

# Promoting Affordable Housing in Well-Resourced Neighborhoods: A Regional Approach to Assessing Neighborhood Resources in New York State

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*Disclaimer: The authors are employees of New York State Homes and Community Renewal (HCR). However, any analyses, conclusions, and views expressed in this article should not be considered the views or positions of HCR and/or the state of New York.*

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## Abstract

Studies have extensively explored the neighborhood effects on low-income families' welfare and the future outcomes of their children. These studies have motivated public policy at various levels to encourage "moving to opportunity"—improving access to affordable housing in neighborhoods with better resources. This study constructs a comprehensive Neighborhood Resource Index score for assessing the resource levels of neighborhoods in New York State. This index is based entirely on publicly available data and accounts for variations in the density and urban nature of different regions across the state. The article uses this index score to explore the placement of affordable housing built with support from Low-Income Housing Tax Credits. It demonstrates the applicability of the index in improving access to affordable housing in well-resourced areas. The findings indicate that although units have been disproportionately built in lower-score neighborhoods, policies and initiatives, such as those employed by New York State, can offer strategies for increasing the amount of affordable housing in neighborhoods with higher resource scores.

## Introduction

An extensive body of scholarship documents the advantages of living in better-resourced neighborhoods for low-income families. The significance of neighborhood characteristics has motivated a number of federal initiatives, such as Moving to Opportunity by the U.S. Department of Housing and Urban Development (HUD).<sup>1</sup> This study introduces a comprehensive methodology for quantifying neighborhood resources. It then demonstrates the practical applicability of this methodology by documenting the distribution of newly built units—specifically those that used Low-Income Housing Tax Credits (LIHTC)—in well-resourced neighborhoods across New York State.

The Low-Income Housing Tax Credit is the largest program to promote the development and preservation of affordable housing in the United States. It encourages the development of rental units for low-income families by providing tax credits to private-sector builders. Nationwide, the program has helped produce more than 3.5 million affordable units since its inception in 1986 (HUD, 2023). To analyze the placement of new affordable homes in well-resourced areas, this study takes advantage of administrative LIHTC data made available to the authors through the New York State Homes and Community Renewal (HCR; New York State’s affordable housing agency). These data include the universe of properties that received tax credits administered by New York State since its beginning in the late 1980s.<sup>2</sup> To construct an index score of neighborhood resource levels, the study uses data from the U.S. Census Bureau and other sources at the census tract level. This article builds on HCR’s prior efforts to identify well-resourced areas based on poverty rates and educational outcomes. It expands that measure by constructing a composite index score for each neighborhood that is an aggregate of multiple neighborhood characteristics. The metrics for neighborhood resource level and the structure of the indexed score presented in this article are generally modeled after the Child Opportunity Index (Acevedo-Garcia et al., 2014). To account for regional variations in urban settings and population densities across the state, the Neighborhood Resource Index is constructed separately for four distinct regions. The study overlays a sample of state-administered LIHTC properties on neighborhoods and analyzes the placement of those properties in high- versus low-resourced neighborhoods.

This article proposes an index of neighborhood resource levels that employs a diverse set of indicators of local economic and other conditions, thereby alleviating potential inaccuracies that may arise from relying merely on official poverty rates in measuring neighborhood resourcefulness. This index score relies entirely on publicly available data and, therefore, can be updated annually. This feature is especially important for devising new policies and updating the existing ones according to the most recent data available.

The article’s analysis of LIHTC developments indicates that units have been disproportionately built in a relatively small concentration of neighborhoods that have lower resource scores, although analysis of recent data suggests an expansion of the areas in which LIHTC units are built, including more well-resourced areas. This distribution in LIHTC units is not unique to New York and exists

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<sup>1</sup> See <https://www.hud.gov/programdescription/mta>.

<sup>2</sup> A part of New York State’s tax credit allocation authority is granted to the city of New York. Both HCR and New York City’s housing agencies finance LIHTC projects within New York City through separate programs. This study only looks at LIHTC projects financed by the State.

across the country. New York has been proactive in creating avenues of access to better-resourced neighborhoods—and equity in access to resources more generally—through the LIHTC program and other complementary initiatives.

The article proceeds as follows: Review of Theoretical and Empirical Literature reviews three areas of scholarship that are related to moving to well-resourced areas; Prior Work Done by New York State summarizes HCR's recent efforts to facilitate more units in higher-resourced areas; Data and Methodology introduces the data sources and methodology for generating neighborhood resource scores; Discussion of Findings presents the analyses and findings; and Conclusions summarizes the findings and concludes with some policy recommendations.

## Review of Theoretical and Empirical Literature

This article's exploration of affordable housing in highly resourced areas encompasses three domains of scholarship: (1) advantages of living in well-resourced neighborhoods for children of lower-income families; (2) evaluation of LIHTC as a program; and (3) the role of local zoning codes in potentially limiting multifamily developments. This section provides a brief review of the literature in each of those areas.

### Place-Based Attributes and Outcomes for Children

The economics research documenting the impacts of locational attributes on children's future outcomes is immense. Pioneering theories dating back to the 1960s explored the extent to which community factors influence individual socioeconomic success (see Jencks and Mayer, 1990, for a thorough review of early studies).<sup>3</sup> Social scientists have theorized that living in a well-resourced neighborhood results in better future outcomes through such mechanisms as peer and adult influences. Over time, and with the spread of computer software, the empirical work has been extended to test these theories in different settings and uses a diverse array of indicators for measuring both well-resourced neighborhoods and future outcomes.

Neighborhoods that provide better opportunities for children have been characterized by a comprehensive list of economic and social attributes. The most frequently used factors in research studies include crime and poverty rates; access to public transportation (de Souza Briggs, Popkin, and Goering, 2010); access to high-performing schools (McClure and Schwartz, 2021); local employment rates, demographics, and socioeconomic status (Ellen, Horn, and Kuai, 2018; Lens, 2014); and local income diversity (Chetty et al., 2022). Similarly, researchers have used economic and social attributes to measure future outcomes. Economic indicators include, but are not limited to, job earnings, upward mobility (Chetty and Hendren, 2015), and college attendance (Chetty et al., 2011; 2018). Social factors include family structure (Chetty et al., 2016), teenage pregnancy, and incarceration (Pollakowski et al., 2022).

Two prominent examples of more recent scholarship motivate this article's definition of well-resourced areas in this article: *The Opportunity Atlas* by Raj Chetty and colleagues (2018) and the

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<sup>3</sup> Generally, Jencks and Mayer (1990) categorized the studies that address such influences into those that study the advantages, disadvantages, and irrelevance of living near advantaged neighbors.

*Child Opportunity Index* developed by Acevedo-Garcia and colleagues (2014). Chetty and colleagues follow a nationally representative sample of over 20 million children born between 1978 and 1983, and they provide estimates for earnings and other outcomes based on the characteristics of the census tracts in which the children grew up—characteristics such as household income, poverty rate, racial composition, and population density. Similarly, the *Child Opportunity Index* ranks census tracts based on the “pathways, through which neighborhood environments influence child development” (Acevedo-Garcia et al., 2014; 7). These pathways include indicators such as high school graduation rates, access to green space, commute duration, and public assistance rate. Both studies acknowledge the role of neighborhood quality in child outcomes and assess that quality using a number of place-based attributes, which is generally the approach in this article, too.

Another strand of the scholarship on the role of neighborhoods in future outcomes addresses the barriers to neighborhood choice and explores ways to overcome those barriers. Bergman and colleagues (2019) found that the provision of information, alongside ongoing assistance and counseling services, significantly improves households’ likelihood of moving to well-resourced areas. Other studies (e.g., Godinez-Puig, Garriga, and Freemark, 2023) show that a lack of affordable housing options in high-opportunity areas explains the lower rates of low-income households moving to such neighborhoods. This latter literature, to which this article primarily contributes, raises another question: Why is affordable housing scarce in areas with greater resources?

