do show the significant positive relationship between eviction filing rate and Black-White gaps in homelessness rates.

In communities with a higher rate of eviction filings, there were larger racial gaps in homelessness rates. Therefore, low-income Black renters who get targeted by predatory landlords for eviction filing (Hepburn et al. 2021, 2020; Leung et al. 2021) may have a greater risk of homelessness as an outcome in communities where the eviction filing rates are higher. Thus, resources toward preventing racial disparities in eviction should be intentionally targeted

to communities with higher eviction filing rates and thereby aimed at reducing racial disparities in eviction-led rates of homelessness.

Conclusion

The overrepresentation of Black renters in eviction filing as well as the overrepresentation of Black people experiencing homelessness was well-established in prior research. A recent community-level study showed a positive association between eviction filing and sheltered homelessness rates. This study went a step forward and assessed whether higher eviction filing rates was associated with larger gaps in Black-White homelessness rates. Results provided meaningful evidence that areas with higher eviction filing rates were positively associated with larger racial gaps in homelessness, but the strength of that relationship weakened in areas with relatively higher eviction filing rates.

Findings in the earlier chapter contended the naïve assumption that an increase in relative size of the Black populations increases the overall homelessness rates, and provided evidence that increases in the relative size in Black populations decreases the Black-White gaps in rates of homelessness. When the relative population size of minoritized racial groups within a community increases, the minoritized racial group may increase their social capital and enhance bounded solidarity to form an informal social support system that may further help in prevention and reduction of homelessness. Consistent to these findings, this study confirms that there is a significant negative association between percent Black and racial gaps in rates of homelessness across U.S. metro communities. Thus, this finding complements earlier results in explaining why there were seemingly counterintuitive negative relationship between racial composition and overall homelessness rates.

Lastly, the results from the covariates: rental market dynamics (i.e., mainly median rent), socioeconomic conditions (i.e., mainly Black/White poverty gap), and social safety net measures (i.e., permanent supportive housing and public assistance) support the implication of the main finding that policies informed by racial equity lens to enhance better access of the rental market, effective poverty reduction, and social assistance programs, especially targeting Black renters, may play a critical role to reduce racial gaps in homelessness.

Chapter 4

A Patchwork of Eviction Moratoria and State-Level Homelessness in the United States During the Pandemic

The pandemic caused a global public health emergency. As of April 2023, COVID-19 has claimed more than 6.8 million lives and recorded more than 762 million confirmed cases worldwide (World Health Organization 2023). Simultaneously, the global economy has crashed. Even developed economies such as the United States have been harshly affected. The U.S. unemployment rate spiked from 3.5% in February 2020 to 14.7% in April 2020, although by May 2021 it declined to 5.8%. Moreover, the COVID-19 pandemic precipitated unprecedented job loss, historic unemployment rates, and economic hardship among low-income communities and Black and Hispanic renter households (Airgood-Obrycki and Hermann 2022; Benfer et al. 2022; Goodman, Reynolds, and Choi 2021; Hepburn et al. 2021).

Although the rental housing markets had cooled down early in the pandemic, in 2021 they started heating up again (Joint Center for Housing Studies of Harvard University 2022). On the one hand, rental vacancy rates declined, thereby contributing to increased rents. On the other hand, renter households fell behind in rent payments, increasing their risks of displacement. As of September 2022, more than 7 million renter households in the United States were behind on their rent payments, and about 400 thousand renter households reported a likelihood of being evicted. The U.S. Supreme Court ended the U.S. Centers for Disease Control and Prevention (CDC) residential eviction moratorium on August 26, 2021, which was previously set to expire on October 3, 2021. Consequently, millions of renters were at the risk of mass eviction, potentially threatening a spike in homelessness rates(Hepburn et al. 2021; Rutan and Desmond 2021).

The COVID-19 pandemic has resurfaced some simple yet confounding questions: Why, despite a proliferation of housing services, rehousing interventions, housing first programs, and recent policies such as eviction moratoria, do so many people experience the risks of eviction and subsequent homelessness? Did state eviction moratoria lower the rates of homelessness? To what extent was the strength of state eviction moratoria during the COVID-19 pandemic associated with smaller racial gaps in homelessness across the United States?

The goal of this chapter is twofold. First, the study explores the extent to which the strength of state-level eviction moratoria was associated with lower rates of homelessness during the COVID-19 pandemic. Second, the study explores the extent to which state-level eviction moratoria were associated with smaller racial gaps in homelessness.

Eviction Moratoria and Homelessness During the COVID-19 Pandemic

Even prior to the pandemic, there was substantial variation in landlord-tenant laws related to the eviction process (Coulson et al. 2020; Hatch 2017; Merritt and Farnworth 2021). The eviction process varied between states in several ways, such as: the possible causes, the cost of eviction filing, and the timespan from the starting of the process to the ultimate enforcement of an eviction order (Benfer et al. 2022; Hatch 2017). For instance, in some places, such as Maryland and the District of Columbia, an eviction filing charge at courts could be as low as $15, whereas in some states like Minnesota and Alabama, the eviction filing charge could be hundreds of dollars (Benfer et al. 2022).

During the COVID-19 pandemic, although many states adopted anti-eviction policies, there was state-level variation in those policies (Benfer et al. 2022; Hepburn et al. 2021; Leung et al. 2021; Michener 2022). When the pandemic hit the United States. in March 2020, at least one state-level actor (i.e., court, governor, or legislature) instituted an eviction moratorium in 43

states including the District of Columbia (Michener 2022). Nevertheless, there was state-level variation in freezing different stages of the eviction process. For instance, across 43 U.S. states and District of Columbia, 30 states (70%) blocked removal of tenants by the sheriff, law enforcement agents, or private companies following an eviction judgement, whereas only four states (North Carolina, Nevada, Massachusetts, and Hawaii) froze all stages of the eviction process, i.e., from landlord's notice to tenant about intent of filing an eviction to execution of the eviction (Benfer et al. 2022). I discuss these stages of the eviction process in detail in the methods section.

Eviction often leads to homelessness (Benfer et al. 2021; Treglia et al. 2023). Treglia et. al. (2023) examined the extent to which eviction filings and eviction judgement rates were associated with community-level rates of homelessness in the United States using panel data. They found a positive relationship between the eviction filing rate and the rate of sheltered homelessness. Their findings suggested that policies issued to prevent evictions could also prevent eviction-led homelessness. In contrast, Coulson et. al. (2020) argued that stricter landlord regulations might protect tenants from evictions and eviction-led hardships, but at the cost of higher rents and lower supply of rental units. Consequently, due to the reduced supply of rental units, areas with substantial tenant rights experienced higher homelessness rates. Coulson and colleagues surveyed 15 years of landlord-tenant laws in 50 states and the District of Columbia and constructed a yearly Tenant-Right Index as a proxy for legal protection of tenant rights in each state. They found that there was a positive association between Tenant-Right Index and homelessness rates, but the association was significant only at a 10% level of significance.

The above two studies are fundamentally different in terms of their key independent variables and units of analysis. Treglia et al. (2023) used community-level eviction filing rates,

whereas Coulson et al. (2020) used the Tenant-Right Index as their respective key independent variables. Similarly, Treglia et al.'s (2023) study treated continua of care as the unit of analysis while Coulson et al. (2020) focused on entire states. Coulson et al.'s (2020) suggested that stronger state-level tenant rights prevent eviction, but may disincentivize landlords from keeping affordable housing, which leads to higher rates of homelessness in the state. In contrast, Treglia et al (2023) found a positive association between community-level eviction filing rates and rates of homelessness, suggesting eviction preventing policies would prevent eviction filing and hence reduce rates of homelessness. These implications leave us with a paradox about anti-eviction policies that needs a theoretical reconciliation. It is important to reiterate that Treglia et al.'s (2023) focus was on eviction filing rates, unlike Coulson et al.'s (2020) focus on state-level anti-eviction policies.

In this chapter, I use the state-level variation in the COVID-19 related eviction moratoria and rates of homelessness during the pandemic (Benfer et al. 2022; Hepburn et al. 2021; Leung et al. 2021) to better understand the relationship between anti-eviction policies and homelessness. I ask: To what extent were stronger state eviction moratoria related to lower homelessness rates?

Eviction Moratoria and Racial Gaps in Homelessness

In the United States, on a single night in January 2022, there were 582,462 people experiencing homelessness, which was a 0.3% increase in the number compared to that in 2020 (HUD 2022b). Black Americans continued to be overrepresented among those experiencing homelessness as Black people constituted 37% of all people experiencing homelessness in 2022. This racial disproportionality in the size of race-specific homeless subpopulations during the

pandemic resonates with heightened racial disparities in COVID-19 infection and mortality rates and experiences of economic adversity due to the pandemic (Park 2021).

Without the anti-eviction and rental support policies, the COVID-19 pandemic and its economic impacts could have increased homelessness significantly (HUD 2022b). Superficially, one might expect that state anti-eviction policies would reduce homelessness rates among all low-income renters irrespective of their racial backgrounds. Nevertheless, past studies show that landlords disproportionately target Black renters for evictions filings (Desmond 2012; Hepburn et al. 2021; Leung et al. 2021; Medina et al. 2020). Medina et al. (2020) found that the eviction-rate gap between minority and majority populations in Salt Lake County, Utah, started at about 8% and increased as the percentage of households in poverty within a minority block group increased. In addition, the COVID-19 pandemic surfaced racial disparities in elevated unemployment and COVID-19 infection and mortality for Black Americans (Benfer et al. 2021; Chun et al. 2022; Michener 2022; Park 2021). Moreover, these striking racial inequities during the pandemic were outcomes of institutional responses in the form of public policy (Michener 2022). Public policy such as eviction moratoria transcend boons and burdens in ways that may either reinforce or redress racial disparities. Therefore, I ask: To what extent stronger eviction moratoria influenced smaller racial gaps in homelessness?

The COVID-19 pandemic affected some ethnoracial groups more severely than others (Park 2021). Black and Hispanic families were more likely to be renters rather than homeowners, so they experienced the highest rates of rent burden even before the COVID-19 pandemic. Renters with high rent burdens and limited savings were unable to cope with unexpected events such as job loss (Desmond 2016). During the COVID-19 pandemic, low-income households experienced job loss at greater rates than high-income households, and Black and Hispanic

renters were struggling more than their White counterparts to make timely rent payments (Benfer et al. 2022; Choi, Goodman, and Pang 2022). As a result, Black and Hispanic renters were more likely to deplete their limited savings, borrow from family and friends, and take on debt to pay their rent. Moreover, risk of eviction increased among Black and Hispanic renters who were behind rent payments and who had depleted personal safety nets. Thus, Black, and Hispanic renters were at higher risks of experiencing eviction and eviction-led homelessness (Benfer et al. 2021, 2022; Hepburn et al. 2020).

In this chapter, I also examine associations between the state eviction moratoria and racial gaps in homelessness during the COVID-19 pandemic. The pandemic warranted rapid policy responsiveness, but, due to the fragmented and polarized characteristics of U.S. public policy, states varied widely in terms of how strong their eviction moratoria were (Benfer et al. 2022). I inquire about how the strengths of state-issued eviction moratoria influenced racial gaps in homelessness. In so doing, I control for racial power reflected in the racial composition of state renter households, legislatures, voting constituencies, and social movement activities; COVID-19 positive cases; and rental market dynamics.

While examining the association between strength of eviction moratoria and racial gaps in rates of homelessness, I accounted for racial power such as racial alignments of renter populations, legislatures, voting constituencies, and social movement activities (Michener 2022). One the one hand, the racial power might influence public policy such as eviction moratoria. On the other hand, the racial power might mobilize to advocate for affordable housing for the minoritized racial groups, which could correlate with smaller racial gaps in rates of homelessness. In addition, acknowledging the racial power dynamics theoretically recalibrates how eviction moratoria as a pandemic policy influenced racial disproportionalities in

homelessness during the pandemic. This study builds on the emerging literature exploring anti-eviction state policies (Benfer et al. 2022; Michener 2022) and underscores the implications of public policy for addressing issues of homelessness and racial gaps in homelessness.

My research questions in this chapter are:

1. To what extent were stronger state eviction moratoria associated with lower rates of homelessness during the COVID-19 pandemic?
2. To what extent were stronger state eviction moratoria associated with smaller racial gaps in homelessness during the pandemic?

Eviction Moratoria Index

There were numerous characteristics of state-instituted eviction moratoria during the COVID-19 pandemic. I constructed a novel eviction moratoria index drawing from prior research. As Benfer et al. (2022) suggested, the state-level approach to eviction moratoria varied across five main dimensions: justification, stage of the eviction process that was suspended, duration, source, and eligibility. Benfer and colleagues also discussed state-level variation in additional renter-supportive measures such as utility shutoff moratoria, utility reconnections, late fee bans, and rent raise bans. Michener (2022) also discussed these anti-eviction policies during the COVID-19 pandemic while examining the relationship between the timing of state policy responses and racial power. I have discussed details of constructing the eviction moratoria index in the Data and Measures section below.

Hypotheses

Eviction practices have started to be a part of emerging policy discussions on prevention of homelessness (O'Flaherty 2019). Desmond's (2016) work has been successful at provoking policymakers to consider delaying or preventing evictions as a new intervention to reduce

homelessness. Collin and Reed (2018), in one of the first studies of evictions, found that in New York City, evictions made households more likely to experience homelessness. Treglia et al. (2023) showed that, at the community-level, eviction filing rates were positively associated with sheltered homelessness rates. In contrast, Coulson et al. (2020) counter-intuitively argued that states with stronger tenant rights (i.e., measured using Tenant-Right index, a proxy for the tenant protection in each U.S. state over 15 years' period, constructed by using state laws) would experience higher levels of homelessness. Although their hypothesis was marginally supported ($p < 0.10$), they suggested that increased tenant-favorable regulations could counteract the intended welfare-enhancing goal of the laws and increase homelessness. Therefore, whether stronger state eviction moratoria during the COVID-19 pandemic reduced or increased overall homelessness as well as racial gaps in homelessness is an open question. With the implementation of eviction moratoria during the COVID-19 pandemic, there were at least 1.55 million fewer eviction cases filed in 2020 than expected in a normal year (Hepburn et al. 2021), yet there was a slight increase in overall homelessness in the United States between 2020 and 2022. Without the eviction moratoria, we might have expected to observe a large spike in homelessness given a similar spike in unemployment (HUD 2022b). Therefore, I hypothesize that:

Hypothesis 1: Strong state eviction moratoria were associated with lower rates of overall homelessness.

To account for the strength of state eviction moratoria, I accounted for any eviction moratorium implemented by a state between March 2020 and December 2021. Details of the eviction moratoria index, (a proxy measure of the strength of state eviction moratoria) is presented later in this chapter. I used HUD PIT counts of people experiencing homelessness in

2020 and 2022. For 2021, the complete homelessness data is not available due to the COVID-19 pandemic's disruption of HUD PIT counts of unsheltered population. The HUD PIT estimates in 2020 and 2022 show a slight change in racial composition of people experiencing homelessness. For instance, share of Black people experiencing homelessness decreased by about 2 percentage points (i.e., 39.4% of total homelessness in 2020 to 37.3% of total homelessness in 2022). In contrast, share of White people experiencing homelessness increased by nearly 2 percentage-points (i.e., 48.3% of total homelessness in 2020 to 50 % of total homelessness in 2022). To what extent did this slight reduction in racial gaps in homelessness nationally during the pandemic translate into smaller racial gaps in homelessness at the state-level? Specifically, to what extent were stronger state eviction moratoria associated with smaller racial gaps in homelessness?

Evictions disproportionately target Black renters, particularly Black women renters (Desmond 2012, 2016; Hepburn et al. 2020; Medina et al. 2020). Areas with higher eviction rates not only had greater risks of evictions among Black renters, but greater risks of homelessness among Black people as well (Collinson and Reed 2018; Rutan and Desmond 2021). During the COVID-19 pandemic, the historic racial disparities in evictions among Black renters persisted (Hepburn et al. 2020; Leung et al. 2021). However, policies at the federal, state, and local levels offered emergency protections to renters. Hepburn et al. (2021) estimated that in 2020, the first year of the COVID-19 pandemic, at least 1.55 million fewer eviction cases were filed than in a normal year. But when the pandemic-related eviction moratoria lapsed, Black renters received a disproportionate share of eviction filings. Moreover, during the implementation of the eviction moratoria, there were cross-state differences, suggesting the strength of eviction moratoria was not the same, even across states that implemented the moratoria (Benfer et al. 2022). Therefore, I hypothesize that, since evictions disproportionately

targeted Black renters, stronger renter protections through the state eviction moratoria benefited Black renters more, such that states with stronger eviction moratoria may have had smaller racial gaps in homelessness.

Hypothesis 2: Strong state eviction moratoria were associated with smaller racial gaps in rates of homelessness.

Data and Methodology

Data

I obtained data from (a) U.S. Department of Housing and Urban Development (HUD) 2020 - 2022 Point-in-Time (PIT) estimates of homelessness[8] by state for sheltered homelessness and unsheltered homelessness disaggregated by race and HUD Housing Inventory Count (HIC) by state for Public Supportive Housing (PSH) beds (https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/), (b) Eviction Moratoria and Housing Policy data from Inter-university Consortium for Political and Social Research (https://www.openicpsr.org/openicpsr/project/157201/)[9] (Benfer and Koehler 2023), (c) the U.S. Census Bureau American Community Survey 5-year estimates for 2019 and 2020 demographic and socio-economic data, (d) political data from the National Conference of State Legislatures, (e) the number of Black Lives Matters protests that occurred in each state between 2020 and 2021 from the Armed Conflict Location and Event Data (ACLED,

[8] Data for both sheltered and unsheltered homelessness was available for 2020 and 2022 but not 2021. Since HUD PIT counts are conducted in January, complete data was available for 2020 as it was prior to March 2020's hit of the COVID-19 pandemic in the United States. However, due to the COVID-19 pandemic, counts of unsheltered homeless people in January 2021 were disrupted. In 2021, there were 226 HUD CoC communities that conducted either complete or partial counts of unsheltered homelessness (HUD 2022a), but since those CoCs are not representative of all CoCs across the United States, I omitted 2021 data, and analyzed HUD PIT counts for 2020 and 2022.

[9] I also triangulated this data with the policy data from the COVID U.S. State Policy Database: https://statepolicies.com/ published in 2021. However, Benfer and Koehler (2023) was the most recent data, revised since Benfer et al.'s (2022) publication, so I utilized the latest data for eviction moratoria policy data analysis.

https://acleddata.com/), and (f) COVID-19 positive cases from Centers for Disease Control and Prevention (https://data.cdc.gov/).

In the study sample, I included 49 States. I omitted Nebraska because of its unique unicameral legislature. In the study, I control for racial gaps in the lower house of state legislatures as one indicator of racial power. I also omitted the District of Columbia as despite being in the contiguous United States, it is not an independent state.

Analysis

I used ordinary least square regression models to assess how the eviction moratoria influenced overall rates of homelessness and rates of racial gaps in homelessness during the pandemic. The analysis includes four separate regression models. The first two models, the change in total homelessness rates and the change in Black-White gaps in overall homelessness rates, were the major models in alignment to the study hypotheses. The other two models, the change in Black-White gaps in sheltered homelessness rates and the change in Black-White gaps in unsheltered homelessness rates provided additional robustness checks aimed at further assessing the reliability of my findings.

I used R (version 4.2.3) for data management and fitting regression models. I used QGIS (version 3.26.3) for visual illustration of key measures through maps.

Measures

To measure overall homelessness rates, and homelessness rates disaggregated by race, I obtained state-level PIT estimates from HUD for each year 2020 and 2022, and ACS 5-year estimates of total state-level population for 2019 and 2021. Thereafter, I divided the respective homeless population of a state each year by lagged total population of the corresponding state and multiplied the quotient by 10,000 to obtain rates of homelessness per 10,000 residents.

Following the same strategy, I measured Permanent Supportive Housing PSH beds per 10,000 residents.

Initially, I created a dataset in long form, where each year of data (i.e., 2020 and 2022), then I reshaped the long data to wide. The wide data allowed me to take the difference between 2020 and 2022 observations to measure the change before and during the pandemic. For instance, to measure the change in overall homelessness rates between 2020 and 2022, I subtracted overall homelessness rates in 2020 from the overall homelessness rates in 2022. Similarly, to measure the change in racial gaps in homelessness rates, I subtracted racial gaps in homelessness rates in 2020 from the racial gaps in homelessness rates in 2022.

Eviction Moratoria Index Construction

An eviction moratoria index that took on integer values between 0 to 8 was the key independent variable of this study. I conducted a comprehensive survey of the eviction moratoria dataset constructed by Benfer et al. (2022) in each of the 50 U.S. states and the District of Columbia and triangulated the dataset with the anti-eviction policy data published by the COVID U.S. State Policy Database. I assigned a score between 0 and 2 to each of the key aspects of state eviction moratoria policy discussed below. Initially, I started with five key aspects of the eviction moratoria. However, reliability tests using Cronbach's alpha and McDonald's omega flagged one item (state adoption of federal moratoria) as relatively less compatible (the alpha value improved to 0.80 from 0.71 with this measure excluded) with the rest of the measures, so I dropped the item.

The final eviction moratoria index was based on four eviction moratoria items: justification, stage of freezing the eviction process, duration, and rental support. The index

ranged between 0 to 8 ($\alpha = .80$). The higher the index value, the stronger the eviction moratoria adopted by the state. The details of the eviction moratoria index are as follows.

Moratoria Justifications. At least one of the state actors (i.e., governors, legislatures, or courts) used two major rationales for halting evictions during the COVID-19 pandemic (Benfer et al. 2022). In the states that issued eviction moratoria, at least one state actor prohibited evictions for tenants experiencing an economic or health-related hardship due to COVID-19 (Michener 2022). Some states cited both economic and public health rationales while issuing eviction prohibitions. I assigned this variable a value of zero if a state did not issue an eviction moratorium. If a state cited either of the two justifications, then the state scored 1 for the "justification" item. If a stated cited both justifications, then the state scored 2 for the "justification" item.

Freezing Stage of the Eviction Process for Eviction Protections. Generally, there are five stages of an eviction process:

Stage 1: landlord provides notice of intent of eviction filing to tenant,

Stage 2: landlord files eviction case with the court,

Stage 3: court holds eviction case hearing,

Stage 4: court issues eviction judgement and orders writ of eviction, and

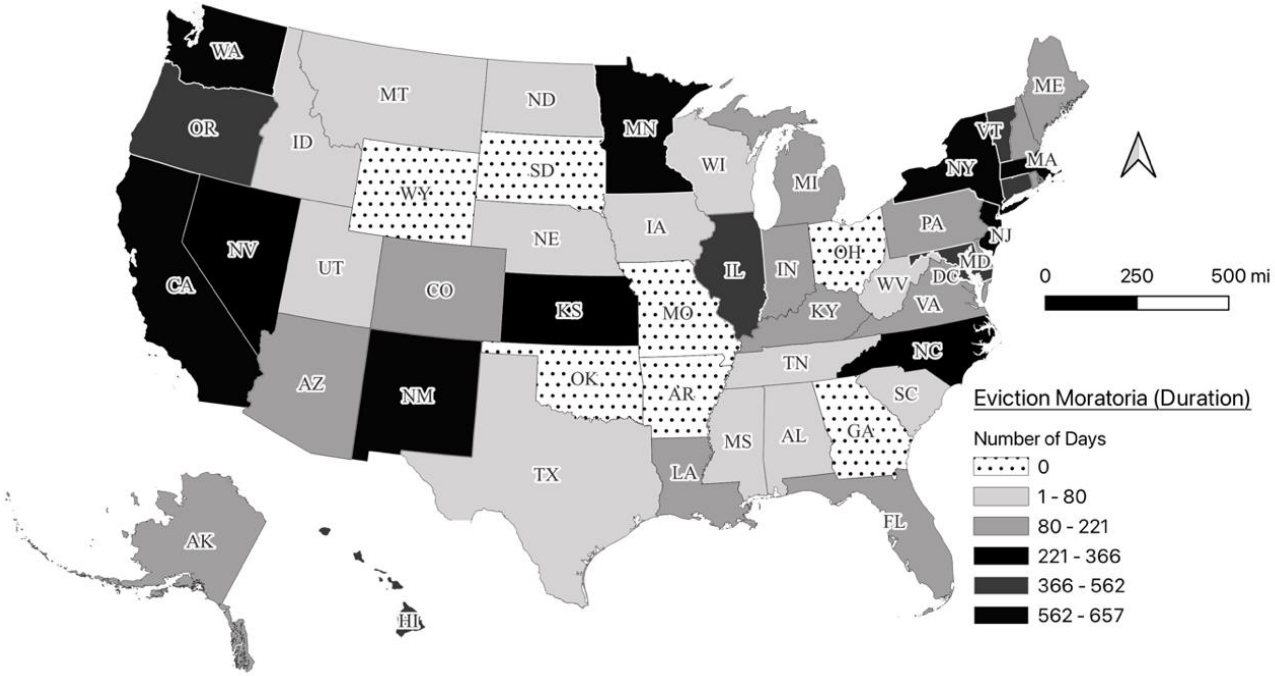
Stage 5: law enforcement or other contracted party executes the eviction.

During the first year of the COVID-19 pandemic, there were 10 states that froze only Stage 3 or only Stage 5, and other states froze either different combinations of two or more than two stages of the eviction process (Benfer et al. 2022). Any state that froze at least one of the five stages of the eviction process during the COVID-19 pandemic received a score of 1. Similarly, a state that froze more than one stage of the eviction process received a score of 2.

Duration of Eviction Protections. According to Benfer et al. (2022), between March 2020 – March 2021, the median length of a moratorium was 144 days. Considering that the HUD PIT count took place in January 2022, I calculated the median length of a moratorium based on moratorium duration data until December 2021. Figure 4.1 shows how states varied in the duration of eviction protections. The median length of the duration of eviction protections between March 2020 and December 2021 was 144 days. Any state with no eviction moratorium received a score of 0 for the "duration" item. Similarly, any state with the duration below the median length of moratorium (i.e., 144 days) received a score of 1, and any state with the duration of eviction protections equal or above 144 days received a score of 2.

Figure 4.1

Number of Days Eviction Moratoria was Effective Across States



Adoption of Federal Moratoria. During the first year of the COVID-19 pandemic, the federal government issued two eviction moratoria. The CARES Act provided eviction protections

between March 27, 2020, and July 25, 2020, and the CDC moratorium halted evictions from September 4, 2020, until the Supreme Court struck its extended and revised version down on August 26, 2021. There was variation in interpretation and implementation of the two moratoria by state courts and governors.

There were 21 states that issued orders to implement the CARES Act moratorium, and 18 states that implemented the CDC moratorium (Benfer et al. 2022). If any state actor did not recognize the authority of a federal moratorium in the state, then the state received a score of 0. If at least one state actor adopted either of the federal moratoria, i.e., requiring that a landlord filing for eviction provided a certification/affirmation that the property was not covered by the federal CARES Act eviction moratorium or a certification/affirmation that the tenant had not provided the landlord with a CDC Declaration, then the state received a score of 1 for the "federal moratorium" item. Lastly, any state that adopted both federal moratoria received a score of 2. As mentioned above, reliability tests showed that incorporation of this item reduced the reliability of the index, therefore, this item was omitted from the final eviction moratoria index.

Renter-Supportive Measures. In addition to the eviction moratoria, states also adopted renter-supportive measures to prevent evictions. These measures included utilities shutoff moratoria, utility reconnection, bans on reporting eviction, bans on late fees, bans on raising rents, grace period for rent payment, and measures sealing eviction records.

Initially, I assigned 0 if a state did not adopt any of the renter-supportive measures and assigned 1 if a state adopted each of the renter-supportive sub-items. There were 15 states that did not adopt any of the renter-supportive measures. There were 17 states that adopted one of the renter-supportive measures. Washington was the only state that adopted all seven renter-

supportive measures, followed by Connecticut which adopted five renter-supportive measures and then, Montana and Oregon, each adopting four renter-supportive measures.

Finally, for the "renter-supportive" item of the eviction moratoria index, I scored 0 for a state with no adoption of any renter-supportive measures, 1 for a state that adopted any one of the renter-supportive measures, and 2 for a state that adopted more than one renter-supportive measure. Table 4.1 summarizes four items related to state anti-eviction policy that were utilized to create the eviction moratoria index. Figure 4.2 shows the eviction moratoria index score across states.

Table 4.1

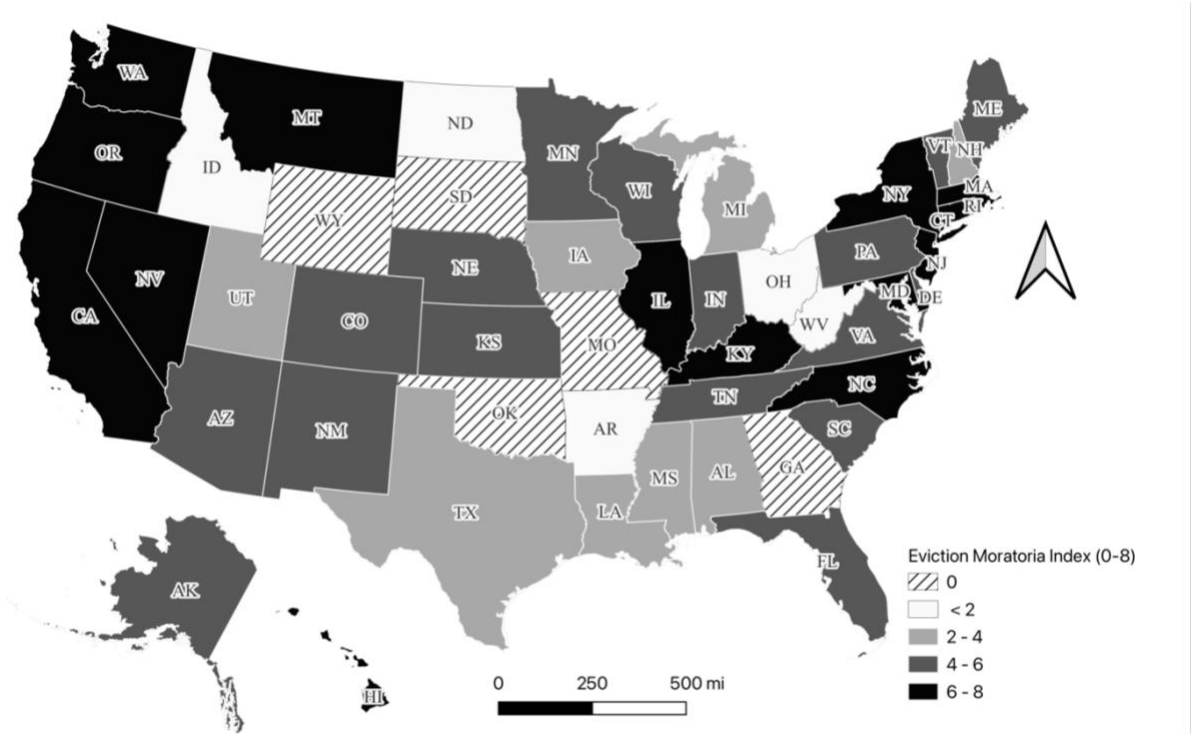
Summary of Four Variables Constructing the Eviction Moratoria Index.

Variable	Description	Number of States	Number of States scoring		
			0	1	2
Moratoria Justification	At least one state actor prohibited eviction citing economic hardship and/or health-related hardship due to COVID-19 as a rationale.	28	22	16	12
Freezing Stage of Eviction Process	At least one state actor froze a stage of eviction process (e.g., intent of eviction filing, eviction filing, eviction hearing, eviction judgement, and eviction enforcement)	43	7	9	34
Duration of Eviction Protection	Number of days any of the eviction moratoria was active. Median = 144 days.	43	7	22	21
Renter-Supportive Measures	At least one state actor adopted renter-supportive measures (e.g., utilities shutoff moratoria, utility reconnection, bans on reporting eviction, bans on late fees, bans on raising rents, grace period for rent payment, and measures sealing eviction records)	36	14	17	19

Note. A state actor may include governor, legislature, or court. The Number of States column on right shows the number of states that scored 0, 1, and 2 as described in the Eviction Moratoria Index construction above.

Figure 4.2

Eviction Moratoria Index Score across states



Lastly, I further examined the four items of the state-level eviction moratoria used to construct the index using Principal Component Analysis. It is only the first principal component that has eigenvalue greater than 1, and it explains 64% of the variation in the index. However, the first two principal components explain more than 82% of variation in the Index. Table 4.2 reports the loadings and eigenvalues of the two components.

Table 4.2

Principal Component Analysis, Loadings and Eigen Values

Variable	Component 1	Component 2
Moratoria Justification	0.459	-0.574
Freezing Stage of Eviction Process	0.549	0.111
Duration of Eviction Protection	0.558	-0.225
Renter-Supportive Measures	0.421	0.780
Eigen Values	2.569	0.727

The first component seems to fairly load on all four measures of eviction moratoria: justification, freezing stage of eviction process, duration, and renter-supportive measures, with relatively higher loading on duration. The second component seems to load heavily on renter-supportive measures. Similarly, there was a strong positive correlation between the first principal component and the eviction moratoria index. Therefore, the Principal Component Analysis results validated the use of the four dimensions of eviction moratoria policy to construct the eviction moratoria index as a proxy of state-level strength of anti-eviction policies.

Racial Power

Building on prior research, I constructed racial power measures as control variables in this study. I emphasize four key sets of actors who can influence state policy: (a) state racial composition measured as the percentage Black residents, (b) racial composition of state voters, (c) state partisanship measured as average White-Black gaps in state legislators[10] and change in percent Democrats in lower chamber between 2019 and 2021, and (d) state social movement actors measured as the number of Black Lives Matters protests that occurred in the state following the murder of George Floyd (Michener 2022).

The racial composition of state populations is a key dimension of racial power because it captures the representation of race in state politics and can influence policy formulation. Similarly, state legislators have direct roles over policy outputs. Therefore, I accounted for racial gaps in state legislators because the gap can affect emergence of racially equitable state policy. The racial composition of state voters is an important dimension of racial power because

[10] National Conference of State Legislatures released the racial composition of state legislators for 2015 and 2020 (see https://www.ncsl.org/about-state-legislatures/state-legislator-demographics). Since I did not have access to racial composition of state legislators during the pandemic, I could not create a change in White-Black gaps in state legislators before and during the pandemic. Therefore, I took an average of White legislators and Black legislators in each state and took a percentage-difference to account for the White-Black gaps in state legislators one of the measures of racial power. Smaller gap indicated relatively higher racial power of minoritized racial groups in the state.

variation in racial composition of voters have substantial implications for political representation and responsiveness (Michener 2022). Consistent to Michener (2022), I controlled for the proportion of the state electorate that is Black (i.e., Black population in the state that was 18 or above)[11].

Since Democrats are more likely to support pro-tenant laws (Coulson et al. 2020), a change in percent Democrats in the lower chamber likely affected the strength of eviction moratoria during the pandemic. In addition, Democratic legislators are expected to pursue a variety of affordable housing supports that would be associated with relatively lower rates of homelessness. Therefore, I constructed a change in the percentage of Democrats in the lower chamber by subtracting the percentage of Democrats in the lower chamber in 2019 from the percentage of Democrats in the lower chamber in 2021. Considering the racial disproportionalities in the share of Black and White renter households (i.e., in the study period the average share of Black renters was 22.23% of Black residents, whereas the average share of White renters was 10.56% of White residents across states), I considered the change in the percent Democrats in the lower chamber as a dimension of racial power which could affect Black renters through pro-tenant policy.

Lastly, state social movement actors organize protests and contest for political power. On the one hand, such political contestations can help to shift power relations and change the course of political trajectories, especially for Black Americans (Michener 2022). On the other hand, political protests contesting for racial power could provoke countervailing or even defensive responses from White Americans (Blalock 1967; Eitle et al. 2002). Therefore, I controlled for the

[11] One limitation of this proxy measure of Black voters is that it does not account for the Black population over 18 but ineligible to vote due to factors such as current incarceration, being on parole, or being on probation.

number of Black Lives Matters protests in each state as a state-level proxy for the racial power inherent to social movement actors.

Other Control Variables

The number of COVID-19 cases per state population, an interaction between the COVID-19 positive case rates and percent Black, and the change in (a) White to Black unemployment ratio, (b) the percentage of public assistance recipients, (c) the permanent supportive housing per 10,000 state residents, and (d) the residential mobility between 2020 and 2022 were other control variables in this study. I considered the interaction effect between the COVID-19 case rates and percent Black residents to capture the structural racial inequality during the pandemic (Bogan et al. 2022; Bowleg 2020; Enriquez and Goldstein 2020).

Results

Table 4.3 contains the descriptive statistics. On average the total homelessness rates across U.S. states increased by 1.34 people per 10,000 general population in 2022 compared to 2020. The Black-White gap in homelessness rates was more than 9 people on average in 2022 than the Black-White gap in homelessness rates in 2020. This average increase in racial gaps seemed to be due to an increase in Black-White gaps in sheltered homelessness as opposed to Black-White gaps in unsheltered homelessness. Likewise, an average state scored 4.71 in eviction moratoria index.