## **Low-Income Housing Tax Credit and Its Challenges**

Numerous programs, tax breaks, and funding sources support the provision of affordable housing at local, state, and federal levels.<sup>4</sup> The largest subsidy for the development or preservation of low-income rental housing is the LIHTC, a provision of the Internal Revenue Code created as part of the Tax Reform Act of 1986. LIHTC has subsidized the development or preservation of over 3.5 million units in 52,000 buildings across the United States through 2021 (HUD, 2023). In New York State, LIHTC subsidies have helped finance the development of at least 304,000 units since inception,<sup>5</sup> which make up roughly 10 percent of all multifamily rental units in the state and surpass the number of public housing units by 56 percent.

Investors in affordable housing development claim LIHTC against their federal income tax liability. The federal government allocates LIHTC funds to state housing agencies, usually a state housing finance agency (HFA), based on state populations.<sup>6</sup> State housing agencies then award credits to individual developments based on a Qualified Allocation Plan (QAP) that sets out the state’s eligibility criteria and other priorities. The amount of credits awarded to a project is based primarily on the construction costs (which generally include the cost of development minus land price), location, and the proportion of units set aside for tenants from different income categories, with bonuses given for additional criteria or priorities set forth in the QAP. State QAPs can play

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<sup>4</sup> Major subsidies for affordable housing are provided by the federal government and administered by state and local governments in the form of block grants or allocations. Some examples include public housing, rent payment assistance for tenants (Housing Choice Vouchers), or assistance for rural housing.

<sup>5</sup> This figure includes both New York State and the city of New York’s LIHTC programs since the inception of the program, including developments that have since left supervision.

<sup>6</sup> Allocations were originally set at \$1.25 per capita, but they were subsequently increased to \$1.75 in 2002 and \$2.20 in 2008, and they were pegged to inflation. As of this writing, state allocations are at \$2.75 per person.

a significant role in shaping the siting patterns of affordable housing (Ellen, Horn, and Kuai, 2018). Whereas much of the eligibility and allocation criteria for LIHTC is set in federal statute, HFAs have some discretion in what types of projects get prioritized. For instance, federal statute encourages developments in areas with high housing costs or large populations below the poverty line by offering additional credits for projects in these areas (defined by statute). State HFAs may choose to offer additional credits or set aside credits to meet specific state housing goals, such as serving special populations or increasing access to affordable housing in well-resourced areas. A smaller version of the credit is available to all properties financed through federally tax-exempt Private Activity Bonds.<sup>7</sup> In the case of New York State, both credit allocations and Private Activity Bond financing are administered by HCR.

Developments must set the rent for at least 20 percent of their units as affordable to low-income tenants to be eligible for LIHTC.<sup>8</sup> Tax credits are awarded over the course of 10 years, and buildings must maintain affordability for at least 15 years after being put in use.<sup>9</sup>

Once the development costs are estimated, real estate investors consider the amount of tax credits, other tax benefits, and possible profits if the property is sold. LIHTC investors are usually large financial institutions that buy tax credits assembled from multiple developments. Assembling the credits is done by for-profit or nonprofit entities called syndicators who charge a portion of the credit for their service fees. Developers who sell the credits to the investors use the proceeds as equity in the development. As the structure of the subsidy implies, a portion of every LIHTC credit goes toward investment returns and syndication fees.

Researchers have identified several shortcomings of LIHTC. Regarding the subsidy's primary goal of expanding affordability, some have argued that LIHTC can be inferior to other forms of subsidy that are tied to the tenant's income, such as housing vouchers or public housing (Eriksen, 2009). Unlike those programs, LIHTC rents are independent of changes in the tenant's income. Therefore, in instances where the Area Median Income grows faster than the tenant's income, rent can become burdensome. Scholars have also argued that the subsidy in its current form does not provide incentives for developers to target the lowest income groups, especially in higher-cost areas (Schwartz, 2010).

LIHTC has also been subjected to criticisms about inefficiency (Clancy, 1990; Stegman, 1991). As briefly mentioned previously, the full amount of every LIHTC dollar given out by the federal government does not reach low-income tenants because investor profits and syndication fees are

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<sup>7</sup> The smaller version of the credit associated with Private Activity Bond deals is commonly known as the "4 percent" credit, as opposed to the full "9 percent" credit. These names refer to the proportion of covered project costs that can be claimed each year over the course of a 10-year credit period.

<sup>8</sup> Affordability is defined as rent being at or below 50 percent of the Area Median Income (AMI). Alternatively, 30 percent of units can be set aside for tenants with incomes at 60 percent of AMI.

<sup>9</sup> For new construction and substantial rehabilitation projects, the 10-year credit is calculated based on 70 percent of the present value of a project's qualified costs, which translates to 9 percent annually. Projects that receive other federal subsidies or tax-exempt financing (in addition to LIHTC) are eligible for smaller subsidies based on 30 percent of the present value of their qualified costs, amounting to approximately 4 percent annually. The Revenue Reconciliation Act of 1989 requires properties to maintain their affordability for an additional 15 years after the first one expires.

deducted.<sup>10</sup> As exemplified by the financial crisis of 2008, tax credits may lose their attractiveness for investors in times of economic (or other) shocks (Schwartz, 2010), cutting developers short of sufficient equity for producing affordable housing. Scholars have argued that during such times, LIHTC can be costlier than the units the market would have generated without the subsidies (Eriksen and Lang, 2018). Another risk becomes apparent in high-inflation periods. In such periods, inflation drives up prices of building materials and makes affordable housing development costlier than usual. Because the Federal Reserve usually responds to inflationary risks by increasing interest rates, securing mortgages without other sources of financing becomes more difficult for below-market rental projects (Capps, 2023). This circumstance can burden states with the need for providing additional subsidies or force developers to allocate smaller shares of new units to affordable housing.

Units supported by LIHTC are also found to be challenging to maintain in the long run. Almost any residential building would need physical improvement and upgrading of major systems one or two decades after being put in service, which can be challenging for LIHTC buildings with very low-income tenants. In such cases, the rent income is not large enough to support refinancing the property and paying for the necessary repairs (Schwartz and Melendez, 2008). States have been increasingly providing new tax credits and tax-exempt bonds for these purposes, although this forces them to choose between financing new units and preserving existing ones.

Scholars have also noted an imbalanced spatial distribution of units supported by LIHTC nationally. According to Climaco and colleagues (2009), as of 2006, 35 percent of tax credit units were located in areas with 30 percent or more of their populations below the poverty line, and 44 percent of tax credit units were in tracts with over 50 percent minority populations (those proportions for all rental units pooled together during that same period were 21 and 32 percent, respectively). However, scholars have also argued that there can be an upside to placing LIHTC projects in low-income neighborhoods because LIHTC tenants usually have incomes above the poverty line and can improve average local income levels (Schwartz, 2010).

In summary, the academic literature on LIHTC highlights some of the reasons behind the scarcity of affordable housing in well-resourced areas. One reason may be that the tax credits can be less cost-effective, especially in higher-cost areas or when a larger portion of the credit is deducted from profits and fees. Furthermore, the cost of building new LIHTC units can be influenced by macroeconomic dynamics and other factors that may be beyond states' control. Maintaining existing units may also be difficult without additional subsidies. These factors, however, do not fully explain why low-income units are less likely to be built in areas with greater resources. The following section reviews the literature on another possible explanation: Zoning.

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<sup>10</sup> In the subsidy's early years, the price paid by investors for every dollar of LIHTC credit was as low as \$0.40. However, as the program became more familiar and was made permanent by Congress in 1993, investors have been willing to pay much more, and the price has even exceeded \$1.00 at times, including the period leading to the Great Recession and more recently during 2015–16. Before the COVID-19 pandemic, the equity price of each LIHTC credit was about \$0.93, and most recently it is \$0.90.