Table 4.4 includes correlation coefficients of the independent variables. The correlation matrix did not flag any collinearity issue because all correlation coefficients are below the tolerance (i.e., $r < 0.70$). The highest correlation coefficient, $r = -0.64$, is between percentage Black residents and White – Black gaps in state legislators. It is conceivable that states with greater size of Black populations are more likely to have increased share of Black legislators,

hence decreasing the White-Black gaps in the legislators. Furthermore, generalized variance inflation factor (GVIF) analysis showed no concerning collinearity issue. GVIFs for the interaction term (COVID-19 positive rate and % Black) were 6.12 and 5.13 for models estimating change in total rates of homelessness and change in Black-White gaps in overall homelessness rates respectively. GVIFs for all other independent variables were below 4.

Table 4.3

Descriptive Statistics

Variables	**Mean**	**SD**	**Min**	**Max**
Dependent				
Change in Total Homelessness Rates	1.34	5.39	-9.76	25.55
Change in B-Gaps in Homelessness Rates	9.08	69.99	-34.42	466.35
Change in B-W Gaps in Sheltered Homelessness Rates	8.42	69.7	-47.24	464.21
Change in B-W Gaps in Unsheltered Homelessness Rates	0.66	6.97	-11.27	38.57
Independent				
Eviction Moratoria Index (0-8)	4.71	2.45	0	8
Black Lives Matters	236.1	231.82	22	1298
% Black Voters	74.26	3.61	65.48	82.19
W-B Gaps in State Legislators	72.03	18.44	21	98.5
Change in % Democrats in Lower Chamber	-2.45	4.32	-18	6
COVID-19 Positive Case Rates	16.73	3.33	7.54	22.58
% Black	10.62	9.49	0.58	37.53
Change in W/B Unemployment Ratio (in %-point)	2.32	8.16	-23.96	23.83
Change in % PA Recipients	0.21	0.21	-0.33	0.8
Change in PSH Beds	-0.08	1.13	-3.71	2.38
Change in Residential Mobility	-0.85	0.37	-1.74	0.1
Number of States				49

Table 4.5 shows the main empirical results of this study. The findings are displayed from the best fit models for each of the four dependent variables: (a) change in total homelessness rates and change in Black-White gaps in (b) overall, (c) sheltered, and (d) unsheltered homelessness rttes. For each dependent variable, I ran sequential models, starting with bivariate

regression between the dependent variable and eviction moratoria index as the key independent variable, and then step-by-step adjusting other control variables discussed above. I did not include any controls related to the change in rental market dynamics (i.e., change in rental vacancy rate, change in rent burdened households, change in median rent for two-beds apartment, and change in crowded rental units) because they did not improve the model fit.

Model 1 estimates the relationship between the strength of eviction moratoria and the change in total homelessness rates before and during the COVID-19 pandemic. Model 2 estimates the relationship between the strength in eviction moratoria and the change in Black-White gaps in homelessness rates. Model 3 estimates the relationship between the strength in eviction moratoria and the change in Black-White gaps in sheltered homelessness rates. Model 4 estimates the relationship between the strength in eviction moratoria and the change in Black-White gaps in unsheltered homelessness rates.

Model 1 controls for the racial power dynamics and interaction effect of COVID-19 positive case rates and percent Black. In addition, model 2 and model 3 control for the change in White to Black unemployment ratio.

Lastly, the estimates in Table 4.5 show no significant association between the strength of eviction moratoria and (a) the change in total homelessness rates, (b) the change in Black-White gaps in overall homelessness rates, and (c) the change in Black-White gaps in sheltered homelessness rates. Model 4 results show that stronger state eviction moratoria had a positive association with increase in Black-White gaps in unsheltered homelessness rates. Unlike other models, model 4 controls for additional measures of social safety nets and transience. The social safety nets and transience measures contributed to the fitness of model 4 only. I used F-statistics to compare series of regression models and determined a fit model for each dependent variable.

Without these additional controls the association between state eviction moratoria and Black-White gaps in unsheltered homelessness rates was marginally positive ($p < 0.10$). However, with the additional controls, the relationship became statistically significant ($b = 0.96$, 95% CI [0.12, 1.80], $p < 0.05$). This result is counterintuitive and contrary to my hypothesis that predicted a negative association between the eviction moratoria index and the change in racial gaps in homelessness rates.

The main findings fail to support the two hypotheses that stronger state eviction moratoria were associated with lower homelessness rates and smaller racial gaps in homelessness rates during the COVID-19 pandemic. Nevertheless, the counterintuitive finding that stronger state eviction moratoria were associated with increased racial gaps in unsheltered homelessness rates, along with the significant positive relationships between some of the control variables and the dependent variables offered new insights.

One of the dimensions of racial power, i.e., percent Black voters, was negatively associated with the change in Black-White gaps in (a) overall homelessness rates and (b) sheltered homelessness rates. In addition, another dimension of racial power, i.e., White-Black gaps in state legislatures, was significantly positively associated with the change in total homelessness rates and the change in Black-White gaps in unsheltered homelessness rates. The state racial composition significantly moderated the relationship between the COVID-19 case rates and the change in total homelessness rates and marginally moderated the relationship between COVID-19 case rates and Black-White gaps in homelessness rates (see Figure 4.3). In states with lower percentages of Black people, there was a negative relationship between the COVID-19 case rates and the total homelessness rates. However, as the relative size of Black

Table 4.4

Correlation Matrix

	Change in Total homeles sness rates	Change in B-W gaps in homeles sness rates	EM Index	Black Lives Matters	% Black Voters	W-B Gaps in State Legislators	Change in % Democrats, Lower Chamber	% Black	COVID-19 Case Rates	Change in W/B Unempl-oyment	Change in PA Recipie nts	PSH beds Change
Change in B-W gaps in homelessness rates	0.64											
Eviction Moratoria Index (EM Index)	-0.05	0.03										
BLM	-0.23	-0.11	0.39									
% Black Voters	-0.15	-0.25	0.32	0.24								
Legislator B-W Gap	0.32	0.19	-0.21	-0.28	-0.51							
% Democrats Change	-0.07	-0.09	0.11	0.26	-0.01	-0.31						
% Black	-0.09	-0.13	-0.06	0.13	0.19	-0.64	0.29					
COVID-19 Case Rates	-0.14	-0.30	-0.45	-0.31	-0.36	0.28	-0.25	0.06				
W/B Unemployment Change	-0.06	0.29	0.10	0.24	-0.12	0.05	0.05	0.02	-0.08			
PA Recipients Change	-0.38	-0.35	0.24	0.14	0.29	-0.35	0.11	-0.10	-0.13	-0.07		
PSH Change	-0.01	0.09	0.16	0.18	0.26	-0.10	-0.09	-0.22	-0.19	0.12	0.10	
Residential Mobility Change	-0.15	-0.01	0.27	0.14	0.22	-0.20	0.21	0.05	-0.26	-0.12	0.09	-0.12

Table 4.5

Regression Results Examining Eviction Moratoria and Homelessness

	Dependent variable: Change in Homelessness Rates, 2020 – 2022			
	Model (1) Total	Model (2) B-W Gaps	Model (3) B-W Gaps Sheltered	Model (4) B-W Gaps Unsheltered
Eviction Moratoria Index (0-8)	0.055	-0.042	-0.899	0.960*
	(0.319)	(4.169)	(4.277)	(0.429)
Black Lives Matters	-0.004	-0.047	-0.049	0.002
	(0.003)	(0.044)	(0.045)	(0.004)
% Black voters	-0.025	-6.421*	-6.404*	-0.029
	(0.229)	(3.037)	(3.115)	(0.315)
W-B Gaps in State Legislators	0.181**	0.674	0.535	0.218*
	(0.057)	(0.750)	(0.769)	(0.089)
Change in % Democrats in Lower Chamber	-0.013	-2.858	-2.705	-0.094
	(0.173)	(2.259)	(2.317)	(0.232)
COVID-19 positive case rates	-1.184**	-15.784**	-15.172**	-0.919*
	(0.295)	(3.880)	(3.981)	(0.405)
% Black	-1.121**	-8.597	-8.162	-0.523
	(0.413)	(5.407)	(5.547)	(0.546)
Change in W/B Unemployment Ratio (in %-point)		1.971+	1.794	0.121
		(1.112)	(1.141)	(0.114)
Change in % PA Recipients				9.778+
				(5.188)
Change in PSH Beds				0.299
				(0.891)
Change in Residential Mobility				-6.956*
				(2.571)
Interaction: COVID-19 × % Black	0.078**	0.576+	0.543	0.047
	(0.024)	(0.315)	(0.323)	(0.032)
Intercept	8.455	689.088*	693.609*	-13.922
	(20.177)	(266.008)	(272.874)	(27.175)
Observations	49	49	49	49
R^2	0.414	0.422	0.387	0.454

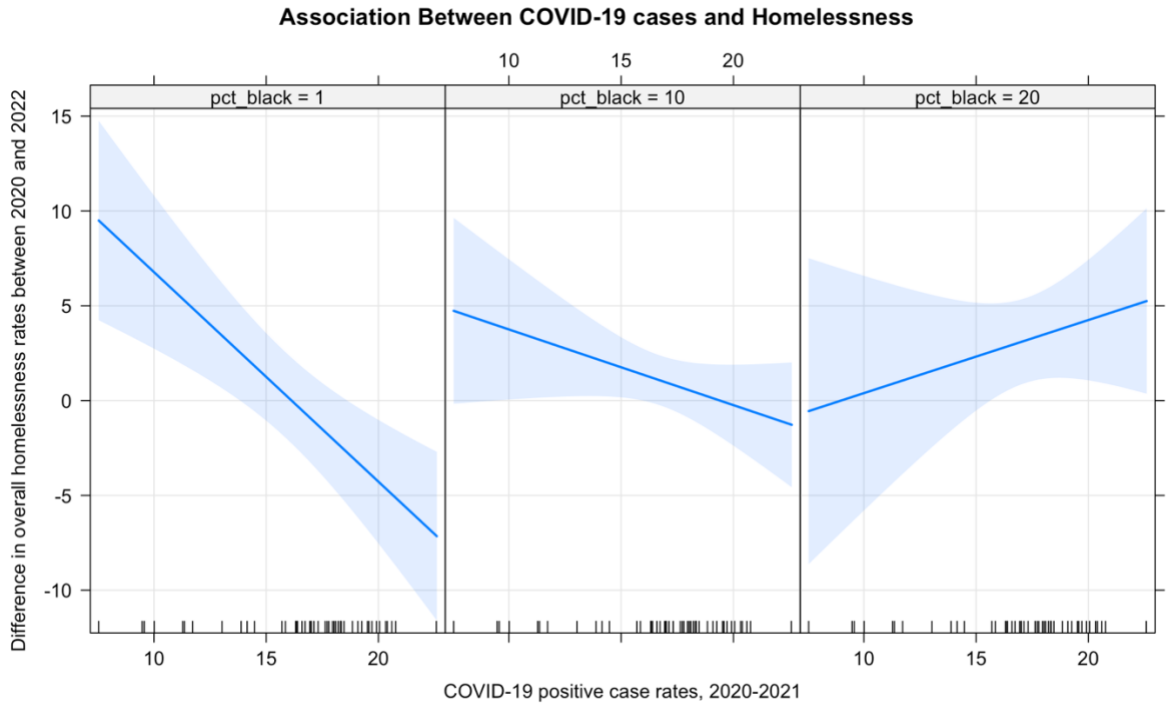
Note. +p<0.10 *p<0.05 **p<0.01

populations increased, the relationship between the COVID-19 case rates and the total homelessness rates became positive.

Figure 4.3 shows the estimated moderation effect of state racial composition on the relationship between the COVID-19 case rates and the total homelessness rates. Lastly, the change in residential mobility had a significant negative relationship with Black-White gaps in unsheltered homelessness rates.

Figure 4.3

Moderation effect plot of state racial composition on COVID-19 case rates and the change in total homelessness rates.



Discussion

These findings do not confirm my hypotheses, but they are insightful. One potential reason that the strength of state-level eviction moratoria during the pandemic may have had null effects on the change in racial gaps in homelessness before and during the COVID-19 pandemic concerns pre-existing differences in the strength of pro-tenant policies across states. For instance,

comparing the map of state landlord-tenant policy regimes created by Hatch (2017) and adopted by other scholars such as Merritt and Farnworth (2021), with the map I created in Figure 4.2 showing Eviction Moratoria Index scores, there are overlaps between tenant protectionist states pre-pandemic and states with high scores in Eviction Moratoria Index such as New Jersey, New York, California, and Oregon.

The positive association between stronger eviction moratoria and increased Black-White gaps in unsheltered homelessness rates, to some extent, complements Coulson et al.'s (2020) marginal findings that increases in tenant protections were associated with decreases in housing supply and increases in homelessness rates. However, the positive association between pro-tenant policy and homelessness rates suggested by Coulson et al. (2020) seems to be (a) more relevant in terms of unsheltered homelessness, and (b) driven by increase in Black homelessness rates as opposed to White homelessness rates, in the context of the COVID-19 pandemic.

In states with stronger eviction moratoria, landlords might be either reluctant to rent their low-income affordable units in the first place or spend money on maintenance due to fear of their inability to evict tenants for rent non-payments. Consequently, there might have been a lack of affordable rental units as well as increased risks of uninhabitable low-income units due to lack of timely maintenance. These phenomena exacerbate the preexisting racial discrimination in the rental market as well as preexisting Black-White disparities in liquid asset amounts (Chun et al. 2022). Studies show that the COVID-19 pandemic immediately hit low-income Black populations and that their recovery was slower compared to their White counterparts (Chun et al. 2022; Park 2021). Therefore, null associations between eviction moratoria index and overall homelessness rates, overall Black-White gaps in homelessness rates and Black-White gaps in sheltered homelessness rates could be due to cancellation of the protective effects as well as the reduction of affordable housing. Nevertheless, the reduction of affordable housing due to

stronger eviction moratoria could have stretched the increased racial gaps in unsheltered homelessness rates during the pandemic.

Although the results were null for the hypothesized relationships, the significant findings of the three race-related covariates, i.e., the percent Black voters, the racial gaps in state legislatures, and the moderation effect of race on the COVID-19 case rates and the homelessness rates begs us to revisit the racialized contexts of housing politics that belie the colorblind notion that race does not matter (Colburn and Aldern 2022; Michener 2022; Olivet et al. 2021).

First, the negative association between the percent Black voters and the change in Black-White gaps in rates of overall and sheltered homelessness suggest that the racial composition of voters mattered because if the racially minoritized populations exercised their political voice through voting then they exhibited higher chances of securing racially equitable policy (Michener 2022). Second, the positive association between the White-Black gaps in state legislatures and the rates of total homelessness and Black-White gaps in unsheltered homelessness suggest that narrowing down the racial gaps in state legislatures could potentially reduce the total homelessness rates as well as the racial gaps in homelessness rates. Third, the significant moderation effect of state racial composition on the COVID-19 case rates and the homelessness rates confirmed the disproportionate COVID-19 vulnerability and associated risks of homelessness among Black people in states with large Black populations.

Although in states with relatively larger Black populations, the severity of the COVID-19 pandemic was positively associated with the increase in total homelessness rates, possibly due to disproportionate rates of COVID-19 hardships and subsequent homelessness among Black people, the results associated with the percent Black voters and the narrowing of racial gaps in state legislatures coherently reiterated how these dimensions of minoritized racial power could induce more racially equitable outcomes.

The null findings of this chapter may point to a need to revisit the construction of the eviction moratoria index, with an eye toward making it more robust and facilitating the testing of community-level hypotheses. The complexities of the eviction moratoria index prevented me from including all possible dimensions of eviction moratoria that varied across states. For example, there were variations in state actors both in terms of their categories and their frequency while enacting an eviction moratorium. During the study period, in New York the governor issued eviction moratoria twice, the court issued once, and the state legislature issued twice. Conversely, in Virginia, neither the governor nor the state legislature issued any eviction moratorium; rather, it was the court that issued eviction moratoria three times. Likewise in Colorado, Nevada and Washington, the state governors issued eviction moratoria twice each in their respective states, while other state actors remained dormant. However, including the state actors in the index raised issues of multicollinearity as the state actors were correlated with the duration of eviction protections. In addition, the index accounted for renter-supportive policies, but it did not incorporate rental assistance, which is an important eviction protection during the pandemic (Benfer et al. 2022).

A second area that merits revisiting of the methods used in this study could be a multilevel analysis of the association between the state eviction moratoria index and homelessness rates at the community level. Although communities nested within states had a universal state-level eviction moratoria index, there were variations in homelessness rates across communities within states. My preliminary multi-level analysis at the community level showed a significant negative association between the eviction moratoria index and (a) total homelessness rates, (b) Black-White gaps in overall homelessness rates, and (c) Black-White gaps in sheltered homelessness rates. This preliminary analysis also suggested that the positive association between stronger eviction moratoria and increased racial gaps in unsheltered homelessness rates

might only hold at the state level, and not for community-level racial gaps in unsheltered homelessness rates.

Conclusion

This chapter does not offer empirical evidence that stronger eviction moratoria were associated with lower homelessness rates and lower Black-White gaps in rates of homelessness during the COVID-19 pandemic. Although the data failed to statistically confirm the hypothesized associations, anti-eviction policies and homelessness hold vital significance for Black communities (Benfer et al. 2022; Hepburn et al. 2020; Michener 2022; Treglia et al. 2023). When the COVID-19 pandemic hit the United States in March 2020, policymakers had to swiftly decide about the extensions of tenant protections. Pre-pandemic studies showed mixed associations between evictions and homelessness rates (Coulson et al. 2020; Treglia et al. 2023). To explore whether stronger eviction protections were associated with decreases in rates of homelessness and racial gaps in homelessness, I developed a novel state-level index to proxy for the strength of eviction moratoria during the COVID-19 pandemic. Thereafter, I used a series of regression models to examine the associations between the index and the changes in homelessness rates.

Although my hypotheses were not supported, the result showing positive association between eviction moratoria index and the change in Black-White gaps in unsheltered homelessness highlights an unintended consequence of stronger tenant protection policies: exacerbating unsheltered homelessness among Black communities. Stronger state eviction moratoria might be associated with changes in racial gaps in unsheltered homelessness rates but not with other measures of change in homelessness rates (i.e., total homelessness rates, overall Black-White gaps in homelessness, and Black-White gaps in sheltered homelessness) because for the latter cases there might be offsetting effects of tenant protections that eviction moratoria

provided and barriers to access affordable housing units posed by the moratoria. Therefore, the possible shrinking of low-income rental units in states with stronger eviction moratoria could have caused a positive association between stronger state eviction moratoria and Black-White gaps in unsheltered homelessness rates. However, these speculations require closer examination in future research.

This study paved the way towards understanding what effects tenant protection policies during the COVID-19 pandemic had on changes in homelessness patterns. Although the core questions of whether stronger state eviction moratoria were successful in influencing reduced rates of homelessness and reduced racial gaps in rates of homelessness at the state level were answered, the instructive findings showcased possible avenues for future research such as further developing the novel index that this chapter introduced or conducting further research with the community as the unit of analysis.