## **Municipal Land Use Regulations and Low-Income Housing**

Zoning regulations in America are defined by shielding residential land use in general, and low-density single-family functions in particular, from other forms of land use (Hirt, 2014).<sup>11</sup> A half-century ago, such protective approaches tended to be justified based on the negative outcomes of metropolitan growth, such as air pollution or traffic congestion (Tolley, 1974). However, many examples of dense urban areas have shown much greater gains from agglomeration efficiencies—including reduced costs of transporting goods and access to service, specialization of human capital, and knowledge spillovers. Ellickson (2022) provides a summary of studies related to agglomeration efficiency. Therefore, the persistence of zoning most likely has to do with more than protecting environmental quality.

After more than a century since their inception, local zoning ordinances still govern what gets built and where it gets built. The endurance of zoning regulations in American cities is primarily due to their function as the protector of private property values, especially of detached single-family homes.<sup>12</sup> Higher property values are favored not only by property owners but also by local governments, for whom property tax revenues are the lifeline in providing basic services and fulfilling political promises (Bassett, 1922; Fischler, 1998). This arrangement was coined by William Fischel (2005) as the “homevoter theory,” and it has been studied by various scholars (e.g., Been, Madar, and McDonnell, 2014).

Social science scholars have frequently criticized zoning practices for various reasons. Most prominently, the separation of low-density residential districts has been argued to segregate people by class, race, and gender (Haar and Kayden, 1989; Micklow, 2008) and limit diversity and interaction (Jacobs, 1961). Detached single-family zoning is also shown to cause environmental damage by requiring wasteful infrastructure extensions and imposing higher maintenance costs and longer commute times (Schuetz, 2022).

Also relevant to this article is the economics literature on the effect of zoning ordinances on housing prices. This literature employs classical supply and demand frameworks to explain how zoning restrictions inflate housing prices and make housing unaffordable by putting a cap on supply (Been, Ellen, and O’Regan, 2019; Glaeser and Gyourko, 2002; Quigley and Raphael, 2004; Saiz, 2010). Based on this argument, policymakers have prescribed boosting housing supply in low-density areas as a remedy to housing affordability issues,<sup>13</sup> with the assumption that newly built units will be occupied by higher-income households, and lower-income households would be able to afford older units through the filtering process (Mast, 2023). However, empirical research

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<sup>11</sup> In a survey of zoning ordinances of 25 of the largest 50 cities in the U.S., Hirt (2014) finds that 15 cities impose an absolute ban on business functions in residential areas. Across the cities that keep residential and business land uses completely separate, the overwhelming majority of the residential districts are low-density, ranging from 73 percent in Atlanta, Georgia, to 90 percent in Cleveland, Ohio, to nearly 100 percent in El Paso, Texas.

<sup>12</sup> Pioneering arguments for citywide zoning codes often presented the protection of property values as a tool to enhance equity by distributing the gains among the American masses rather than a few (Bassett, 1922). In practice, however, zoning codes have served the benefits of homeowners and businessowners over those of low-income renters. For various discussions of this topic in cities like New York, Chicago, Pittsburgh, and others, see Fischel (2004).

<sup>13</sup> California and Massachusetts have implemented laws known as “builder’s remedy,” which generally allow developers to bypass the local/municipal authority to reject their applications as long as they achieve certain development goals. For California, see Elmendorf (2022). For Massachusetts, see Reid, Galante, and Weinstein-Carnes (2016).



is inconclusive about whether building more housing per se would address affordability issues. Some studies have found that new construction can even lead to higher home values nearby through amenity and aesthetic effects (Zahirovich-Herbert and Gibler, 2014), whereas some others argue that building new units would reduce rents in the surrounding area and limit displacement (Asquith, Mast, and Reed, 2019; Li, 2022). Even when new construction is found to lower rents and improve affordability, outcomes can vary by housing market segment, affecting the higher end of the market more than others (Stacy et al., 2023). The growing significance of affordability in the pro-supply discourse has urged many government entities to specifically encourage affordable housing in jurisdictions with restrictive zoning and isolated low-density land use districts. More than 500 inclusionary zoning programs across the country represent these efforts to promote affordable housing through mandatory or voluntary zoning reforms, although their effectiveness has been subject to criticism (Hickey, Sturtevant, and Thaden, 2014).

Despite all the policy efforts, zoning regulations continue to be a key element in the disparate distribution of low-income and/or multifamily housing development across the country.

## **Prior Work Done by New York State**

### **Defining Well-Resourced Areas**

New York State's 2016 Analysis of Impediments to Fair Housing Choice (2016 A-I) took a proactive, data-driven approach to understanding the spatial distribution of new affordable rental housing construction in the state. In this article, HCR identified 2,062 Census tracts in 59 of the state's 62 counties as potentially likely to provide educational and other opportunities for lower-income families and their children. This effort was informed by findings from HUD's Moving to Opportunity (MTO) research and other related studies (see Chetty, Hendren, and Katz, 2016; Turner, 2011). The 2016 A-I found a lack of affordable housing in well-resourced neighborhoods, and this shortage contributed to a disparity in access to valuable community assets. The agency subsequently began developing a standard methodology for identifying "opportunity census tracts," later renamed Well-Resourced Areas (WRA).

The agency published WRA designations in 2018 with a binary "in-or-out" structure, meaning that tracts were deemed either well-resourced or not. The criteria relied on two measures: the poverty rate as calculated by the U.S. Department of Commerce and a relative measure of school performance using New York State Education Department (NYSED) testing data in reading and math (see more details in the Tract-Level Data and Opportunity Metrics section of this article). The decision to use a relatively simple, binary designation was intended to keep the designation easy to understand and predict for the agency program staff and affordable housing developers.

Since 2018, HCR has updated the list of WRA tracts twice in 2020 and 2023. Exhibit 1 presents the share of WRA tracts in the three cycles.



## Exhibit 1

Number of Well-Resourced Area Tracts as Defined by New York State Homes and Community Renewal

2018 Tracts			2020 Tracts			2023 Tracts		
WRA	Total	%	WRA	Total	%	WRA	Total	%
1,447	4,900	30	1,432	4,900	29	1,786	5,411	33

WRA = Well-Resourced Areas.

Sources: American Community Survey 5-year estimates, 2021; New York State Education Department, Annual English Language Arts and Mathematics Data Reporting, Grades 3-8

## Incorporation of Well-Resourced Areas into HCR Programs

In recent years, HCR has increasingly incorporated WRA designations in its programs to further encourage developments in well-resourced neighborhoods. The agency amended its Qualified Allocation Plans (QAP)<sup>14</sup> for the federal LIHTC in 2019 and 2021 to define the construction of new multifamily rental housing in WRAs as a “State Housing Goal.” HCR set aside a subset of its multifamily housing capital funding budget specifically for developments in these tracts. The agency has also adjusted its 2021 QAP—their section on Project Scoring and Ranking Criteria (Item F)—to assign five points to “Housing Opportunity,” or building a project in a high-opportunity area.<sup>15</sup> Furthermore, the State’s attention to well-resourced areas is also reflected in its most recent Request for Proposals for LIHTC in 2022. This document specifically mentions that Housing Opportunity Projects (HOP)—developments located in WRAs—may qualify for a 30-percent boost to their base credit amount (New York State Division of Housing and Community Renewal, 2022; 14).

The State’s latest Assessment of Fair Housing made reference to HCR’s use of federal housing subsidies (including HUD capital funding, vouchers, and LIHTC credits) to support new affordable multifamily rental housing in areas of high opportunity. The assessment considered multiple definitions of “areas of high opportunity,” including grouping census tracts by the agency’s designated WRAs. The assessment found that HCR’s portfolio of newly awarded LIHTC projects from the period 2015–20 was concentrated in non-WRA census tracts, but it also noted a growing number of new units financed in WRAs. Exhibit 2 summarizes the share of LIHTC units in WRA and other neighborhoods (New York State Division of Housing and Community Renewal, 2016).

## Exhibit 2

Concentrations of 2015–20 LIHTC Construction Starts in WRA vs. Non-WRA Tracts

	Multifamily Units (2015–20) per 1,000 Households	Multifamily Units, New Construction (2015–20) per 1,000 Households	Multifamily Units, Rehabilitation (2015–20) per 1,000 Households	Total Households
<b>WRA</b>	1.51	1.23	0.29	2,608,767
<b>Non-WRA</b>	10.68	5.32	5.36	4,634,320

LIHTC = Low-Income Housing Tax Credit. WRA = Well-Resourced Areas.

Sources: Administrative data from New York State Division of Housing and Community Renewal (DHCR) and New York State Housing Finance Agency

<sup>14</sup> The Internal Revenue Code (Section 42(m)(1)(B)) requires all housing credit agencies, including New York State, to prepare and adopt Qualified Action Plans for each funding round. This document generally lays out the agency’s housing goals and priorities, and the criteria used for giving preference in allocating housing credits to selected project types.

<sup>15</sup> Low-Income Housing Credit Qualified Action Plan, 9 CRR-NY 2040.14 (2021).

## Data and Methodology

This article combines two sets of data to develop the Neighborhood Resource Index and explore the placement of low-income multifamily homes in high-resource areas. These data sets are (1) administrative data on all newly constructed multifamily housing in New York State that benefited from state-administered LIHTC and (2) census tract-level data from various sources.

### Administrative Data

The pool of LIHTC properties used in this article is a subset of all properties that have ever used state-administered LIHTC credits in New York State since the program's inception. Therefore, any reference to LIHTC properties in this article concerns only properties that received LIHTC through New York State, unless otherwise noted. In order to assess developers' decisions about the siting of low-income housing, this subset includes only new construction projects and excludes rehabilitation or preexisting properties. The study sample includes properties financed only by LIHTC credits and those that combined credits with other sources of capital financing from the state. The study sample excludes any LIHTC properties financed solely by entities other than HCR. The data also provide the number of units within each property, which can be a combination of subsidized and market-rate units.

One of the challenges of working with this dataset is determining a time identifier (e.g., year) for each property. The development process for residential properties usually spans multiple years and can be even longer for developments that use public financing and tax credits, especially when low-income developments face local opposition. The state's data management system stores several time identifiers for each project, including construction start, issuance of the certificate of occupancy, and a "placed in service" date. However, the data do not provide specific information about when siting decisions were made. Among the date variables available, the construction start date is closest to the beginning of the development's process, so that variable becomes the basis for assigning "year" values to the buildings.

The LIHTC sample include 4,180 newly constructed buildings since 1988 that were financed by tax credits administered by the state. When analyzed on their own, LIHTC properties are considered in their entire history, but in most cases, when analyzed in relation to their hosting census tracts, the sample is limited to 2015–23. The reason is twofold: First, as mentioned previously, New York State became more proactive in 2016 in its focus on well-resourced neighborhoods; second, from a methodological standpoint, the metrics of neighborhood resources rely mostly on 5-year average data that cover the period of 2016 through 2021, so they may not reliably represent the conditions of the neighborhoods where projects were built many years earlier. Given the article's approach to assigning year values to properties, it is possible that siting decisions for developments in the earlier part of the study period were made before 2015, but in the absence of a more accurate date identifier, the analysis uses 2015 as the cut-off point. This trimmed sample includes projects built after 2015 and has 1,425 observations. Exhibit 3 presents summary statistics of the state-administered LIHTC sample.

**Exhibit 3**

LITHC Properties in New York State

	Number of Buildings	Number of Units	Number (Share) of Income-Restricted Units	Share of Income-Restricted Units in Average Building (%)
<b>1988–2014</b>	2,735	57,743	52,973 (91.7)	94.9
<b>2015–23</b>	1,425	48,015	39,219 (81.7)	84.9

Source: Homes and Community Renewal's (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data

**Tract-Level Data and Opportunity Metrics**

As briefly mentioned in previous sections, HCR's earlier definition of Well-Resourced Areas was based on two indicators: poverty rates and school test scores, motivated by work done by Chetty and colleagues (Chetty, Hendren, and Katz, 2016). According to that methodology, a census tract would be designated as WRA if (1) its poverty rate is lower than 10 percent and (2) its share of students rated proficient on mathematics and English Language Arts (ELA) tests exceeds the state's median. More specifically, the latter indicator captured the proportion of students in third through eighth grades scoring in the top two tiers of proficiency in each tract over the last 5 years, compared with the median proportion of proficient students across the entire state. This method was also based on a binary designation, with which census tracts were either designated as WRA or not. In its most recent iteration, this approach resulted in 1,606 census tracts qualifying as WRA out of the state's total of 4,900.<sup>16</sup>

These two criteria (poverty and test scores) are widely used in similar studies and usually embody many other implicit characteristics of places. For example, poverty can be highly correlated with the average educational attainment or unemployment rate of the neighborhood. However, a number of challenges and limitations motivated the authors to expand the previous work on WRA designation, as described in the following.

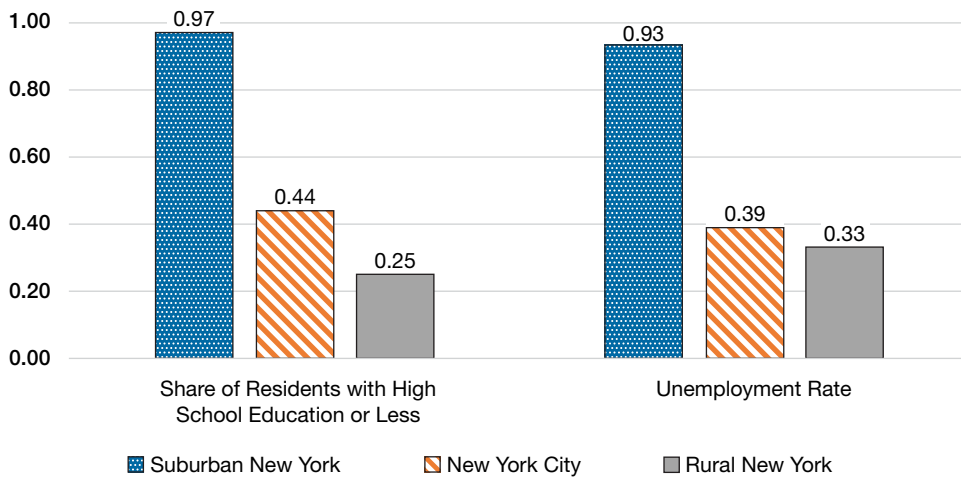
With regard to the school test score data, although they provide a widely accepted publicly available measure of school quality, the availability and nature of the data were noticeably disrupted by the COVID-19 pandemic. Educational assessments were not conducted in 2020, and subsequent assessments featured significantly lower participation rates than previous years, to the extent that the 2022 data were considered unreliable by the New York State Education Department (NYSED, 2022). In addition, the increasing number of students who opted out of standardized tests was another threat to test-score data credibility in terms of representing the state's students (Harris and Fessenden, 2015). These limitations necessitated using additional metrics to augment understanding of a neighborhood's education quality. These measures are described in the following section.

<sup>16</sup> The original analysis was using the Census Bureau's 2010 definition of census tract boundaries, when the total number of tracts in New York State was 4,900. According to the 2020 Census, which is used in the current study, the state includes 5,411 tracts.