Future analyses should account for additional dimensions of eviction protections such as rental assistance in the (re)construction of the eviction moratoria index. Moreover, future research could assess the long-term effects of the COVID-19 related eviction moratoria using multilevel longitudinal approaches. While this chapter leaves us with unexpected findings about the anti-eviction policies and their influences on homelessness during the pandemic, its findings also reinforce the critical importance of centering race in social policies related to evictions and homelessness.

Chapter 5

Conclusion

Although homelessness is undoubtedly a housing problem (Colburn and Aldern 2022), race is just as important a factor in shaping homelessness patterns in U.S. communities. Black Americans are overrepresented in homeless populations, yet most of the literature about homelessness remains silent about race (Olivet et al. 2021; Wagner and White 2015). This dissertation is a step towards breaking the silence. To achieve equitable solutions to end homelessness in the United States, it is time we acknowledge that homelessness is not colorblind (Olivet et al. 2021). Colorblindness quietly otherizes homelessness. Colorblind racism serves as an ideological armor that shields a covert and institutionalized system of oppression (Bonilla-Silva 2018) and prevents us from drawing connections between structural racism and homelessness (Jones 2016). To develop effective policy and equitable practice solutions, there was a call for research to examine the racial demographics of homelessness (Jones 2016; Olivet et al. 2021; Wagner and White 2015). This study is a response to this call: How do societal structures influence racial disparities in homelessness?

Race and Homelessness in the United States

In Chapter 1, I provided an overview of this dissertation. In this chapter, I presented three key research questions to assess how race matters in understanding racial gaps in homelessness: How did the community-level racial composition influence racial gaps in homelessness rates within U.S. communities? How were area eviction filing rates associated with racial gaps in rates of homelessness across U.S. communities? How did stronger state eviction moratoria influence change in state-level racial gaps in rates of homelessness? To answer these questions, this study was the first to use U.S. Department of Housing and Urban Development's Point-In-Time (HUD

PIT) annual estimates of homelessness disaggregated by race from 2015 to 2022. Consistent with Byrne et al. (2013), I constructed a geographic crosswalk to match Continua of Care (CoC), a geographic unit used by HUD to coordinate services for people experiencing homelessness including conducting Point-In-Time estimates every year in the month of January and U.S. census boundaries. I used R and QGIS, software for data cleaning, management, and analysis in this study.

Community Racial Composition and Racial Gaps in Homelessness

In Chapter 2, I examined the association between area racial composition and community-level racial gaps in rates of homelessness. In this chapter, I revisited the naïve assumption that areas with higher proportions of Black residents were positively associated with higher rates of community-level homelessness. Existing literature showed mixed findings, with some studies confirming the positive association (Elliott and Krivo 1991), some studies showing no association (Byrne et al. 2013; Lee et al. 2003), and recent studies showing a negative association between the size of Black populations and rates of homelessness (Colburn and Aldern 2022; Muniz 2021). To solve these paradoxical findings, I studied the association between community-level racial composition and both race-specific homelessness rates and Black-White gaps in rates of homelessness between 2015 and 2020.

My theoretical framework incorporated two competing theses: group threat theory and embeddedness theory. Aligning with the group threat theory suggested that increases in percent Black would increase racial gaps in homelessness. Based on group threat theory, widely tested in criminal justice literature, I hypothesized that as the relative increase in size of Black populations posed a perceived group threat that activated the majority group to maneuver state apparatuses and social forces to retain their power and privileges (Blalock 1967; Eitle et al. 2002), the

subsequent increase in Black homelessness rates would contribute to increased Black-White gaps in rates of homelessness. In contrast, drawing from embeddedness theory, widely used in economic sociology and studies of minoritized groups, I hypothesized that a relative increase in minority population size increased their social capital, providing a buffer against the racial prejudice often expressed by majority populations. Specifically, I theorized that increases in social capital associated with larger Black populations induced bonded solidarity, care capital, and informal support systems which prevented low-income minority populations from the risks of homelessness. Therefore, embeddedness theory suggested that increases in percent Black would decrease the racial gaps in homelessness.

Fixed effects regression results within 369 communities between 2015 and 2020 supported the embeddedness thesis that suggested increases in percent Black within community would decrease Black-White gaps in homelessness rates. While there is a plethora of studies on racial discrimination in housing (Howell and Korver-Glenn 2021; Korver-Glenn 2018; Krysan and Crowder 2017; Massey and Denton 1993), there are also narratives of Black mobilization for fair housing via Black tenants' associations or Black churches (Lindberg 2022; Rodriguez 2022). The findings of this chapter challenged the naïve assumption about racial composition and homelessness. Making the first use of HUD PIT counts disaggregated by race, this study provided new insight into the counterintuitive findings in several recent studies of a negative association between the relative size of a community's Black population and its overall homelessness rate. The negative association was due to lowering of Black homelessness rates as the relative size of Black populations increased. Therefore, this chapter recentered a racial equity lens in the policy conversations that aimed to prevent and reduce homelessness. Especially in

areas where racial gaps in rates of homelessness are high, race-sensitive policy and policy interventions are important.

Evictions and Racial Gaps in Homelessness Across Metro Communities

In Chapter 3, I examined the relationship between evictions and racial gaps in community-level homelessness rates. More importantly, I analyzed whether the racial composition of renters in a community moderated the association between the community's eviction filing rates and Black-White gaps in rates of homelessness. Although there was a broad consensus in the literature that evictions often led to homelessness (Benfer et al. 2021; Burt 2001; Collinson and Reed 2018; Crane and Warnes 2000; Desmond and Kimbro 2015; Richter et al. 2021; Timmer et al. 1994), Treglia et al. (2023) is the first comprehensive study that quantitatively assessed whether eviction filing rates and eviction judgement rates were associated with homelessness rates. Treglia and colleagues found that there was a positive association between eviction filing rates and sheltered rates of homelessness. I built on Treglia et al.'s (2023) study by utilizing the latest county-level eviction filing data from Princeton University Eviction Lab for 2018. While Treglia and colleagues used a longitudinal approach to observe within community variation in evictions and homelessness between 2006-2017, my goal was to examine a point-in-time variation in eviction filing rates and racial gaps in rates of homelessness across 247 metropolitan communities in the United States in 2019.

Results from ordinary least square regressions and seemingly unrelated regressions (SUR) supported my first hypothesis that eviction filing rates and racial gaps in homelessness rates had a positive relationship with a decreasing slope.

State Eviction Moratoria Policy and Change in Homelessness

In Chapter 4, I examined whether stronger state eviction moratoria during the COVID-19 pandemic influenced lower rates of homelessness and created smaller gaps in Black-White rates of homelessness. Although the COVID-19 pandemic warranted rapid policy responses, states varied in the strength of their eviction moratoria aimed at curbing the spread of SARS-CoV-2 virus. Stronger state eviction moratoria were particularly relevant for protecting low-income Black renters from experiencing homelessness because on one hand, evictions targeted low-income Black renters (Desmond 2012; Hepburn et al. 2020; Leung et al. 2021; Medina et al. 2020), and on the other hand, the pandemic had caused disproportionate unemployment rates, housing challenges, and COVID-19 hardships among Black renters (Chun et al. 2022; Enriquez and Goldstein 2020; Park 2021). Therefore, I hypothesized that states with stronger eviction moratoria would have lower rates of homelessness and smaller gaps in Black-White homelessness rates.

To measure the strength of state eviction moratoria, I constructed a noble Eviction Moratoria Index by surveying the dimensions of eviction moratoria (e.g., justification for issuing moratoria, freezing of stages of eviction process, duration of eviction protection, and renter-supportive measures) discussed by Benfer et. al. (2022) and Michener (2022). Building on Michener (2022), I also controlled for racial power dynamics in the regression models examining the association between the strength of eviction moratoria and homelessness rates. Contrary to my hypotheses, there was no significant relationship between stronger state moratoria and changes in homelessness rates across U.S. states.

Despite the null findings, this chapter nonetheless helped to unpack the complex relationship between state eviction moratoria and racial gaps in homelessness during the

pandemic. Rather than adopting a binary narrative of whether a state issued a moratorium or not during the pandemic, this chapter accounted for variation in state eviction moratoria by creating an Eviction Moratoria Index. Although this chapter is an incremental step to existing body of literature assessing anti-eviction policies of states in the United States (Benfer et al. 2022; Michener 2022), the null findings point future research to improve the Eviction Moratoria Index by accounting for additional dimensions of eviction moratoria such as rental assistance and test these hypotheses at multi-level, i.e., examine whether these state-level variations in strength of eviction moratoria influenced changes in community-level rates of homelessness disaggregated by race.

Breaking the Silence

Just as homeless persons are visibly present across U.S. communities, a century ago, child labor was rampant in the U.S. On October 2nd, 1921, The New York Times published a news article entitled "Child Labor in America: Two Million Wage Earners Under 16 in This Country, Says Report." Social activism by actors such as Lewis Hine[12] and Edward Clopper[13], progressive movements for compulsory education, lobbying against child labor by social workers and unions, and reformation of laws in the early twentieth century successfully regulated child labor. Today, the visible child labor of the 20th century does not exist in the United States (Tamla Rai 2018). The American history of solving a social problem needs to repeat. The United States solved the problem of child labor in the 20th century. Homelessness, moreover, racial gaps in homelessness, persists to be a 21st century social problem in the United States. Like abolishing child labor, the United States needs to abolish homelessness.

[12] Lewis Hine took more than five thousand photographs of children in child labor for National Child Labor Committee between 1908 and 1918.
[13] Edward Clopper was a child labor abolitionist, and author of "Child Labor in City Streets" published in 1912.

Ending homelessness would undoubtedly require expansion of affordable housing. In that sense, homelessness is a housing problem. But contemporary homelessness responses have failed because myriad evidence suggests that while the housing programs work for some people (Colburn and Aldern 2022), for racially minoritized people, there are barriers to these housing programs, including racism and discrimination within homeless services (Olivet et al. 2021). While there is a plethora of research on homelessness in the United States, despite overrepresentation of Black people in homeless population, the racial demographics of homelessness received sparse attention from sociologists and policymakers (Jones 2016; Olivet et al. 2021). There was silence about race in the homeless crisis (Wagner and White 2015).

This dissertation is one step towards breaking the colorblind silence in the structural analysis of homelessness in the United States. This dissertation offers evidence that the percent Black population was negatively associated with the Black-White gaps in rates of homelessness, areas with higher eviction filing rates was positively associated with community-level racial gaps in homelessness rates, and there was a need of further assessment of relationship between stronger state eviction moratoria and the change in rates of homelessness. This study has kindled the conversation of race in the homelessness crisis. Homelessness is more than an affordable housing problem. To abolish homelessness in the 21st century United States, breaking the silence on the role of race in homelessness is just the beginning. We need to tear down the walls that invisibilize homelessness, especially the walls that invisibilize Black people experiencing homelessness!

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Appendix I

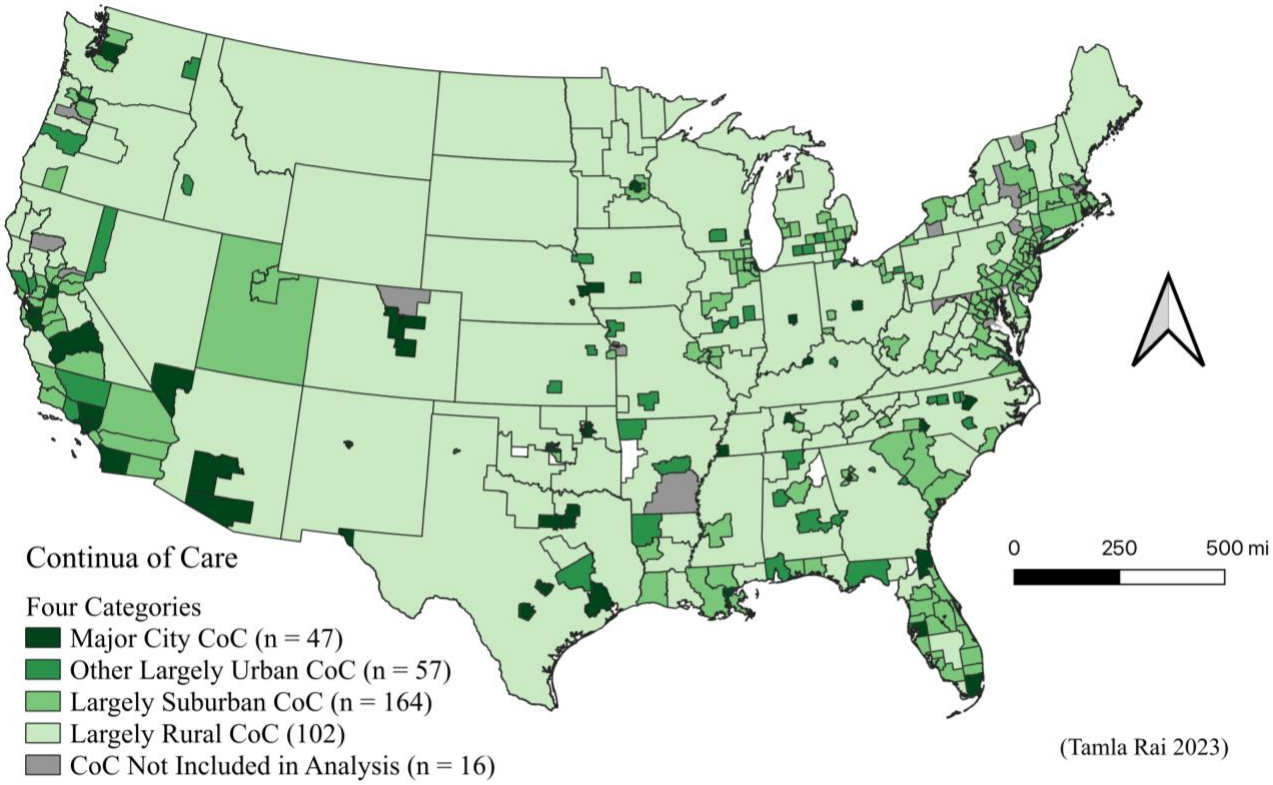


Figure 1. Map of Continua of Care (CoCs) included in this study sample (Number of Sample CoCs = 369).

Appendix II

Table 1 *Continua of Care (CoCs) Included and Excluded in the Study Sample (N = 392)*

CoC Number	CoC Name	Sample
AK-500	Anchorage CoC	No
AK-501	Alaska Balance of State CoC	No
AL-500	Birmingham/Jefferson, St. Clair, Shelby Counties CoC	Yes
AL-501	Mobile City & County/Baldwin County CoC	Yes
AL-502	Florence/Northwest Alabama CoC	Yes
AL-503	Huntsville/North Alabama CoC	Yes
AL-504	Montgomery City & County CoC	Yes
AL-505	Gadsden/Northeast Alabama CoC	No
AL-506	Tuscaloosa City & County CoC	Yes
AL-507	Alabama Balance of State CoC	Yes
AR-500	Little Rock/Central Arkansas CoC	Yes
AR-501	Fayetteville/Northwest Arkansas CoC	Yes
AR-503	Arkansas Balance of State CoC	Yes
AR-505	Southeast Arkansas CoC	No
AZ-500	Arizona Balance of State CoC	Yes
AZ-501	Tucson/Pima County CoC	Yes
AZ-502	Phoenix, Mesa/Maricopa County CoC	Yes
CA-500	San Jose/Santa Clara City & County CoC	Yes
CA-501	San Francisco CoC	Yes
CA-502	Oakland, Berkeley/Alameda County CoC	Yes
CA-503	Sacramento City & County CoC	Yes
CA-504	Santa Rosa, Petaluma/Sonoma County CoC	Yes
CA-505	Richmond/Contra Costa County CoC	Yes
CA-506	Salinas/Monterey, San Benito Counties CoC	Yes
CA-507	Marin County CoC	Yes
CA-508	Watsonville/Santa Cruz City & County CoC	Yes
CA-509	Mendocino County CoC	Yes
CA-510	Turlock, Modesto/Stanislaus County CoC	Yes
CA-511	Stockton/San Joaquin County CoC	Yes
CA-512	Daly/San Mateo County CoC	Yes
CA-513	Visalia/Kings, Tulare Counties CoC	Yes
CA-514	Fresno City & County/Madera County CoC	Yes
CA-515	Roseville, Rocklin/Placer County CoC	Yes
CA-516	Redding/Shasta, Siskiyou, Lassen, Plumas, Del Norte, Modoc, Sierra Counties CoC	Yes
CA-517	Napa City & County CoC	Yes
CA-518	Vallejo/Solano County CoC	Yes
CA-519	Chico, Paradise/Butte County CoC	Yes

CoC Number	CoC Name	Sample
CA-520	Merced City & County CoC	Yes
CA-521	Davis, Woodland/Yolo County CoC	Yes
CA-522	Humboldt County CoC	Yes
CA-523	Colusa, Glenn, Trinity Counties CoC	Yes
CA-524	Yuba City & County/Sutter County CoC	Yes
CA-525	El Dorado County CoC	Yes
CA-526	Amador, Calaveras, Mariposa, Tuolumne Counties CoC	Yes
CA-527	Tehama County CoC	No
CA-529	Lake County CoC	Yes
CA-530	Alpine, Inyo, Mono Counties CoC	Yes
CA-531	Nevada County CoC	No
CA-600	Los Angeles City & County CoC	Yes
CA-601	San Diego City and County CoC	Yes
CA-602	Santa Ana, Anaheim/Orange County CoC	Yes
CA-603	Santa Maria/Santa Barbara County CoC	Yes
CA-604	Bakersfield/Kern County CoC	Yes
CA-606	Long Beach CoC	Yes
CA-607	Pasadena CoC	Yes
CA-608	Riverside City & County CoC	Yes
CA-609	San Bernardino City & County CoC	Yes
CA-611	Oxnard, San Buenaventura/Ventura County CoC	Yes
CA-612	Glendale CoC	Yes
CA-613	Imperial County CoC	Yes
CA-614	San Luis Obispo County CoC	Yes
CO-500	Colorado Balance of State CoC	Yes
CO-503	Metropolitan Denver CoC	Yes
CO-504	Colorado Springs/El Paso County CoC	Yes
CO-505	Fort Collins, Greeley, Loveland/Larimer, Weld Counties CoC	No
CT-503	Bridgeport, Stamford, Norwalk, Danbury/Fairfield County CoC	Yes
CT-505	Connecticut Balance of State CoC	Yes
DC-500	District of Columbia CoC	Yes
DE-500	Delaware Statewide CoC	Yes
FL-500	Sarasota, Bradenton/Manatee, Sarasota Counties CoC	Yes
FL-501	Tampa/Hillsborough County CoC	Yes
FL-502	St. Petersburg, Clearwater, Largo/Pinellas County CoC	Yes
FL-503	Lakeland, Winterhaven/Polk County CoC	Yes
FL-504	Deltona, Daytona Beach/Volusia, Flagler Counties CoC	Yes
FL-505	Fort Walton Beach/Okaloosa, Walton Counties CoC	Yes
FL-506	Tallahassee/Leon County CoC	Yes
FL-507	Orlando/Orange, Osceola, Seminole Counties CoC	Yes