Secondly, the nature of neighborhoods, and therefore ways of measuring their opportunity levels, can differ between dense urban areas like New York City, where an average of 31 people live in each acre of land, and small rural areas, with 1 resident living on every 10 acres. Within this context of diverse urban settings, the poverty rate—as a proxy for a multitude of other place-based characteristics—performs differently in different regions. Exhibit 4 shows two examples of this variation: Poverty rate at the tract level is more strongly correlated with educational attainment or unemployment rate in “suburban” New York State (the area comprised mostly of New York City’s metropolitan area excluding the city itself) than in New York City or the state’s rural areas.<sup>17</sup>

**Exhibit 4**

Correlation Between Poverty Rates and Other Neighborhood Attributes by Region



Source: American Community Survey 5-year estimates, 2021

To address the challenges imposed by the unavailability of reliable test score data and the regional variations in the correlation between poverty rate and other socioeconomic attributes, this study takes two steps: First, it broadens the number of indicators for neighborhood opportunity scores. After much testing and reviewing the available literature, the authors increased the number of indicators from the 2 original indicators to 24. These indicators were organized into four broad domains: income and employment; education; demographics; and housing and local amenities. The authors modeled the set of indicators and their classification generally after the categories used in the Child Opportunity Index and added new or more nuanced indicators in each domain.

The second remedy to potential risks of data unavailability was to classify neighborhoods into four groups according to their urban setting rather than treating them all similarly. This strategy aims to measure neighborhoods’ resource levels relative to their regional contexts and counterparts. The authors’ guide in classifying neighborhoods by region is the HUD Entitlement Communities, which are counties, major metropolitan areas, and cities with sizable populations eligible for

<sup>17</sup> For brevity, the article only presents the two examples of high school education and unemployment rate, but variation in poverty’s correlation with other economic and social factors runs across many more indicators.

the Community Development Block Grant (CDBG) program.<sup>18</sup> In addition to identifying New York State's nonurban areas in this way, the study further subdivides the urban areas based on population densities. Exhibits 5 and 6 present the four regions and their characteristics.

### Exhibit 5

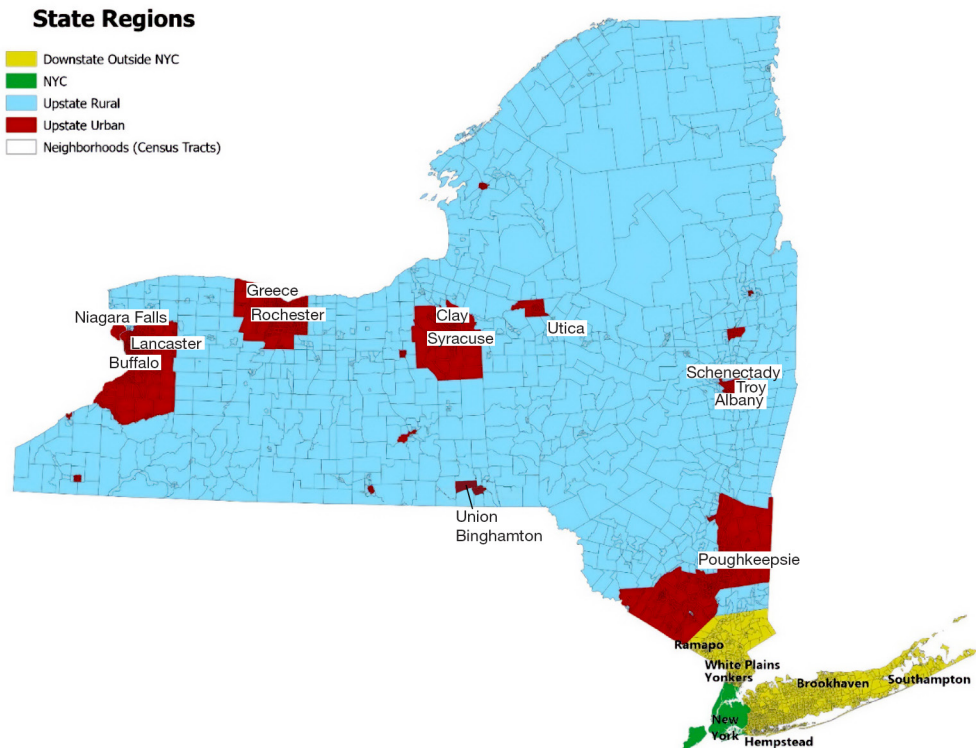
Four Regions Based on Urban Density

Region	Number of Census Tracts	Total Population	Population Density (persons per acre)
Downstate excluding New York City	980	4,057,833	2.58
New York City	2,237	8,238,733	31.05
Upstate Urban	1,013	3,365,462	1.12
Upstate Rural	1,046	3,348,282	0.12

Source: American Community Survey 2021 5-year estimates

### Exhibit 6

Four Classes of Neighborhoods Across New York State



NYC = New York City.

Source: Authors' categorization of New York State regions guided by HUD Entitlement Communities

<sup>18</sup> For detailed information on Entitlement Communities, see [https://www.hud.gov/program\\_offices/comm\\_planning/cdbg/entitlement-program](https://www.hud.gov/program_offices/comm_planning/cdbg/entitlement-program).

The following section lays out the data sources for the four domains of neighborhood resourcefulness, and exhibit 7 provides the complete list of indicators.

- A. **Income and Employment.** This group of indicators is motivated either by HCR's prior work to identify WRA tracts or other similar indices, such as the Child Opportunity Index (COI). The Income and Employment domain includes indicators for *poverty rate, level of reliance on cash transfers, labor force participation and unemployment rates, commute times, and the socioeconomic status of the residents and the workforce*. The latter set of indicators, including metrics like the proportion of high-wage earners living in the tract, are inspired by findings from Chetty et al. (2022) that attest to the positive impact of growing up among employed adults on children's future outcomes.

Indicators in this category are constructed using data from the Census Bureau's American Community Survey (ACS) 5-year estimates for 2021 (the most recent year available as of this writing). For the workforce metrics, the authors used tract-level data from the Longitudinal Employer-Household Dynamics (LEHD), which is also a Census Bureau product providing information about the labor force in their tracts of residence. The latest year available for LEHD is 2020.

- B. **Education.** In addition to using standardized test scores, the study includes a number of other indicators for approximating neighborhood educational qualities. Given the need for HCR to update the Neighborhood Resource Index with new data annually, the authors use publicly available data and construct indicators that approximate students, schools, and neighborhoods' educational performance. Those indicators are *student poverty, class size, school district funding, state aid to cover revenue gaps, and the share of proficient students in math and ELA*.

In constructing the education indicators, the authors had to resolve the geographical mismatch inherent to the data. The education data used in the analysis are available either at the school or school district levels. Because the study defines neighborhoods as census tracts, it converted school or school district information to census tract level data.<sup>19</sup>

Educational indicators are constructed using data from the New York State Division of the Budget (Enacted Budget Financial Plan for Fiscal Year 2023) and the New York State

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<sup>19</sup> In the case of school-specific information, the authors faced three situations: (1) When a census tract had only one school, the authors assigned it the characteristics of that school; (2) when a census tract had more than one school, they assigned it the characteristics of the school that was closest to the tract's centroid; and (3) when a census tract did not have any schools in it, they assigned it the characteristics of the closest school to its boundaries, conditional on some overlap between the tract and the school's catchment area.

In the case of school district information, boundaries do not usually align with those of census tracts. Here, there were two possible situations: (1) When multiple census tracts fell within the same school district, the authors assigned all of them the same characteristics of the district; and (2) when one census tract spanned over multiple school districts, they assigned it the characteristics of the district that entailed the tract's centroid.

The authors undertake these reconciliation strategies to convert educational variable to census-tract-level ones. However, they acknowledge the imperfections that they introduce to the data. For example, by assigning the characteristics of the closest school to a census tract, the study makes the assumption that living in that particular tract is synonymous with attending that specific school, which may not always be the case. In the absence of a perfect solution, the authors chose to reconcile the education data with our other data as explained previously.

Education Department. Data on school poverty (free and reduced lunches) are used at the high school level, and the other metrics used data at the school district level.

- C. **Local Demographics.** The demographic indicators are generally motivated by the COI and Chetty and colleagues' Opportunity Atlas (2018). They include *household structure, educational attainments, and access to health insurance.*

Demographic indicators are constructed using data from the Census Bureau's ACS 5-year estimates for 2021.

- D. **Housing and Local Amenities.** Indicators in this domain include *housing vacancy, overcrowding, adequate utilities, neighborhood residential stability, and proximity to health and recreational facilities.*

Data for health facilities are from the New York State Facility Map ([health.data.ny.gov](http://health.data.ny.gov)), and data on recreational facilities are from the New York State GIS Clearinghouse. All other indicators in this domain use ACS 5-year estimates for 2021.

## Exhibit 7

Neighborhood Resource Metrics (1 of 2)

Domain	Indicator	Description	Reference
Income and Employment	<b>Poverty rate</b>	Rank in distribution across all tracts	Acevedo-Garcia et al. (2014); Ellen et al. (2018)
	<b>Public assistance share of income</b>	Tract's aggregate transfer income relative to the total	Acevedo-Garcia et al. (2014)
	<b>Median household income</b>	Rank in distribution across all tracts	Acevedo-Garcia et al. (2014)
	<b>Labor force participation</b>		Chetty et al. (2018); McClure and Schwartz (2021)
	<b>Unemployment rate</b>		Acevedo-Garcia et al. (2014); McClure and Schwartz (2021)
	<b>Average commute time</b>	Rank in distribution across all tracts	Acevedo-Garcia et al. (2014); Ellen et al. (2018)
	<b>Labor force socioeconomic status</b>		Chetty et al. (2018); Lens (2014)
	<i>Wages</i>	Proportion earning \$3,333 or more per month	
	<i>Telecommuters</i>	Proportion working remotely	
	<i>Education</i>	Proportion with a high school degree or less	



**Exhibit 7**

Neighborhood Resource Metrics (2 of 2)

Domain	Indicator	Description	Reference
Education	Share of free & reduced lunches		Acevedo-Garcia et al. (2014)
	Student-to-teacher ratio		Chetty et al. (2018)
	Spending per pupil		
	State school aid	Distributed in inverse proportion to local fiscal capacity	
	Standardized Test Proficiency	Share of students in the top 2 tiers of math and ELA	HCR; McClure and Schwartz (2021)
Demographics	Married couples		Acevedo-Garcia et al. (2014)
	Education level	Share with a high school degree	Acevedo-Garcia et al. (2014)
	Health insurance coverage	Insured-uninsured ratio	Acevedo-Garcia et al. (2014)
Housing and Amenities	Vacancy rates		Acevedo-Garcia et al. (2014)
	owners & renters		
	Overcrowding	Share of units with 1.5 or more people per room	
	Inadequate access to utilities	Lacking adequate plumbing, kitchen, telephone	
	Residential stability	Proportion of residents that moved in before 2010	Chetty et al. 2018
	Access to health facilities	Miles to first hospital	
	Access to parks	Miles to the first state park	Acevedo-Garcia et al. (2014); Ellen et al. (2018)

ELA = English Language Arts. HCR = Homes and Community Renewal.

Sources: American Community Survey 5-year estimates, 2021; Longitudinal Employer-Household Dynamics, 2020; New York State Division of the Budget Enacted Budget Financial Plan for Fiscal Year, 2023; New York State Education Department, 2023; New York State GIS Clearinghouse

**Indexing and Weights**

After compiling data on all indicators, the study generates resource index scores for every census tract within each of the four regional classes in the following manner: First, it standardizes individual indicators—which have various units of analysis or scales—by generating z-score equivalents. Subsequently, it generates domain-specific scores by adding up the individual indicators within each domain and then converts the domain scores to a scaled range of 0 to 25. This range is a product of having four domains, and the study assigns equal weights to each of them in constructing the aggregate score. As exhibit 7 shows, the number of indicators each has among the four domains is not equal. In the absence of definitive theories or empirical findings about how metrics should be weighed,<sup>20</sup> the analysis is based on the assumption that domains bear equal importance in defining neighborhoods’ level of resource, or, in other words, have equal weights.

<sup>20</sup> Other studies, such as Acevedo-Garcia et al. (2014) generate weights based on regressing future child outcomes on individual indicators. This article does not engage longitudinal data on child outcomes.

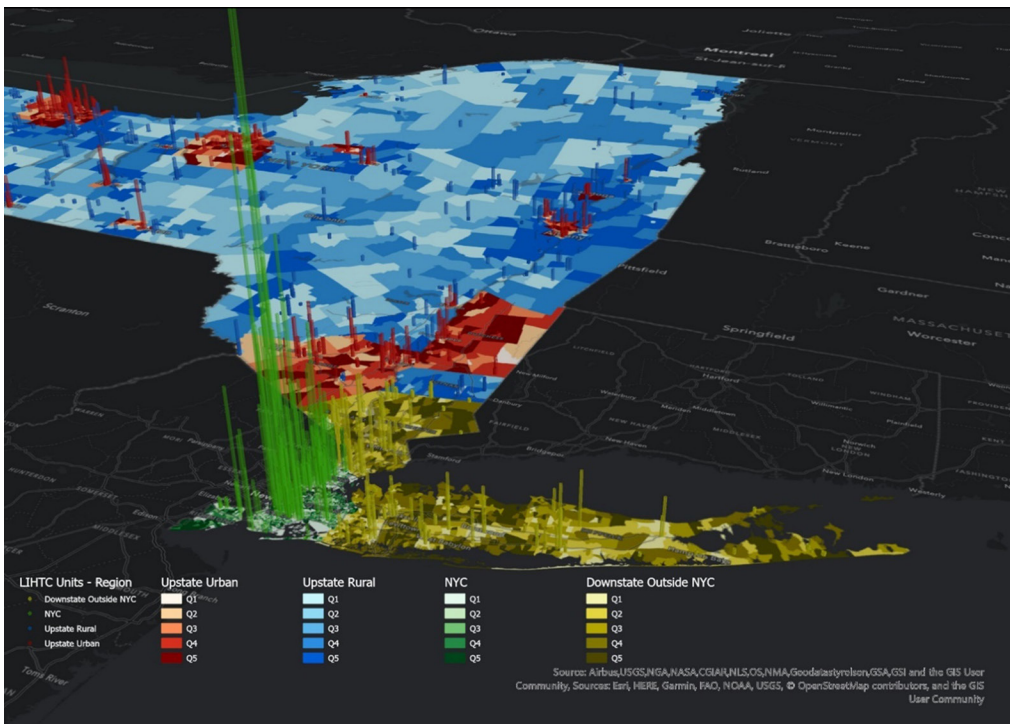
The final resource score is the sum of the four domain-specific scores, and it ranges between 0 and 100. In the conversion and summation process, the scoring scheme takes into account the different nature of various metrics because some imply a higher resource status for tracts that rank higher (e.g., median household income), and some others imply a lower status when tracts rank higher (e.g., unemployment rate). The outcome of this procedure, i.e., the four domain-specific scores and the final aggregate score, indicate the level of neighborhood resources on an escalating basis, which means higher-resource neighborhoods have scores closer to 100.

To exclude neighborhoods that are not residential or are irrelevant to the purposes of this study, the scoring scheme excludes census tracts that had populations less than 10 or were entirely undevelopable. This adjustment reduces the sample size from 5,411 to 5,270 tracts.

Exhibit 8 provides a view of the four regions (in different colors), Neighborhood Resource Index (in shades), and the number of LIHTC units (bars). Darker shades indicate higher resource scores, and bars represent tens of units.