CoC Number	CoC Name	Sample
FL-508	Gainesville/Alachua, Putnam Counties CoC	Yes
FL-509	Fort Pierce/St. Lucie, Indian River, Martin Counties CoC	Yes
FL-510	Jacksonville-Duval, Clay Counties CoC	Yes
FL-511	Pensacola/Escambia, Santa Rosa Counties CoC	Yes
FL-512	St. Johns County CoC	Yes
FL-513	Palm Bay, Melbourne/Brevard County CoC	Yes
FL-514	Ocala/Marion County CoC	Yes
FL-515	Panama City/Bay, Jackson Counties CoC	Yes
FL-517	Hendry, Hardee, Highlands Counties CoC	Yes
FL-518	Columbia, Hamilton, Lafayette, Suwannee Counties CoC	Yes
FL-519	Pasco County CoC	Yes
FL-520	Citrus, Hernando, Lake, Sumter Counties CoC	Yes
FL-600	Miami-Dade County CoC	Yes
FL-601	Ft Lauderdale/Broward County CoC	Yes
FL-602	Punta Gorda/Charlotte County CoC	Yes
FL-603	Ft Myers, Cape Coral/Lee County CoC	Yes
FL-604	Monroe County CoC	Yes
FL-605	West Palm Beach/Palm Beach County CoC	Yes
FL-606	Naples/Collier County CoC	Yes
GA-500	Atlanta CoC	Yes
GA-501	Georgia Balance of State CoC	Yes
GA-502	Fulton County CoC	Yes
GA-503	Athens-Clarke County CoC	Yes
GA-504	Augusta-Richmond County CoC	Yes
GA-505	Columbus-Muscogee CoC	Yes
GA-506	Marietta/Cobb County CoC	Yes
GA-507	Savannah/Chatham County CoC	Yes
GA-508	DeKalb County CoC	Yes
GU-500	Guam CoC	No
HI-500	Hawaii Balance of State CoC	No
HI-501	Honolulu City and County CoC	No
IA-500	Sioux City/Dakota, Woodbury Counties CoC	Yes
IA-501	Iowa Balance of State CoC	Yes
IA-502	Des Moines/Polk County CoC	Yes
ID-500	Boise/Ada County CoC	Yes
ID-501	Idaho Balance of State CoC	Yes
IL-500	McHenry County CoC	Yes
IL-501	Rockford/DeKalb, Winnebago, Boone Counties CoC	Yes
IL-502	Waukegan, North Chicago/Lake County CoC	Yes
IL-503	Champaign, Urbana, Rantoul/Champaign County CoC	Yes

CoC Number	CoC Name	Sample
IL-504	Madison County CoC	Yes
IL-506	Joliet, Bolingbrook/Will County CoC	Yes
IL-507	Peoria, Pekin/Fulton, Tazewell, Peoria, Woodford Counties CoC	Yes
IL-508	East St. Louis, Belleville/St. Clair County CoC	Yes
IL-510	Chicago CoC	Yes
IL-511	Cook County CoC	Yes
IL-512	Bloomington/Central Illinois CoC	Yes
IL-513	Springfield/Sangamon County CoC	Yes
IL-514	DuPage County CoC	Yes
IL-515	South Central Illinois CoC	Yes
IL-516	Decatur/Macon County CoC	Yes
IL-517	Aurora, Elgin/Kane County CoC	Yes
IL-518	Rock Island, Moline/Northwestern Illinois CoC	Yes
IL-519	West Central Illinois CoC	Yes
IL-520	Southern Illinois CoC	Yes
IN-502	Indiana Balance of State CoC	Yes
IN-503	Indianapolis CoC	Yes
KS-502	Wichita/Sedgwick County CoC	Yes
KS-503	Topeka/Shawnee County CoC	Yes
KS-505	Overland Park, Shawnee/Johnson County CoC	Yes
KS-507	Kansas Balance of State CoC	Yes
KY-500	Kentucky Balance of State CoC	Yes
KY-501	Louisville-Jefferson County CoC	Yes
KY-502	Lexington-Fayette County CoC	Yes
LA-500	Lafayette/Acadiana CoC	Yes
LA-502	Shreveport, Bossier/Northwest Louisiana CoC	Yes
LA-503	New Orleans/Jefferson Parish CoC	Yes
LA-505	Monroe/Northeast Louisiana CoC	Yes
LA-506	Slidell/Southeast Louisiana CoC	Yes
LA-507	Alexandria/Central Louisiana CoC	Yes
LA-509	Louisiana Balance of State CoC	Yes
MA-500	Boston CoC	Yes
MA-502	Lynn CoC	Yes
MA-503	Cape Cod Islands CoC	Yes
MA-504	Springfield/Hampden County CoC	Yes
MA-505	New Bedford CoC	Yes
MA-506	Worcester City & County CoC	Yes
MA-507	Pittsfield/Berkshire, Franklin, Hampshire Counties CoC	Yes
MA-509	Cambridge CoC	Yes
MA-510	Gloucester, Haverhill, Salem/Essex County CoC	Yes

CoC Number	CoC Name	Sample
MA-511	Quincy, Brockton, Weymouth, Plymouth City and County CoC	Yes
MA-515	Fall River CoC	Yes
MA-516	Massachusetts Balance of State CoC	Yes
MA-519	Attleboro, Taunton/Bristol County CoC	Yes
MD-500	Cumberland/Allegany County CoC	No
MD-501	Baltimore CoC	Yes
MD-502	Harford County CoC	Yes
MD-503	Annapolis/Anne Arundel County CoC	Yes
MD-504	Howard County CoC	Yes
MD-505	Baltimore County CoC	Yes
MD-506	Carroll County CoC	Yes
MD-507	Cecil County CoC	No
MD-508	Charles, Calvert, St. Mary's Counties CoC	No
MD-509	Frederick City & County CoC	Yes
MD-510	Garrett County CoC	No
MD-511	Mid-Shore Regional CoC	Yes
MD-512	Hagerstown/Washington County CoC	No
MD-513	Wicomico, Somerset, Worcester Counties CoC	Yes
MD-600	Prince George's County CoC	Yes
MD-601	Montgomery County CoC	Yes
ME-500	Maine Statewide CoC	Yes
MI-500	Michigan Balance of State CoC	Yes
MI-501	Detroit CoC	Yes
MI-502	Dearborn, Dearborn Heights, Westland/Wayne County CoC	Yes
MI-503	St. Clair Shores, Warren/Macomb County CoC	Yes
MI-504	Pontiac, Royal Oak/Oakland County CoC	Yes
MI-505	Flint/Genesee County CoC	Yes
MI-506	Grand Rapids, Wyoming/Kent County CoC	Yes
MI-507	Portage, Kalamazoo City & County CoC	Yes
MI-508	Lansing, East Lansing/Ingham County CoC	Yes
MI-509	Washtenaw County CoC	Yes
MI-510	Saginaw City & County CoC	Yes
MI-511	Lenawee County CoC	Yes
MI-512	Grand Traverse, Antrim, Leelanau Counties CoC	Yes
MI-514	Battle Creek/Calhoun County CoC	Yes
MI-515	Monroe City & County CoC	Yes
MI-516	Norton Shores, Muskegon City & County CoC	Yes
MI-517	Jackson City & County CoC	Yes
MI-518	Livingston County CoC	Yes
MI-519	Holland/Ottawa County CoC	Yes

CoC Number	CoC Name	Sample
MI-523	Eaton County CoC	Yes
MN-500	Minneapolis/Hennepin County CoC	Yes
MN-501	Saint Paul/Ramsey County CoC	Yes
MN-502	Rochester/Southeast Minnesota CoC	Yes
MN-503	Dakota, Anoka, Washington, Scott, Carver Counties	Yes
MN-504	Northeast Minnesota CoC	Yes
MN-505	St. Cloud/Central Minnesota CoC	Yes
MN-506	Northwest Minnesota CoC	Yes
MN-508	Moorhead/West Central Minnesota CoC	Yes
MN-509	Duluth/St. Louis County CoC	Yes
MN-511	Southwest Minnesota CoC	Yes
MO-500	St. Louis County CoC	Yes
MO-501	St. Louis City CoC	Yes
MO-503	St. Charles City & County, Lincoln, Warren Counties CoC	Yes
MO-600	Springfield/Greene, Christian, Webster Counties CoC	Yes
MO-602	Joplin/Jasper, Newton Counties CoC	Yes
MO-603	St. Joseph/Andrew, Buchanan, DeKalb Counties CoC	Yes
MO-604a	Kansas City, Independence, Lee, Äôs Summit/Jackson, Wyandotte Counties, MO & KS	No
MO-606	Missouri Balance of State CoC	Yes
MP-500	Northern Mariana Islands CoC	No
MS-500	Jackson/Rankin, Madison Counties CoC	Yes
MS-501	Mississippi Balance of State CoC	Yes
MS-503	Gulf Port/Gulf Coast Regional CoC	Yes
MT-500	Montana Statewide CoC	Yes
NC-500	Winston-Salem/Forsyth County CoC	Yes
NC-501	Asheville/Buncombe County CoC	Yes
NC-502	Durham City & County CoC	Yes
NC-503	North Carolina Balance of State CoC	Yes
NC-504	Greensboro, High Point CoC	Yes
NC-505	Charlotte/Mecklenberg CoC	Yes
NC-506	Wilmington/Brunswick, New Hanover, Pender Counties CoC	Yes
NC-507	Raleigh/Wake County CoC	Yes
NC-509	Gastonia/Cleveland, Gaston, Lincoln Counties CoC	Yes
NC-511	Fayetteville/Cumberland County CoC	Yes
NC-513	Chapel Hill/Orange County CoC	Yes
NC-516	Northwest North Carolina CoC	Yes
ND-500	North Dakota Statewide CoC	Yes
NE-500	Nebraska Balance of State CoC	Yes
NE-501	Omaha, Council Bluffs CoC	Yes

CoC Number	CoC Name	Sample
NE-502	Lincoln CoC	Yes
NH-500	New Hampshire Balance of State CoC	Yes
NH-501	Manchester CoC	Yes
NH-502	Nashua/Hillsborough County CoC	Yes
NJ-500	Atlantic City & County CoC	Yes
NJ-501	Bergen County CoC	Yes
NJ-502	Burlington County CoC	Yes
NJ-503	Camden City & County/Gloucester, Cape May, Cumberland Counties CoC	Yes
NJ-504	Newark/Essex County CoC	Yes
NJ-506	Jersey City, Bayonne/Hudson County CoC	Yes
NJ-507	New Brunswick/Middlesex County CoC	Yes
NJ-508	Monmouth County CoC	Yes
NJ-509	Morris County CoC	Yes
NJ-510	Lakewood Township/Ocean County CoC	Yes
NJ-511	Paterson/Passaic County CoC	Yes
NJ-512	Salem County CoC	No
NJ-513	Somerset County CoC	Yes
NJ-514	Trenton/Mercer County CoC	Yes
NJ-515	Elizabeth/Union County CoC	Yes
NJ-516	Warren, Sussex, Hunterdon Counties CoC	Yes
NM-500	Albuquerque CoC	Yes
NM-501	New Mexico Balance of State CoC	Yes
NV-500	Las Vegas/Clark County CoC	Yes
NV-501	Reno, Sparks/Washoe County CoC	Yes
NV-502	Nevada Balance of State CoC	Yes
NY-500	Rochester, Irondequoit, Greece/Monroe County CoC	Yes
NY-501	Elmira/Steuben, Allegany, Livingston, Chemung, Schuyler Counties CoC	Yes
NY-503	Albany City & County CoC	Yes
NY-505	Syracuse, Auburn/Onondaga, Oswego, Cayuga Counties CoC	Yes
NY-507	Schenectady City & County CoC	Yes
NY-508	Buffalo, Niagara Falls/Erie, Niagara, Orleans, Genesee, Wyoming Counties CoC	Yes
NY-510	Ithaca/Tompkins County CoC	Yes
NY-511	Binghamton, Union Town/Broome, Otsego, Chenango, Delaware, Cortland, Tioga Count	Yes
NY-512	Troy/Rensselaer County CoC	Yes
NY-513	Wayne, Ontario, Seneca, Yates Counties CoC	Yes
NY-514	Jamestown, Dunkirk/Chautauqua County CoC	Yes
NY-518	Utica, Rome/Oneida, Madison Counties CoC	Yes
NY-519	Columbia, Greene Counties CoC	Yes
NY-520	Franklin, Essex Counties CoC	Yes

CoC Number	CoC Name	Sample
NY-522	Jefferson, Lewis, St. Lawrence Counties CoC	Yes
NY-523	Glens Falls, Saratoga Springs/Saratoga, Washington, Warren, Hamilton Counties Co	Yes
NY-525	New York Balance of State Continuum of Care	No
NY-600	New York City CoC	Yes
NY-601	Poughkeepsie/Dutchess County CoC	Yes
NY-602	Newburgh, Middletown/Orange County CoC	Yes
NY-603	Nassau, Suffolk Counties CoC	Yes
NY-604	Yonkers, Mount Vernon/Westchester County CoC	Yes
NY-606	Rockland County CoC	Yes
NY-608	Kingston/Ulster County CoC	Yes
OH-500	Cincinnati/Hamilton County CoC	Yes
OH-501	Toledo/Lucas County CoC	Yes
OH-502	Cleveland/Cuyahoga County CoC	Yes
OH-503	Columbus/Franklin County CoC	Yes
OH-504	Youngstown/Mahoning County CoC	Yes
OH-505	Dayton, Kettering/Montgomery County CoC	Yes
OH-506	Akron, Barberton/Summit County CoC	Yes
OH-507	Ohio Balance of State CoC	Yes
OH-508	Canton, Massillon, Alliance/Stark County CoC	Yes
OK-500	North Central Oklahoma CoC	Yes
OK-501	Tulsa City & County CoC	Yes
OK-502	Oklahoma City CoC	Yes
OK-503	Oklahoma Balance of State CoC	Yes
OK-504	Norman/Cleveland County CoC	Yes
OK-505	Northeast Oklahoma CoC	Yes
OK-506	Southwest Oklahoma Regional CoC	Yes
OK-507	Southeastern Oklahoma Regional CoC	Yes
OR-500	Eugene, Springfield/Lane County CoC	Yes
OR-501	Portland, Gresham/Multnomah County CoC	Yes
OR-502	Medford, Ashland/Jackson County CoC	Yes
OR-503	Central Oregon CoC	Yes
OR-504	Salem/Marion, Polk Counties CoC	No
OR-505	Oregon Balance of State CoC	Yes
OR-506	Hillsboro, Beaverton/Washington County CoC	Yes
OR-507	Clackamas County CoC	Yes
PA-500	Philadelphia CoC	Yes
PA-501	Harrisburg/Dauphin County CoC	Yes
PA-502	Upper Darby, Chester, Haverford/Delaware County CoC	Yes
PA-503	Wilkes-Barre, Hazleton/Luzerne County CoC	Yes

CoC Number	CoC Name	Sample
PA-504	Lower Merion, Norristown, Abington/Montgomery County CoC	Yes
PA-505	Chester County CoC	Yes
PA-506	Reading/Berks County CoC	Yes
PA-508	Scranton/Lackawanna County CoC	Yes
PA-509	Eastern Pennsylvania CoC	Yes
PA-510	Lancaster City & County CoC	Yes
PA-511	Bristol, Bensalem/Bucks County CoC	Yes
PA-512	York City & County CoC	Yes
PA-600	Pittsburgh, McKeesport, Penn Hills/Allegheny County CoC	Yes
PA-601	Western Pennsylvania CoC	Yes
PA-603	Beaver County CoC	Yes
PA-605	Erie City & County CoC	Yes
PR-502	Puerto Rico Balance of Commonwealth CoC	No
PR-503	South-Southeast Puerto Rico CoC	No
RI-500	Rhode Island Statewide CoC	Yes
SC-500	Charleston/Low Country CoC	Yes
SC-501	Greenville, Anderson, Spartanburg/Upstate CoC	Yes
SC-502	Columbia/Midlands CoC	Yes
SC-503	Myrtle Beach, Sumter City & County CoC	Yes
SD-500	South Dakota Statewide CoC	Yes
TN-500	Chattanooga/Southeast Tennessee CoC	Yes
TN-501	Memphis/Shelby County CoC	Yes
TN-502	Knoxville/Knox County CoC	Yes
TN-503	Central Tennessee CoC	Yes
TN-504	Nashville-Davidson County CoC	Yes
TN-506	Upper Cumberland CoC	Yes
TN-507	Jackson/West Tennessee CoC	Yes
TN-509	Appalachian Regional CoC	Yes
TN-510	Murfreesboro/Rutherford County CoC	Yes
TN-512	Morristown/Blount, Sevier, Campbell, Cocke Counties CoC	Yes
TX-500	San Antonio/Bexar County CoC	Yes
TX-503	Austin/Travis County CoC	Yes
TX-600	Dallas City & County, Irving CoC	Yes
TX-601	Fort Worth, Arlington/Tarrant County CoC	Yes
TX-603	El Paso City & County CoC	Yes
TX-604	Waco/McLennan County CoC	Yes
TX-607	Texas Balance of State CoC	Yes
TX-611	Amarillo CoC	Yes
TX-624	Wichita Falls/Wise, Palo Pinto, Wichita, Archer Counties CoC	Yes
TX-701	Bryan, College Station/Brazos Valley CoC	Yes