### Exhibit 8

LIHTC Units and Neighborhood Opportunity Scores



NYC = New York City. Q = quintile.

Sources: Homes and Community Renewal's (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data; Authors' analysis of the following data sources: American Community Survey 5-year estimates, 2021; Longitudinal Employer-Household Dynamics, 2020; New York State Division of the Budget Enacted Budget Financial Plan for Fiscal Year, 2023; New York State Education Department, 2023; New York State GIS Clearinghouse

## Discussion of Findings

### Profile of Neighborhoods in New York State

**Resources are distributed less equitably in high-resource areas than elsewhere.** As is implied by the indicators laid out in the previous section of this article, neighborhoods with higher scores have wealthier and more educated residents, better schools, greater shares of homeowners, and lower vacancy rates. Although these attributes may signify a more desirable neighborhood, they can also characterize highly exclusive and homogenous ones. Social and developmental gains from diversity are highlighted in the academic literature (e.g., Chetty et al., 2022), and the authors want to know whether equity and diversity are implied by the article's resource score. This section presents a description of census tracts at the bottom and top of the Neighborhood Resource Index distribution from the standpoint of equity and diversity. The authors use a number of simple indicators of equity, listed in exhibit 9, that aim to demonstrate differences in the distribution of resources between the top and bottom groups. These indicators are set up so that higher values would represent higher inequality or lower diversity (the only exception is the Herfindahl–Hirschman Index of industrial concentration, with which lower scores imply more diversity).

Exhibit 9 compares the average census tract in the bottom and top quintiles of the resource score distribution (or low- versus high-resource neighborhoods) in terms of the nine equity indicators in each of the four regions. Two indicators (the ratio of high-wage workers to low-wage ones and the number of high earners relative to low earners) specifically aim to measure income inequality. As demonstrated by both measures, neighborhoods with higher scores have much more inequitable income distributions compared with low-resource neighborhoods.

Gender and racial compositions, captured by the ratio of male to female workers and White residents to non-White, are also more biased toward men and White residents in neighborhoods with high scores. Upstate rural can be considered an exception here, where the White to non-White ratio is lower in highest-opportunity areas, perhaps because of the different composition of agricultural workers in that region.

With regard to housing inequality, a few points are worth highlighting. First, high-scoring neighborhoods are predominantly owner-occupied across all regions, which shows a lack of tenure diversity to various extents. Secondly, the ratio of single-family homes to other housing types is much larger in well-resourced neighborhoods, especially in the upstate urban and suburban downstate areas. Differentials between the highest- and lowest-value homes are also larger in the higher-scoring neighborhoods. Together, these measures indicate a much greater inequitable distribution of housing resources in areas that score high on resources.

**Regions rank differently in terms of different equity metrics.** Among the four regions, the first one (Downstate Outside NYC) ranks least equitable in four out of nine equity and diversity metrics: It has the most disproportionate number of top earners relative to low earners, homeowners relative to renters, single-family homes relative to multifamily ones, and high-value homes relative to low-value ones. The New York City region comes second, ranking most disproportionate in three out of nine equity metrics.

**Exhibit 9**

Equity and Diversity in Low- Versus High-Resource Neighborhoods

	Downstate Outside NYC		NYC		Upstate Rural		Upstate Urban	
	Bottom Quintile	Top Quintile	Bottom Quintile	Top Quintile	Bottom Quintile	Top Quintile	Bottom Quintile	Top Quintile
High- to Low-Wage Worker Ratio	2.1	3.6	1.6	3.9	1.7	2.8	1.0	2.7
White to Non-White Worker Ratio	2.4	6.5	0.8	3.1	18.5	17.1	1.5	11.9
Male to Female Worker Ratio	0.9	1.0	0.8	1.0	1.0	1.0	0.9	1.0
Top to Bottom Earners Ratio (Count)	4.1	18.0	1.0	7.9	1.0	7.6	0.4	8.6
Herfindahl–Hirschman Index of Industry Mix	0.11	0.09	0.12	0.10	0.11	0.10	0.11	0.09
Owner to Renter Ratio	2.7	21.2	0.5	2.4	2.9	7.0	0.6	11.8
Single-Family to Multifamily Ratio	15.7	63.0	1.5	5.5	58.3	63.1	11.6	49.1
Rent to Mortgage Ratio (Median)	0.7	0.6	0.6	0.7	0.7	0.6	0.9	0.7
High to Low Home Value Ratio	5.3	54.4	8.6	36.9	0.3	3.8	0.1	2.4

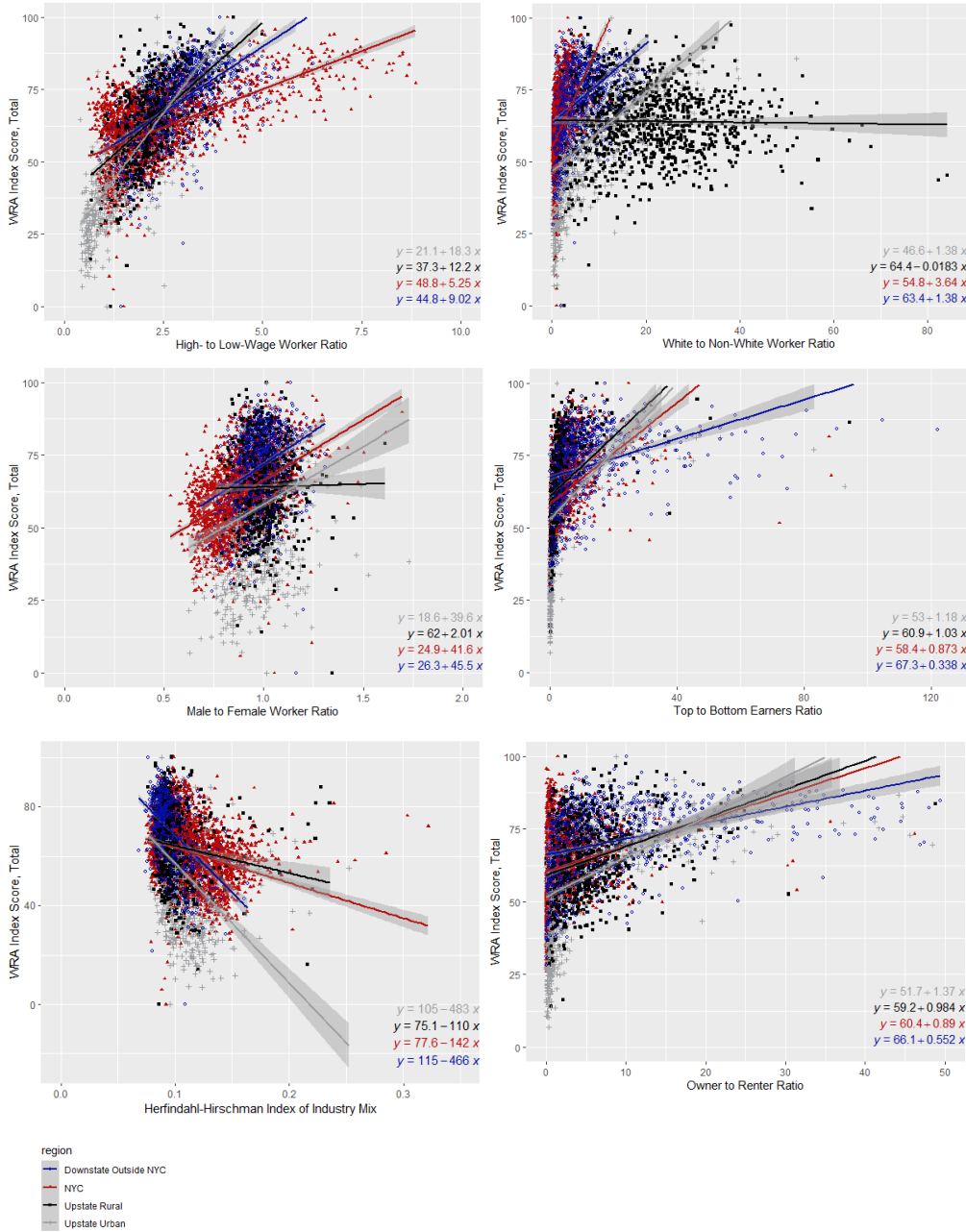
NYC = New York City.