CoC Number	CoC Name	Sample
TX-700	Houston, Pasadena, Conroe/Harris, Ft. Bend, Montgomery, Counties CoC	Yes
UT-500	Salt Lake City & County CoC	Yes
UT-503	Utah Balance of State CoC	Yes
UT-504	Provo/Mountainland CoC	Yes
VA-500	Richmond/Henrico, Chesterfield, Hanover Counties CoC	Yes
VA-501	Norfolk, Chesapeake, Suffolk/Isle of Wight, Southampton Counties CoC	Yes
VA-502	Roanoke City & County, Salem CoC	Yes
VA-503	Virginia Beach CoC	Yes
VA-504	Charlottesville CoC	Yes
VA-505	Newport News, Hampton/Virginia Peninsula CoC	Yes
VA-507	Portsmouth CoC	Yes
VA-508	Lynchburg CoC	Yes
VA-513	Harrisburg, Winchester/Western Virginia CoC	Yes
VA-514	Fredericksburg/Spotsylvania, Stafford Counties CoC	Yes
VA-521	Virginia Balance of State CoC	Yes
VA-600	Arlington County CoC	Yes
VA-601	Fairfax County CoC	Yes
VA-602	Loudoun County CoC	Yes
VA-603	Alexandria CoC	Yes
VA-604	Prince William County CoC	Yes
VI-500	Virgin Islands CoC	No
VT-500	Vermont Balance of State CoC	Yes
VT-501	Burlington/Chittenden County CoC	Yes
WA-500	Seattle/King County CoC	Yes
WA-501	Washington Balance of State CoC	Yes
WA-502	Spokane City & County CoC	Yes
WA-503	Tacoma, Lakewood/Pierce County CoC	Yes
WA-504	Everett/Snohomish County CoC	Yes
WA-508	Vancouver/Clark County CoC	Yes
WI-500	Wisconsin Balance of State CoC	Yes
WI-501	Milwaukee City & County CoC	Yes
WI-502	Racine City & County CoC	Yes
WI-503	Madison/Dane County CoC	Yes
WV-500	Wheeling, Weirton Area CoC	Yes
WV-501	Huntington/Cabell, Wayne Counties CoC	Yes
WV-503	Charleston/Kanawha, Putnam, Boone, Clay Counties CoC	Yes
WV-508	West Virginia Balance of State CoC	Yes
WY-500	Wyoming Statewide CoC	Yes

Appendix III

Table 1

Fixed Effects General Feasible Generalized Least Square (GGLS) Models on Black Homelessness Rates, 2015-2020

	Black Homelessness		Sheltered Black Homelessness		Unsheltered Black Homelessness	
	Per 10,000 Black residents		Per 10,000 Black residents		Per 10,000 Black residents	
	b	s.e.	b	s.e.	b	s.e.
Logged % Black	-115.676***	14.495	-67.215***	9.918	-28.811***	8.500
Dissimilarity Index	-0.620^{+}	0.336	0.476*	0.231	-0.812***	0.200
PSH per 10,000 residents	0.281^{+}	0.158	-0.011	0.112	0.222*	0.093
% Crowded	11.932***	2.948	4.008*	2.027	5.661***	1.689
Rental vacancy rate	-0.456	0.814	-0.304	0.551	-0.028	0.474
% Rent burdened	0.882^{+}	0.522	0.869*	0.357	0.076	0.305
Black below poverty	-0.876***	0.235	-0.189	0.163	-0.606***	0.134
Black unemployment rate	1.025***	0.281	0.535**	0.191	0.312^{+}	0.168
Labor Market Index (0-10)	-2.370*	1.055	-1.187	0.742	-1.349*	0.612
% Hispanic	2.633	1.921	4.760***	1.306	-1.746	1.105
% 1-person household	2.503^{+}	1.305	0.69	0.893	1.187	0.771
% Public Assistance recipient	-2.102	2.418	-0.857	1.631	-1.988	1.437
Residential mobility rate	-1.386	1.064	-0.595	0.723	-0.402	0.614
Mean temperature	-0.068	0.231	-0.147	0.169	0.124	0.144
CoC-Year Observations	2229		2229		2229	

$^{+}p<0.10$. *$p<0.05$. **$p<0.01$. ***$p<0.001$.

Note. All models include Continuum of Care (CoC) fixed effects. The standard errors clustered at CoC are shown in the parentheses. All are unbalanced panel models (N = 372).

Table 2

Fixed Effects General Feasible Generalized Least Square (GGLS) Models on White Homelessness Rates, 2015-2020

	White Homelessness		Sheltered White Homelessness		Unsheltered White Homelessness	
	Per 10,000 White residents		Per 10,000 White residents		Per 10,000 White residents	
	b	s.e.	b	s.e.	b	s.e.
% Black	0.013	0.558	0.257	0.300	-0.069	0.418
Dissimilarity Index	0.06	0.062	0.123***	0.034	-0.181***	0.047
PSH per 10,000 residents	-0.077**	0.026	-0.060***	0.015	-0.018	0.019
% Crowded	0.834	0.580	0.354	0.317	0.08	0.417
Rental vacancy rate	0.281	0.172	0.022	0.091	0.254*	0.126
% Rent burdened	-0.017	0.115	0.008	0.062	0.144^{+}	0.083
White below poverty	1.104***	0.287	0.301*	0.150	0.552**	0.210
White unemployment rate	-0.214	0.214	0.079	0.118	-0.554***	0.156
Labor Market Index (0-10)	0.066	0.185	0.05	0.105	0.034	0.137
% Hispanic	1.065*	0.439	0.667**	0.235	-0.406	0.339
% 1-person household	0.597*	0.262	0.258^{+}	0.143	0.066	0.193
% Public Assistance recipient	-0.404	0.505	0.022	0.267	-0.755*	0.380
Residential mobility rate	-0.347	0.219	-0.108	0.117	-0.219	0.159
Mean temperature	-0.092*	0.045	-0.137***	0.024	0.023	0.026
CoC-Year Observations	2229		2229		2229	

$^{+}p<0.10$. *$p<0.05$. **$p<0.01$. ***$p<0.001$.

Note. All models include Continuum of Care (CoC) fixed effects. The standard errors clustered at CoC are shown in the parentheses. All are unbalanced panel models (N = 372).

Table 3

Fixed Effects General Feasible Generalized Least Square (GGLS) Models on Gaps in Homelessness Rates, 2015-2020

	Black-White Homelessness Rates Gap		Sheltered Black-White Homelessness Rates Gap		Unsheltered Black-White Homelessness Rates Gap	
	b	s.e.	b	s.e.	b	s.e.
% Black	-120.895***	13.36	-81.483***	9.416	-26.708***	7.435
Dissimilarity Index	-0.828**	0.317	0.031	0.227	-0.61***	0.181
PSH per 10,000 residents	0.357*	0.152	0.047	0.11	0.211*	0.088
% Crowded	10.776***	2.801	3.669^{+}	1.987	4.758**	1.514
Rental vacancy rate	-0.461	0.762	-0.454	0.538	0.013	0.417
% Rent burdened	1.087*	0.466	1.151***	0.33	-0.061	0.257
Black/White below poverty ratio	-5.785*	2.308	-1.057	1.648	-4.627***	1.281
Black/White unemployment ratio	5.74***	1.59	3.086**	1.137	2.893**	0.93
Labor Market Index (0-10)	-1.771^{+}	1.014	-0.571	0.735	-1.262*	0.566
% Hispanic	0.976	1.725	3.911**	1.203	-1.98*	0.943
% 1-person household	1.052	1.223	-0.722	0.863	1.141^{+}	0.684
% Public Assistance recipient	-3.058	2.23	-1.421	1.565	-0.951	1.253
Residential mobility rate	-0.545	0.991	-0.22	0.698	-0.184	0.539
Mean temperature	0.024	0.233	0.005	0.169	0.108	0.136
CoC-Year Observations	2229		2229		2229	

*$^{+}$p<0.10. *p<0.05. **p <0.01. ***p<0.001.*

Note. All models include Continuum of Care (CoC) fixed effects. The standard errors clustered at CoC are shown in the parentheses. All are unbalanced panel models (N = 372).

Table 4

Random Effects Models on Black Homelessness Rates, 2015-2020

	Dependent variable:		
	Black Homelessness Per 10,000 Black residents	Sheltered Black Homelessness Per 10,000 Black residents	Unsheltered Black Homelessness Per 10,000 Black residents
Logged % Black	-28.154*** (2.330)	-15.324*** (1.533)	-12.689*** (1.668)
Dissimilarity Index	-0.692*** (0.215)	-0.091 (0.143)	-0.616*** (0.155)
Permanent Supportive Housing	1.323*** (0.148)	0.746*** (0.099)	0.615*** (0.107)
Percent Crowded	15.607*** (1.721)	3.823*** (1.147)	11.819*** (1.240)
Rental Vacancy Rate	-2.167*** (0.572)	-1.620*** (0.385)	-0.579 (0.414)
Percent Rent Burdened	0.683** (0.346)	0.543** (0.232)	0.132 (0.250)
Percent Black Below Poverty	-0.545*** (0.201)	-0.418*** (0.135)	-0.124 (0.146)
Black Unemployment Rate	1.303*** (0.235)	0.642*** (0.159)	0.666*** (0.171)
Labor Market Index (0-10)	-2.774*** (1.051)	-1.385* (0.710)	-1.367* (0.762)
Percent Hispanic	-0.730*** (0.278)	-0.250 (0.184)	-0.494** (0.200)
Percent 1-Person Household	4.056*** (0.599)	2.355*** (0.399)	1.685*** (0.431)
Percent PA Recipients	-3.593** (1.568)	0.702 (1.052)	-4.336*** (1.134)
Residential Mobility	-1.470** (0.574)	-0.375 (0.383)	-1.108*** (0.414)
Mean Temperature	0.030 (0.249)	-0.530*** (0.168)	0.565*** (0.180)
Intercept	15.815 (22.039)	-2.463 (14.665)	19.461 (15.870)
Observations	2,229	2,229	2,229

Note: *p**p***p<0.01

Table 5

Random Effects Models on White Homelessness Rates, 2015-2020

	Dependent variable:		
	White Homelessness Per 10,000 White residents	Sheltered White Homelessness Per 10,000 White residents	Unsheltered White Homelessness Per 10,000 White residents
Percent Black	-0.362*** (0.068)	-0.133*** (0.044)	-0.244*** (0.041)
Dissimilarity Index	-0.073 (0.062)	-0.003 (0.043)	-0.111*** (0.040)
Permanent Supportive Housing	0.195*** (0.042)	0.110*** (0.030)	0.125*** (0.027)
Percent Crowded	2.831*** (0.508)	0.520 (0.352)	2.341*** (0.325)
Rental Vacancy Rate	0.261 (0.165)	0.194 (0.119)	0.094 (0.108)
Percent Rent Burdened	0.189 (0.116)	0.142* (0.082)	0.072 (0.075)
Percent White Below Poverty	0.936*** (0.198)	0.187 (0.135)	0.636*** (0.125)
White Unemployment Rate	-0.430** (0.186)	-0.208 (0.133)	-0.186 (0.122)
Labor Market Index (0-10)	-0.611** (0.288)	-0.496** (0.209)	-0.072 (0.190)
Percent Hispanic	0.245*** (0.086)	0.177*** (0.058)	0.037 (0.054)
Percent 1-Person Household	1.030*** (0.186)	0.565*** (0.127)	0.444*** (0.118)
Percent PA Recipients	0.173 (0.449)	0.941*** (0.319)	-0.746** (0.292)
Residential Mobility	-0.339** (0.168)	0.016 (0.117)	-0.340*** (0.107)
Mean Temperature	-0.004 (0.069)	-0.118** (0.050)	0.149*** (0.045)
Intercept	-30.389*** (6.751)	-19.647*** (4.642)	-8.890** (4.287)
Observations	2,229	2,229	2,229

Note: *p**p***p<0.01

Table 6

Random Effects Models on Black-White Gaps Homelessness Rates, 2015-2020

	Dependent variables:		
	Black-White Homelessness Rates Gap	Sheltered Black-White Homelessness Rates Gap	Unsheltered Black-White Homelessness Rates Gap
Logged % Black	-22.753*** (2.118)	-13.382*** (1.395)	-9.013*** (1.450)
Dissimilarity Index	-0.547*** (0.199)	-0.133 (0.134)	-0.444*** (0.136)
Permanent Supportive Housing	1.097*** (0.137)	0.652*** (0.094)	0.490*** (0.094)
Percent Crowded	13.187*** (1.598)	3.522*** (1.080)	9.638*** (1.093)
Rental Vacancy Rate	-2.032*** (0.529)	-1.596*** (0.366)	-0.497 (0.361)
Percent Rent Burdened	1.000*** (0.293)	0.624*** (0.202)	0.344* (0.200)
Black/White Below Poverty Ratio	0.851 (1.867)	1.358 (1.289)	-0.025 (1.274)
Black/White Unemployment Ratio	4.522*** (1.558)	2.798** (1.096)	1.626 (1.063)
Labor Market Index (0-10)	-2.417** (0.982)	-1.016 (0.682)	-1.372** (0.670)
Percent Hispanic	-0.999*** (0.255)	-0.425** (0.170)	-0.566*** (0.175)
Percent 1-Person Household	1.998*** (0.545)	1.280*** (0.367)	0.736** (0.373)
Percent PA Recipients	-2.923** (1.431)	0.052 (0.979)	-3.005*** (0.977)
Residential Mobility	-1.113** (0.521)	-0.451 (0.353)	-0.680* (0.356)
Mean Temperature	-0.068 (0.233)	-0.411** (0.162)	0.313** (0.159)
Intercept	20.662 (20.062)	6.482 (13.516)	15.013 (13.717)
Observations	2,229	2,229	2,229

Note: *p**p***p<0.01

Appendix IV

Table 1

Multiple Metro Continua of Care nested within a single County create a Pseudo CoC

CoC Number	CoC Name	Pseudo CoC
California		
CA-606	Long Beach CoC	CA-600a
CA-607	Pasadena CoC	CA-600a
CA-612	Glendale CoC	CA-600a
CA-600	Los Angeles City & County CoC	CA-600a
Georgia		
GA-502	Fulton County CoC	GA-500a
GA-500	Atlanta CoC	GA-500a
Illinois		
IL-510	Chicago CoC	IL-511a
IL-511	Cook County CoC	IL-511a
Massachusetts		
MA-510	Gloucester, Haverhill, Salem/Essex County CoC	MA-510a
MA-502	Lynn CoC	MA-510a
MA-505	New Bedford CoC	MA-519a
MA-515	Fall River CoC	MA-519a
MA-519	Attleboro, Taunton/Bristol County CoC	MA-519a
MA-508	Lowell CoC	MA-517a
MA-509	Cambridge CoC	MA-517a
MA-517	Somerville CoC	MA-517a
MA-510 and MA-516 Shared Jurisdiction		MA-517a
Michigan		
MI-501	Detroit CoC	MI-501a
MI-502	Dearborn, Dearborn Heights, Westland/Wayne County CoC	MI-501a
New Hampshire		
NH-501	Manchester CoC	NH-501a
NH-502	Nashua/Hillsborough County CoC	NH-501a
n = 21		n = 8

Appendix V

Table 1

Continua of Care in 2019 Included in and Excluded from the Sample.

CoC Number	CoC Name	CoC Category	Remarks
AK-500	Anchorage CoC	Other Largely Urban CoC	Excluded
AK-501	Alaska Balance of State CoC	Largely Rural CoC	Excluded
AL-500	Birmingham/Jefferson, St. Clair, Shelby Counties CoC	Largely Suburban CoC	Included
AL-501	Mobile City & County/Baldwin County CoC	Other Largely Urban CoC	Included
AL-502	Florence/Northwest Alabama CoC	Largely Rural CoC	Excluded
AL-503	Huntsville/North Alabama CoC	Other Largely Urban CoC	Included
AL-504	Montgomery City & County CoC	Other Largely Urban CoC	Included
AL-505	Gadsden/Northeast Alabama CoC	Largely Rural CoC	Excluded
AL-506	Tuscaloosa City & County CoC	Other Largely Urban CoC	Included
AL-507	Alabama Balance of State CoC	Largely Rural CoC	Excluded
AR-500	Little Rock/Central Arkansas CoC	Other Largely Urban CoC	Included
AR-501	Fayetteville/Northwest Arkansas CoC	Other Largely Urban CoC	Included
AR-503	Arkansas Balance of State CoC	Largely Rural CoC	Excluded
AR-505	Southeast Arkansas CoC	Largely Rural CoC	Excluded
AR-508	Fort Smith CoC	Largely Rural CoC	Excluded
AZ-500	Arizona Balance of State CoC	Largely Rural CoC	Excluded
AZ-501	Tucson/Pima County CoC	Major City CoC	Included
AZ-502	Phoenix, Mesa/Maricopa County CoC	Major City CoC	Included
CA-500	San Jose/Santa Clara City & County CoC	Major City CoC	Included
CA-501	San Francisco CoC	Major City CoC	Included
CA-502	Oakland, Berkeley/Alameda County CoC	Major City CoC	Included
CA-503	Sacramento City & County CoC	Major City CoC	Included
CA-504	Santa Rosa, Petaluma/Sonoma County CoC	Largely Suburban CoC	Included
CA-505	Richmond/Contra Costa County CoC	Largely Suburban CoC	Included
CA-506	Salinas/Monterey, San Benito Counties CoC	Largely Rural CoC	Excluded
CA-507	Marin County CoC	Largely Suburban CoC	Included
CA-508	Watsonville/Santa Cruz City & County CoC	Largely Suburban CoC	Included
CA-509	Mendocino County CoC	Largely Rural CoC	Excluded
CA-510	Turlock, Modesto/Stanislaus County CoC	Largely Suburban CoC	Included
CA-511	Stockton/San Joaquin County CoC	Other Largely Urban CoC	Included
CA-512	Daly/San Mateo County CoC	Largely Suburban CoC	Included

Note on Remarks:
"Excluded" indicates CoCs excluded from the study sample,
"Included" indicates CoCs in both primary analytics sample and sample including Included eviction filing,
"Included" indicates CoCs included in the sample including Included eviction filing only.

CoC Number	CoC Name	CoC Category	Remarks
CA-513	Visalia/Kings, Tulare Counties CoC	Other Largely Urban CoC	Included
CA-514	Fresno City & County/Madera County CoC	Major City CoC	Included
CA-515	Roseville, Rocklin/Placer County CoC	Largely Suburban CoC	Included
CA-516	Redding/Shasta, Siskiyou, Lassen, Plumas, Del Norte, Modoc, Sierra Counties CoC	Largely Rural CoC	Excluded
CA-517	Napa City & County CoC	Other Largely Urban CoC	Included
CA-518	Vallejo/Solano County CoC	Other Largely Urban CoC	Included
CA-519	Chico, Paradise/Butte County CoC	Largely Rural CoC	Excluded
CA-520	Merced City & County CoC	Largely Suburban CoC	Included
CA-521	Davis, Woodland/Yolo County CoC	Largely Suburban CoC	Included
CA-522	Humboldt County CoC	Largely Rural CoC	Excluded
CA-523	Colusa, Glenn, Trinity Counties CoC	Largely Rural CoC	Excluded
CA-524	Yuba City & County/Sutter County CoC	Largely Suburban CoC	Included
CA-525	El Dorado County CoC	Largely Suburban CoC	Included
CA-526	Amador, Calaveras, Mariposa, Tuolumne Counties CoC	Largely Rural CoC	Excluded
CA-527	Tehama County CoC	Largely Rural CoC	Excluded
CA-529	Lake County CoC	Largely Rural CoC	Excluded
CA-530	Alpine, Inyo, Mono Counties CoC	Largely Rural CoC	Excluded
CA-531	Nevada County CoC	Largely Rural CoC	Excluded
CA-600	Los Angeles City & County CoC	Major City CoC	Included
CA-601	San Diego City and County CoC	Major City CoC	Included
CA-602	Santa Ana, Anaheim/Orange County CoC	Largely Suburban CoC	Included
CA-603	Santa Maria/Santa Barbara County CoC	Largely Suburban CoC	Included
CA-604	Bakersfield/Kern County CoC	Other Largely Urban CoC	Included
CA-606	Long Beach CoC	Major City CoC	Excluded
CA-607	Pasadena CoC	Other Largely Urban CoC	Excluded
CA-608	Riverside City & County CoC	Largely Suburban CoC	Included
CA-609	San Bernardino City & County CoC	Largely Suburban CoC	Included
CA-611	Oxnard, San Buenaventura/Ventura County CoC	Other Largely Urban CoC	Included
CA-612	Glendale CoC	Other Largely Urban CoC	Excluded
CA-613	Imperial County CoC	Largely Suburban CoC	Included
CA-614	San Luis Obispo County CoC	Largely Suburban CoC	Included
CO-500	Colorado Balance of State CoC	Largely Rural CoC	Excluded
CO-503	Metropolitan Denver CoC	Major City CoC	Included
CO-504	Colorado Springs/El Paso County CoC	Major City CoC	Included
CT-503	Bridgeport, Stamford, Norwalk, Danbury/Fairfield County CoC	Other Largely Urban CoC	Included
CT-505	Connecticut Balance of State CoC	Largely Suburban CoC	Excluded

CoC Number	CoC Name	CoC Category	Remarks
DC-500	District of Columbia CoC	Major City CoC	Included
DE-500	Delaware Statewide CoC	Largely Suburban CoC	Included
FL-500	Sarasota, Bradenton/Manatee, Sarasota Counties CoC	Largely Suburban CoC	Included
FL-501	Tampa/Hillsborough County CoC	Major City CoC	Included
FL-502	St. Petersburg, Clearwater, Largo/Pinellas County CoC	Largely Suburban CoC	Included
FL-503	Lakeland, Winterhaven/Polk County CoC	Largely Suburban CoC	Included
FL-504	Deltona, Daytona Beach/Volusia, Flagler Counties CoC	Largely Suburban CoC	Included
FL-505	Fort Walton Beach/Okaloosa, Walton Counties CoC	Largely Suburban CoC	Included
FL-506	Tallahassee/Leon County CoC	Other Largely Urban CoC	Included
FL-507	Orlando/Orange, Osceola, Seminole Counties CoC	Largely Suburban CoC	Included
FL-508	Gainesville/Alachua, Putnam Counties CoC	Largely Rural CoC	Excluded
FL-509	Fort Pierce/St. Lucie, Indian River, Martin Counties CoC	Largely Suburban CoC	Included
FL-510	Jacksonville-Duval, Clay Counties CoC	Major City CoC	Included
FL-511	Pensacola/Escambia, Santa Rosa Counties CoC	Largely Suburban CoC	Included
FL-512	St. Johns County CoC	Largely Suburban CoC	Included
FL-513	Palm Bay, Melbourne/Brevard County CoC	Largely Suburban CoC	Included
FL-514	Ocala/Marion County CoC	Largely Suburban CoC	Included
FL-515	Panama City/Bay, Jackson Counties CoC	Largely Rural CoC	Excluded
FL-517	Hendry, Hardee, Highlands Counties CoC	Largely Rural CoC	Excluded
FL-518	Columbia, Hamilton, Lafayette, Suwannee Counties CoC	Largely Rural CoC	Excluded
FL-519	Pasco County CoC	Largely Suburban CoC	Included
FL-520	Citrus, Hernando, Lake, Sumter Counties CoC	Largely Suburban CoC	Included
FL-600	Miami-Dade County CoC	Major City CoC	Included
FL-601	Ft Lauderdale/Broward County CoC	Largely Suburban CoC	Included
FL-602	Punta Gorda/Charlotte County CoC	Largely Suburban CoC	Included
FL-603	Ft Myers, Cape Coral/Lee County CoC	Largely Suburban CoC	Included
FL-604	Monroe County CoC	Largely Rural CoC	Excluded
FL-605	West Palm Beach/Palm Beach County CoC	Largely Suburban CoC	Included
FL-606	Naples/Collier County CoC	Largely Suburban CoC	Included
GA-500	Atlanta CoC	Major City CoC	Included
GA-501	Georgia Balance of State CoC	Largely Rural CoC	Excluded
GA-502	Fulton County CoC	Largely Suburban CoC	Excluded
GA-503	Athens-Clarke County CoC	Other Largely Urban CoC	Included

CoC Number	CoC Name	CoC Category	Remarks
GA-504	Augusta-Richmond County CoC	Other Largely Urban CoC	Included
GA-505	Columbus-Muscogee CoC	Other Largely Urban CoC	Included
GA-506	Marietta/Cobb County CoC	Largely Suburban CoC	Included
GA-507	Savannah/Chatham County CoC	Other Largely Urban CoC	Included
GA-508	DeKalb County CoC	Largely Suburban CoC	Included
GU-500	Guam CoC	Largely Rural CoC	Excluded
HI-500	Hawaii Balance of State CoC	Largely Rural CoC	Excluded
HI-501	Honolulu City and County CoC	Largely Suburban CoC	Excluded
IA-500	Sioux City/Dakota, Woodbury Counties CoC	Other Largely Urban CoC	Included
IA-501	Iowa Balance of State CoC	Largely Rural CoC	Excluded
IA-502	Des Moines/Polk County CoC	Other Largely Urban CoC	Included
ID-500	Boise/Ada County CoC	Other Largely Urban CoC	Included
ID-501	Idaho Balance of State CoC	Largely Rural CoC	Excluded
IL-500	McHenry County CoC	Largely Suburban CoC	Included
IL-501	Rockford/DeKalb, Winnebago, Boone Counties CoC	Largely Suburban CoC	Included
IL-502	Waukegan, North Chicago/Lake County CoC	Largely Suburban CoC	Included
IL-503	Champaign, Urbana, Rantoul/Champaign County CoC	Other Largely Urban CoC	Included
IL-504	Madison County CoC	Largely Suburban CoC	Included
IL-506	Joliet, Bolingbrook/Will County CoC	Largely Suburban CoC	Included
IL-507	Peoria, Pekin/Fulton, Tazewell, Peoria, Woodford Counties CoC	Largely Suburban CoC	Included
IL-508	East St. Louis, Belleville/St. Clair County CoC	Largely Suburban CoC	Included
IL-510	Chicago CoC	Major City CoC	Excluded
IL-511	Cook County CoC	Largely Suburban CoC	Included
IL-512	Bloomington/Central Illinois CoC	Largely Rural CoC	Excluded
IL-513	Springfield/Sangamon County CoC	Other Largely Urban CoC	Included
IL-514	DuPage County CoC	Largely Suburban CoC	Included
IL-515	South Central Illinois CoC	Largely Rural CoC	Excluded
IL-516	Decatur/Macon County CoC	Other Largely Urban CoC	Included
IL-517	Aurora, Elgin/Kane County CoC	Largely Suburban CoC	Included
IL-518	Rock Island, Moline/Northwestern Illinois CoC	Largely Rural CoC	Excluded
IL-519	West Central Illinois CoC	Largely Rural CoC	Excluded
IL-520	Southern Illinois CoC	Largely Rural CoC	Excluded
IN-502	Indiana Balance of State CoC	Largely Rural CoC	Excluded
IN-503	Indianapolis CoC	Major City CoC	Included

CoC Number	CoC Name	CoC Category	Remarks
KS-502	Wichita/Sedgwick County CoC	Other Largely Urban CoC	Included
KS-503	Topeka/Shawnee County CoC	Other Largely Urban CoC	Included
KS-505	Overland Park, Shawnee/Johnson County CoC	Largely Suburban CoC	Included
KS-507	Kansas Balance of State CoC	Largely Rural CoC	Excluded
KY-500	Kentucky Balance of State CoC	Largely Rural CoC	Excluded
KY-501	Louisville-Jefferson County CoC	Major City CoC	Included
KY-502	Lexington-Fayette County CoC	Other Largely Urban CoC	Included
LA-500	Lafayette/Acadiana CoC	Largely Rural CoC	Excluded
LA-502	Shreveport, Bossier/Northwest Louisiana CoC	Other Largely Urban CoC	Included
LA-503	New Orleans/Jefferson Parish CoC	Major City CoC	Included
LA-505	Monroe/Northeast Louisiana CoC	Largely Rural CoC	Excluded
LA-506	Slidell/Southeast Louisiana CoC	Largely Suburban CoC	Included
LA-507	Alexandria/Central Louisiana CoC	Largely Rural CoC	Excluded
LA-509	Louisiana Balance of State CoC	Largely Suburban CoC	Excluded
MA-500	Boston CoC	Major City CoC	Included
MA-502	Lynn CoC	Largely Suburban CoC	Excluded
MA-503	Cape Cod Islands CoC	Largely Suburban CoC	Included
MA-504	Springfield/Hampden County CoC	Largely Suburban CoC	Included
MA-505	New Bedford CoC	Largely Suburban CoC	Excluded
MA-506	Worcester City & County CoC	Largely Suburban CoC	Included
MA-507	Pittsfield/Berkshire, Franklin, Hampshire Counties CoC	Largely Suburban CoC	Included
MA-508	Lowell CoC	Largely Suburban CoC	Excluded
MA-509	Cambridge CoC	Other Largely Urban CoC	Excluded
MA-510	Gloucester, Haverhill, Salem/Essex County CoC	Largely Suburban CoC	Included
MA-511	Quincy, Brockton, Weymouth, Plymouth City and County CoC	Largely Suburban CoC	Included
MA-515	Fall River CoC	Largely Suburban CoC	Excluded
MA-516	Massachusetts Balance of State CoC	Largely Suburban CoC	Excluded
MA-517	Somerville CoC	Largely Suburban CoC	Included
MA-519	Attleboro, Taunton/Bristol County CoC	Largely Suburban CoC	Included
MD-500	Cumberland/Allegany County CoC	Largely Suburban CoC	Excluded
MD-501	Baltimore CoC	Major City CoC	Excluded
MD-502	Harford County CoC	Largely Suburban CoC	Excluded
MD-503	Annapolis/Anne Arundel County CoC	Largely Suburban CoC	Excluded
MD-504	Howard County CoC	Largely Suburban CoC	Excluded
MD-505	Baltimore County CoC	Largely Suburban CoC	Excluded

CoC Number	CoC Name	CoC Category	Remarks
MD-506	Carroll County CoC	Largely Suburban CoC	Excluded
MD-507	Cecil County CoC	Largely Suburban CoC	Excluded
MD-508	Charles, Calvert, St.Mary's Counties CoC	Largely Suburban CoC	Excluded
MD-509	Frederick City & County CoC	Largely Suburban CoC	Excluded
MD-510	Garrett County CoC	Largely Rural CoC	Excluded
MD-511	Mid-Shore Regional CoC	Largely Rural CoC	Excluded
MD-512	Hagerstown/Washington County CoC	Largely Suburban CoC	Excluded
MD-513	Wicomico, Somerset, Worcester Counties CoC	Largely Rural CoC	Excluded
MD-600	Prince George's County CoC	Largely Suburban CoC	Excluded
MD-601	Montgomery County CoC	Largely Suburban CoC	Excluded
ME-500	Maine Statewide CoC	Largely Rural CoC	Excluded
MI-500	Michigan Balance of State CoC	Largely Rural CoC	Excluded
MI-501	Detroit CoC	Major City CoC	Included
MI-502	Dearborn, Dearborn Heights, Westland/Wayne County CoC	Largely Suburban CoC	Excluded
MI-503	St. Clair Shores, Warren/Macomb County CoC	Largely Suburban CoC	Included
MI-504	Pontiac, Royal Oak/Oakland County CoC	Largely Suburban CoC	Included
MI-505	Flint/Genesee County CoC	Largely Suburban CoC	Included
MI-506	Grand Rapids, Wyoming/Kent County CoC	Other Largely Urban CoC	Included
MI-507	Portage, Kalamazoo City & County CoC	Other Largely Urban CoC	Included
MI-508	Lansing, East Lansing/Ingham County CoC	Other Largely Urban CoC	Included
MI-509	Washtenaw County CoC	Largely Suburban CoC	Included
MI-510	Saginaw City & County CoC	Largely Suburban CoC	Included
MI-511	Lenawee County CoC	Largely Rural CoC	Excluded
MI-512	Grand Traverse, Antrim, Leelanau Counties CoC	Largely Rural CoC	Excluded
MI-513	Marquette, Alger Counties CoC	Largely Rural CoC	Excluded
MI-514	Battle Creek/Calhoun County CoC	Other Largely Urban CoC	Included
MI-515	Monroe City & County CoC	Largely Suburban CoC	Included
MI-516	Norton Shores, Muskegon City & County CoC	Largely Suburban CoC	Included
MI-517	Jackson City & County CoC	Largely Rural CoC	Excluded
MI-518	Livingston County CoC	Largely Suburban CoC	Included
MI-519	Holland/Ottawa County CoC	Largely Suburban CoC	Included
MI-523	Eaton County CoC	Largely Suburban CoC	Included
MN-500	Minneapolis/Hennepin County CoC	Major City CoC	Included
MN-501	Saint Paul/Ramsey County CoC	Other Largely Urban CoC	Included
MN-502	Rochester/Southeast Minnesota CoC	Largely Rural CoC	Excluded

CoC Number	CoC Name	CoC Category	Remarks
MN-503	Dakota, Anoka, Washington, Scott, Carver Counties	Largely Suburban CoC	Included
MN-504	Northeast Minnesota CoC	Largely Rural CoC	Excluded
MN-505	St. Cloud/Central Minnesota CoC	Largely Rural CoC	Excluded
MN-506	Northwest Minnesota CoC	Largely Rural CoC	Excluded
MN-508	Moorhead/West Central Minnesota CoC	Largely Rural CoC	Excluded
MN-509	Duluth/St.Louis County CoC	Largely Rural CoC	Excluded
MN-511	Southwest Minnesota CoC	Largely Rural CoC	Excluded
MO-500	St. Louis County CoC	Largely Suburban CoC	Included
MO-501	St.Louis City CoC	Other Largely Urban CoC	Included
MO-503	St. Charles City & County, Lincoln, Warren Counties CoC	Largely Suburban CoC	Included
MO-600	Springfield/Greene, Christian, Webster Counties CoC	Other Largely Urban CoC	Included
MO-602	Joplin/Jasper, Newton Counties CoC	Largely Rural CoC	Excluded
MO-603	St. Joseph/Andrew, Buchanan, DeKalb Counties CoC	Other Largely Urban CoC	Included
MO-604a	Kansas City, Independence, Lee‚Äôs Summit/Jackson, Wyandotte Counties, MO & KS	Major City CoC	Excluded
MO-606	Missouri Balance of State CoC	Largely Rural CoC	Excluded
MP-500	Northern Mariana Islands CoC	Largely Rural CoC	Excluded
MS-500	Jackson/Rankin, Madison Counties CoC	Largely Suburban CoC	Included
MS-501	Mississippi Balance of State CoC	Largely Rural CoC	Excluded
MS-503	Gulf Port/Gulf Coast Regional CoC	Largely Rural CoC	Excluded
MT-500	Montana Statewide CoC	Largely Rural CoC	Excluded
NA	Total	NA	Excluded
NC-500	Winston-Salem/Forsyth County CoC	Other Largely Urban CoC	Included
NC-501	Asheville/Buncombe County CoC	Largely Suburban CoC	Included
NC-502	Durham City & County CoC	Other Largely Urban CoC	Included
NC-503	North Carolina Balance of State CoC	Largely Rural CoC	Excluded
NC-504	Greensboro, High Point CoC	Other Largely Urban CoC	Included
NC-505	Charlotte/Mecklenberg CoC	Major City CoC	Included
NC-506	Wilmington/Brunswick, New Hanover, Pender Counties CoC	Largely Suburban CoC	Included
NC-507	Raleigh/Wake County CoC	Major City CoC	Included
NC-509	Gastonia/Cleveland, Gaston, Lincoln Counties CoC	Largely Suburban CoC	Included
NC-511	Fayetteville/Cumberland County CoC	Other Largely Urban CoC	Included
NC-513	Chapel Hill/Orange County CoC	Other Largely Urban CoC	Included
NC-516	Northwest North Carolina CoC	Largely Rural CoC	Excluded

CoC Number	CoC Name	CoC Category	Remarks
ND-500	North Dakota Statewide CoC	Largely Rural CoC	Excluded
NE-500	Nebraska Balance of State CoC	Largely Rural CoC	Excluded
NE-501	Omaha, Council Bluffs CoC	Major City CoC	Included
NE-502	Lincoln CoC	Other Largely Urban CoC	Included
NH-500	New Hampshire Balance of State CoC	Largely Rural CoC	Excluded
NH-501	Manchester CoC	Other Largely Urban CoC	Included
NH-502	Nashua/Hillsborough County CoC	Largely Suburban CoC	Excluded
NJ-500	Atlantic City & County CoC	Largely Suburban CoC	Included
NJ-501	Bergen County CoC	Largely Suburban CoC	Included
NJ-502	Burlington County CoC	Largely Suburban CoC	Included
NJ-503	Camden City & County/Gloucester, Cape May, Cumberland Counties CoC	Largely Suburban CoC	Included
NJ-504	Newark/Essex County CoC	Largely Suburban CoC	Included
NJ-506	Jersey City, Bayonne/Hudson County CoC	Largely Suburban CoC	Included
NJ-507	New Brunswick/Middlesex County CoC	Largely Suburban CoC	Included
NJ-508	Monmouth County CoC	Largely Suburban CoC	Included
NJ-509	Morris County CoC	Largely Suburban CoC	Included
NJ-510	Lakewood Township/Ocean County CoC	Largely Suburban CoC	Included
NJ-511	Paterson/Passaic County CoC	Largely Suburban CoC	Included
NJ-512	Salem County CoC	Largely Suburban CoC	Included
NJ-513	Somerset County CoC	Largely Suburban CoC	Included
NJ-514	Trenton/Mercer County CoC	Largely Suburban CoC	Included
NJ-515	Elizabeth/Union County CoC	Largely Suburban CoC	Included
NJ-516	Warren, Sussex, Hunterdon Counties CoC	Largely Suburban CoC	Included
NM-500	Albuquerque CoC	Major City CoC	Included
NM-501	New Mexico Balance of State CoC	Largely Rural CoC	Excluded
NV-500	Las Vegas/Clark County CoC	Major City CoC	Included
NV-501	Reno, Sparks/Washoe County CoC	Other Largely Urban CoC	Included
NV-502	Nevada Balance of State CoC	Largely Rural CoC	Excluded
NY-500	Rochester, Irondequoit, Greece/Monroe County CoC	Largely Suburban CoC	Included
NY-501	Elmira/Steuben, Allegany, Livingston, Chemung, Schuyler Counties CoC	Largely Rural CoC	Excluded
NY-503	Albany City & County CoC	Largely Suburban CoC	Included
NY-504	Cattaragus County CoC	Largely Rural CoC	Excluded
NY-505	Syracuse, Auburn/Onondaga, Oswego, Cayuga Counties CoC	Largely Suburban CoC	Included
NY-507	Schenectady City & County CoC	Largely Suburban CoC	Included
NY-508	Buffalo, Niagara Falls/Erie, Niagara, Orleans, Genesee, Wyoming Counties CoC	Largely Suburban CoC	Included

CoC Number	CoC Name	CoC Category	Remarks
NY-510	Ithaca/Tompkins County CoC	Largely Rural CoC	Excluded
NY-511	Binghamton, Union Town/Broome, Otsego, Chenango, Delaware, Cortland, Tioga Count	Largely Rural CoC	Excluded
NY-512	Troy/Rensselaer County CoC	Largely Suburban CoC	Included
NY-513	Wayne, Ontario, Seneca, Yates Counties CoC	Largely Rural CoC	Excluded
NY-514	Jamestown, Dunkirk/Chautauqua County CoC	Largely Rural CoC	Excluded
NY-516	Clinton County CoC	Largely Rural CoC	Excluded
NY-518	Utica, Rome/Oneida, Madison Counties CoC	Largely Rural CoC	Excluded
NY-519	Columbia, Greene Counties CoC	Largely Rural CoC	Excluded
NY-520	Franklin, Essex Counties CoC	Largely Rural CoC	Excluded
NY-522	Jefferson, Lewis, St. Lawrence Counties CoC	Largely Rural CoC	Excluded
NY-523	Glens Falls, Saratoga Springs/Saratoga, Washington, Warren, Hamilton Counties Co	Largely Suburban CoC	Included
NY-525	New York Balance of State Continuum of Care	Largely Rural CoC	Excluded
NY-600	New York City CoC	Major City CoC	Included
NY-601	Poughkeepsie/Dutchess County CoC	Largely Suburban CoC	Included
NY-602	Newburgh, Middletown/Orange County CoC	Largely Suburban CoC	Included
NY-603	Nassau, Suffolk Counties CoC	Largely Suburban CoC	Included
NY-604	Yonkers, Mount Vernon/Westchester County CoC	Largely Suburban CoC	Included
NY-606	Rockland County CoC	Largely Suburban CoC	Included
NY-607	Sullivan County CoC	Largely Rural CoC	Excluded
NY-608	Kingston/Ulster County CoC	Largely Rural CoC	Excluded
OH-500	Cincinnati/Hamilton County CoC	Largely Suburban CoC	Included
OH-501	Toledo/Lucas County CoC	Other Largely Urban CoC	Included
OH-502	Cleveland/Cuyahoga County CoC	Largely Suburban CoC	Included
OH-503	Columbus/Franklin County CoC	Major City CoC	Included
OH-504	Youngstown/Mahoning County CoC	Other Largely Urban CoC	Included
OH-505	Dayton, Kettering/Montgomery County CoC	Largely Suburban CoC	Included
OH-506	Akron, Barberton/Summit County CoC	Largely Suburban CoC	Included
OH-507	Ohio Balance of State CoC	Largely Rural CoC	Excluded
OH-508	Canton, Massillon, Alliance/Stark County CoC	Largely Suburban CoC	Included
OK-500	North Central Oklahoma CoC	Largely Rural CoC	Excluded
OK-501	Tulsa City & County CoC	Major City CoC	Included
OK-502	Oklahoma City CoC	Major City CoC	Included
OK-503	Oklahoma Balance of State CoC	Largely Rural CoC	Excluded

CoC Number	CoC Name	CoC Category	Remarks
OK-504	Norman/Cleveland County CoC	Largely Suburban CoC	Included
OK-505	Northeast Oklahoma CoC	Largely Rural CoC	Excluded
OK-506	Southwest Oklahoma Regional CoC	Largely Rural CoC	Excluded
OK-507	Southeastern Oklahoma Regional CoC	Largely Rural CoC	Excluded
OR-500	Eugene, Springfield/Lane County CoC	Other Largely Urban CoC	Included
OR-501	Portland, Gresham/Multnomah County CoC	Major City CoC	Included
OR-502	Medford, Ashland/Jackson County CoC	Largely Suburban CoC	Included
OR-503	Central Oregon CoC	Largely Rural CoC	Excluded
OR-505	Oregon Balance of State CoC	Largely Rural CoC	Excluded
OR-506	Hillsboro, Beaverton/Washington County CoC	Largely Suburban CoC	Included
OR-507	Clackamas County CoC	Largely Suburban CoC	Included
PA-500	Philadelphia CoC	Major City CoC	Included
PA-501	Harrisburg/Dauphin County CoC	Largely Suburban CoC	Included
PA-502	Upper Darby, Chester, Haverford/Delaware County CoC	Largely Suburban CoC	Included
PA-503	Wilkes-Barre, Hazleton/Luzerne County CoC	Largely Suburban CoC	Included
PA-504	Lower Merion, Norristown, Abington/Montgomery County CoC	Largely Suburban CoC	Included
PA-505	Chester County CoC	Largely Suburban CoC	Included
PA-506	Reading/Berks County CoC	Largely Suburban CoC	Included
PA-508	Scranton/Lackawanna County CoC	Largely Suburban CoC	Included
PA-509	Eastern Pennsylvania CoC	Largely Rural CoC	Excluded
PA-510	Lancaster City & County CoC	Largely Suburban CoC	Included
PA-511	Bristol, Bensalem/Bucks County CoC	Largely Suburban CoC	Included
PA-512	York City & County CoC	Largely Suburban CoC	Included
PA-600	Pittsburgh, McKeesport, Penn Hills/Allegheny County CoC	Largely Suburban CoC	Included
PA-601	Western Pennsylvania CoC	Largely Rural CoC	Excluded
PA-603	Beaver County CoC	Largely Suburban CoC	Included
PA-605	Erie City & County CoC	Largely Suburban CoC	Included
PR-502	Puerto Rico Balance of Commonwealth CoC	Largely Suburban CoC	Excluded
PR-503	South-Southeast Puerto Rico CoC	Largely Suburban CoC	Excluded
RI-500	Rhode Island Statewide CoC	Largely Suburban CoC	Included
SC-500	Charleston/Low Country CoC	Largely Suburban CoC	Included
SC-501	Greenville, Anderson, Spartanburg/Upstate CoC	Largely Suburban CoC	Included
SC-502	Columbia/Midlands CoC	Largely Suburban CoC	Included
SC-503	Myrtle Beach, Sumter City & County CoC	Largely Rural CoC	Excluded
SD-500	South Dakota Statewide CoC	Largely Rural CoC	Excluded

CoC Number	CoC Name	CoC Category	Remarks
TN-500	Chattanooga/Southeast Tennessee CoC	Largely Rural CoC	Excluded
TN-501	Memphis/Shelby County CoC	Major City CoC	Included
TN-502	Knoxville/Knox County CoC	Largely Suburban CoC	Included
TN-503	Central Tennessee CoC	Largely Rural CoC	Excluded
TN-504	Nashville-Davidson County CoC	Major City CoC	Included
TN-506	Upper Cumberland CoC	Largely Rural CoC	Excluded
TN-507	Jackson/West Tennessee CoC	Largely Rural CoC	Excluded
TN-509	Appalachian Regional CoC	Largely Rural CoC	Excluded
TN-510	Murfreesboro/Rutherford County CoC	Largely Suburban CoC	Included
TN-512	Morristown/Blount, Sevier, Campbell, Cocke Counties CoC	Largely Rural CoC	Excluded
TX-500	San Antonio/Bexar County CoC	Major City CoC	Included
TX-503	Austin/Travis County CoC	Major City CoC	Included
TX-600	Dallas City & County, Irving CoC	Major City CoC	Included
TX-601	Fort Worth, Arlington/Tarrant County CoC	Major City CoC	Included
TX-603	El Paso City & County CoC	Major City CoC	Included
TX-604	Waco/McLennan County CoC	Largely Rural CoC	Excluded
TX-607	Texas Balance of State CoC	Largely Rural CoC	Excluded
TX-611	Amarillo CoC	Other Largely Urban CoC	Included
TX-624	Wichita Falls/Wise, Palo Pinto, Wichita, Archer Counties CoC	Largely Rural CoC	Excluded
TX-700	Houston, Pasadena, Conroe/Harris, Ft. Bend, Montgomery, Counties CoC	Major City CoC	Included
TX-701	Bryan, College Station/Brazos Valley CoC	Other Largely Urban CoC	Included
UT-500	Salt Lake City & County CoC	Largely Suburban CoC	Included
UT-503	Utah Balance of State CoC	Largely Suburban CoC	Excluded
UT-504	Provo/Mountainland CoC	Largely Suburban CoC	Included
VA-500	Richmond/Henrico, Chesterfield, Hanover Counties CoC	Largely Suburban CoC	Included
VA-501	Norfolk, Chesapeake, Suffolk/Isle of Wight, Southampton Counties CoC	Largely Suburban CoC	Included
VA-502	Roanoke City & County, Salem CoC	Largely Suburban CoC	Included
VA-503	Virginia Beach CoC	Major City CoC	Included
VA-504	Charlottesville CoC	Largely Rural CoC	Excluded
VA-505	Newport News, Hampton/Virginia Peninsula CoC	Other Largely Urban CoC	Included
VA-507	Portsmouth CoC	Other Largely Urban CoC	Included
VA-508	Lynchburg CoC	Largely Rural CoC	Excluded
VA-513	Harrisburg, Winchester/Western Virginia CoC	Largely Rural CoC	Excluded
VA-514	Fredericksburg/Spotsylvania, Stafford Counties CoC	Largely Suburban CoC	Included

CoC Number	CoC Name	CoC Category	Remarks
VA-521	Virginia Balance of State CoC	Largely Rural CoC	Excluded
VA-600	Arlington County CoC	Other Largely Urban CoC	Included
VA-601	Fairfax County CoC	Largely Suburban CoC	Included
VA-602	Loudoun County CoC	Largely Suburban CoC	Included
VA-603	Alexandria CoC	Other Largely Urban CoC	Included
VA-604	Prince William County CoC	Largely Suburban CoC	Included
VI-500	Virgin Islands CoC	Largely Rural CoC	Excluded
VT-500	Vermont Balance of State CoC	Largely Rural CoC	Excluded
VT-501	Burlington/Chittenden County CoC	Other Largely Urban CoC	Included
WA-500	Seattle/King County CoC	Major City CoC	Included
WA-501	Washington Balance of State CoC	Largely Rural CoC	Excluded
WA-502	Spokane City & County CoC	Other Largely Urban CoC	Included
WA-503	Tacoma, Lakewood/Pierce County CoC	Largely Suburban CoC	Included
WA-504	Everett/Snohomish County CoC	Largely Suburban CoC	Included
WA-508	Vancouver/Clark County CoC	Largely Suburban CoC	Included
WI-500	Wisconsin Balance of State CoC	Largely Rural CoC	Excluded
WI-501	Milwaukee City & County CoC	Major City CoC	Included
WI-502	Racine City & County CoC	Largely Suburban CoC	Included
WI-503	Madison/Dane County CoC	Other Largely Urban CoC	Included
WV-500	Wheeling, Weirton Area CoC	Largely Rural CoC	Excluded
WV-501	Huntington/Cabell, Wayne Counties CoC	Largely Rural CoC	Excluded
WV-503	Charleston/Kanawha, Putnam, Boone, Clay Counties CoC	Largely Suburban CoC	Included
WV-508	West Virginia Balance of State CoC	Largely Rural CoC	Excluded
WY-500	Wyoming Statewide CoC	Largely Rural CoC	Excluded
	N = 398		n = 247

Appendix VI

Table 1

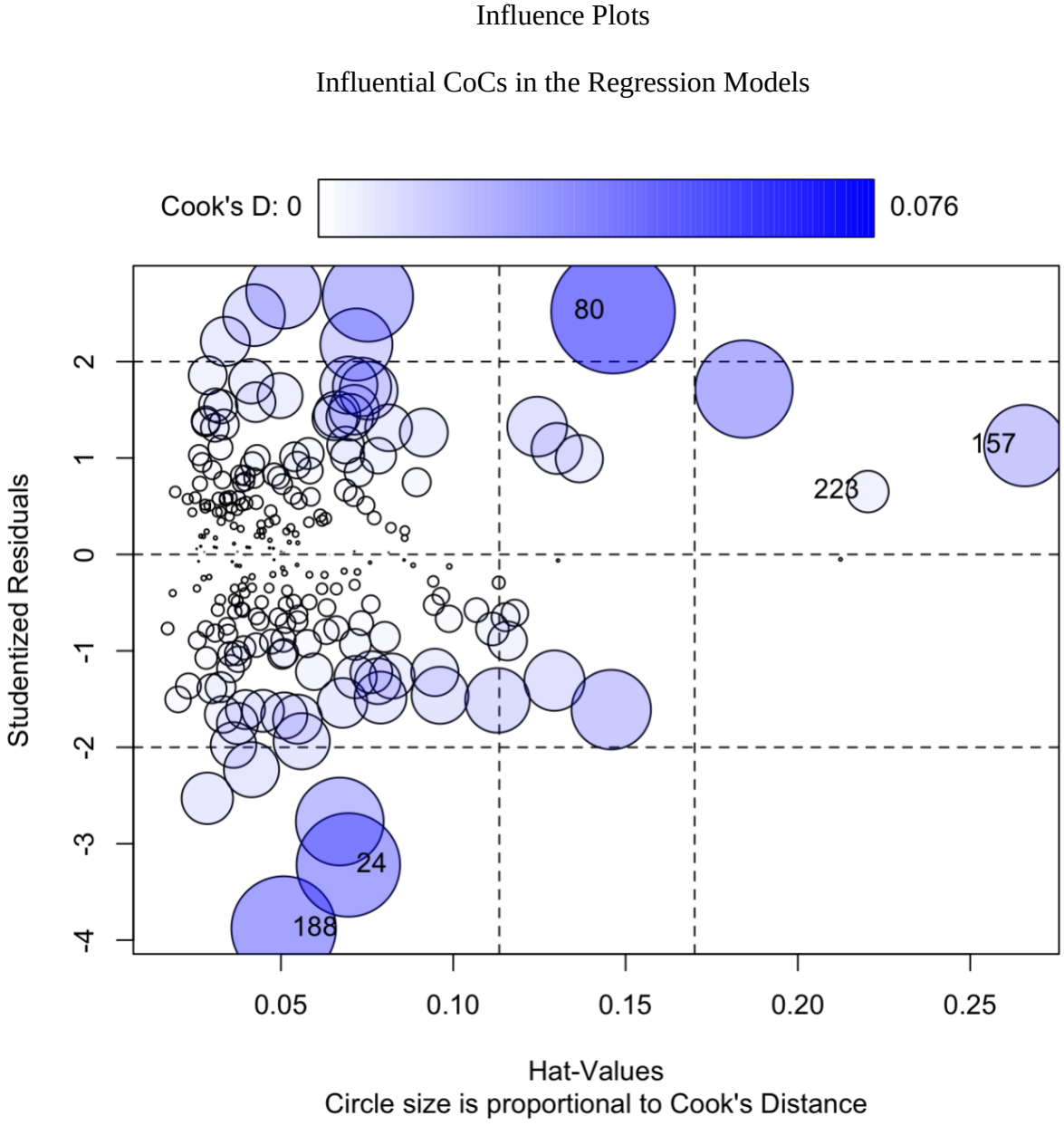
Correlation Matrix.

	Estimated eviction filing	Median rent	% Crowded rental	Rental vacancy	% Rent burdened	B/W poverty	B/W unemployment	Black renters	PSH beds	% PA recipients	South	% Democrat vote
Median rent for two-bed apt	-0.20											
% Crowded rental units	-0.29	0.49										
Rental vacancy rate	0.16	-0.43	-0.34									
% Rent burdened	0.22	-0.63	-0.14	0.33								
B/W poverty ratio	0.01	0.02	-0.25	-0.03	-0.17							
B/W unemployment ratio	0.15	-0.21	-0.22	0.02	0.07	0.55						
Black renter household	0.58	-0.27	-0.34	0.39	0.35	0.13	0.31					
PSH beds	0.01	0.14	-0.01	-0.12	-0.01	0.21	0.40	0.18				
% PA recipients	-0.14	-0.23	0.24	-0.24	0.30	-0.01	0.19	-0.09	0.23			
South	0.23	-0.16	-0.18	0.51	0.11	-0.21	-0.17	0.44	-0.13	-0.38		
% Democrat vote	0.07	0.52	0.26	-0.33	-0.11	0.10	0.18	0.23	0.49	0.11	-0.13	
Temp mean	-0.15	0.17	0.38	0.27	0.10	-0.41	-0.33	0.05	-0.08	-0.10	0.57	0.02

Appendix VII

Figure 1

Influence plot for regression model examining association between eviction filing rates and Black-White gaps in homelessness rates.



Note. Here, 24, 80, 188, and 157 represented four potentially influential CoCs: CA-517, IL-503, NJ-512, and OK-504 respectively.

Appendix VIII

Table 1

Regression Results

	Dependent variable: Logged B-W gaps			
	Sheltered Homelessness		Unsheltered Homelessness	
	(1)	(2)	(3)	(4)
Logged eviction filing rate	0.017	0.104**	-0.150**	-0.077
	(0.047)	(0.052)	(0.075)	(0.104)
Logged median rent for 2-bedroom apartment		0.986***		0.293
		(0.218)		(0.431)
Rent burdened households		0.012		-0.005
		(0.008)		(0.016)
Logged rental vacancy rate		-0.213*		-0.415*
		(0.119)		(0.236)
Logged % crowded rental units		-0.203***		0.008
		(0.078)		(0.154)
B/W below poverty ratio		0.142***		0.018
		(0.055)		(0.109)
B/W unemployment ratio		0.088		0.174
		(0.062)		(0.124)
Black renter rate		0.006		0.004
		(0.004)		(0.007)
Logged % Black population		-0.086		0.186*
		(0.052)		(0.104)
Logged PSH beds		-0.081**		-0.002
		(0.031)		(0.062)
Logged PA recipients		-0.157*		-0.210
		(0.093)		(0.184)
South		-0.145		-0.452*
		(0.118)		(0.234)
Mean temperature		-0.014*		0.028*
		(0.008)		(0.016)
Intercept	1.719***	-5.545***	1.258***	-0.861
	(0.092)	(1.805)	(0.148)	(3.576)
Observations	247	247	247	247
R^2	0.001	0.406	0.016	0.114
Note:				*p**p***p<0.01