Sources: Authors' analysis of the following data sources: American Community Survey 5-year estimates, 2021; Longitudinal Employer-Household Dynamics, 2020; New York State Division of the Budget Enacted Budget Financial Plan for Fiscal Year, 2023; New York State Education Department, 2023; New York State GIS Clearinghouse

To go beyond just the average tract and learn about the covariation between the Neighborhood Resource Index and equity, exhibit 10 presents nine scatterplots that visualize each equity metric in relation to resource scores. This exercise shows that when the regression coefficient (or the slope of the best-fit line) is considered, the Upstate Urban region ranks least equitable in six out of nine indicators. The slopes shown on each scatter plot indicate the rate of change in equity relative to changes in resource scores. For example, when the ratio between high- and low-wage workers increases by 1 unit, the neighborhood resource score increases by 18.3 units (i.e., 18.3 percent) in the Upstate Urban region and 9.02 percent in the Downstate region.

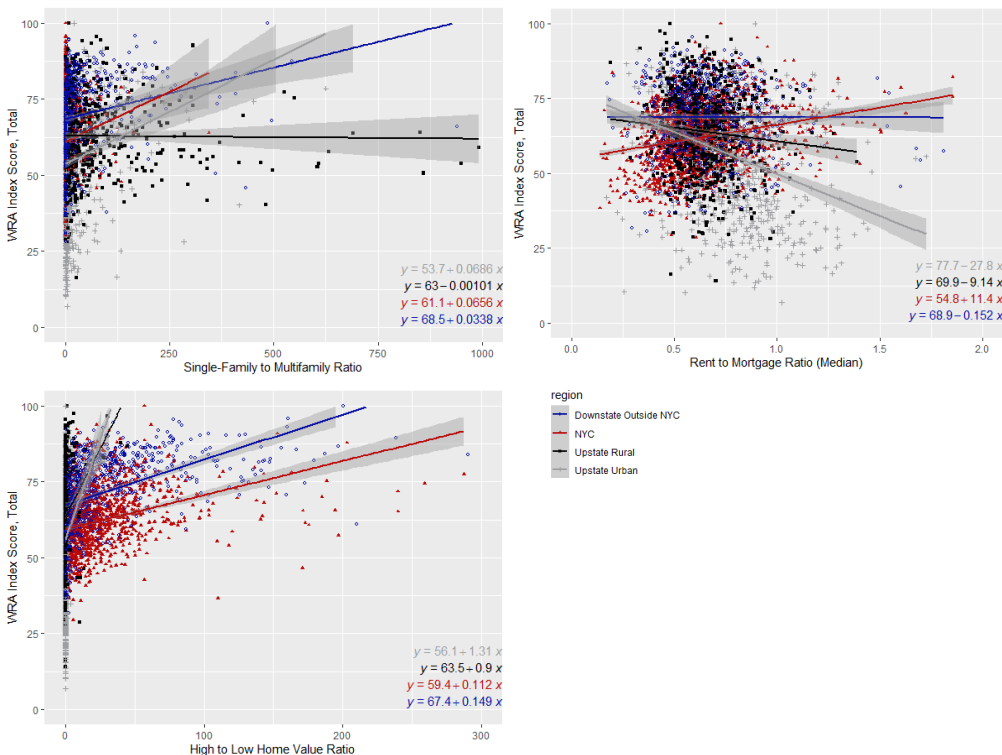
**Exhibit 10**

Regional Variations in the Associations Between Neighborhood Resource Score and Equity (1 of 2)



**Exhibit 10**

**Regional Variations in the Associations Between Neighborhood Resource Score and Equity (2 of 2)**



NYC = New York City. WRA = Well-Resourced Areas.

Sources: Authors' analysis of the following data sources: American Community Survey 5-year estimates, 2021; Longitudinal Employer-Household Dynamics, 2020; New York State Division of the Budget Enacted Budget Financial Plan for Fiscal Year, 2023; New York State Education Department, 2023; New York State GIS Clearinghouse

Although the presented analysis of equity and diversity is broad and general, it implies a noteworthy reality about the siting of low-income housing units: Resources in highest-scoring neighborhoods are distributed rather inequitably, which confirms what previous studies have highlighted. As an example, Reid's (2019) study of residents from 18 LIHTC buildings in California showed that children of lower-income families face barriers to opportunity that are driven by a lack of access to local resources more than by neighborhood characteristics. This situation suggests that policymakers need to think beyond the siting of affordable housing to ensure that low-income families have access to the resources shown to improve future outcomes. The appendix provides a detailed description of each equity/diversity indicator.

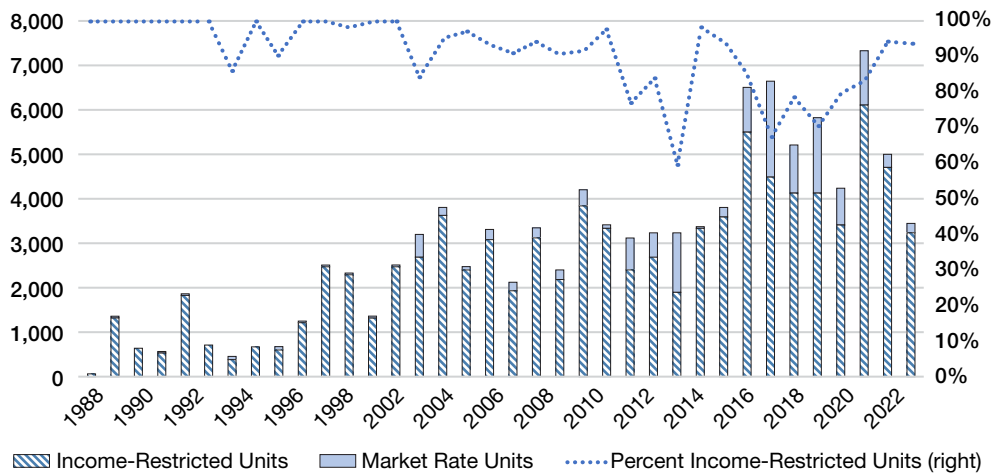
**LIHTC Buildings vis-à-vis Neighborhood Resource Scores**

The income-restricted share of LIHTC units has been increasing recently. Developers of LIHTC properties are allowed to rent a subset of units at the market rate to supplement the below-market rate rents. Although the share of income-restricted units in the past few years in the

sample of state-administered LIHTC properties has been below the historical average, the analysis shows an upward trend in that share since 2016. That timeframe follows the state legislature enacting additional funding for affordable housing as part of the state’s housing plans. Exhibit 11 demonstrates the number of income-restricted and market-rate units over time.

**Exhibit 11**

LIHTC New Construction in New York



Source: Authors’ analysis of Homes and Community Renewal’s (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data

**Most developments augment LIHTC with other capital financing.** Construction costs can be particularly high in high-resource neighborhoods, including those for land acquisition and permit fees. Therefore, building affordable housing in these areas would require substantial gap financing. As confirmed by the study’s data, most developers avail themselves of additional capital subsidies from the state and other sources to supplement LIHTC credits.<sup>21</sup> Across properties for which the authors could confirm this information (properties built after 2010), approximately 34 percent of units were in buildings that used only LIHTC to finance the development. The share of these units peaked during the 2015–19 period and then most recently declined to less than 10 percent. This trajectory is primarily explained by the rise and fall in the prevalence of developments with smaller shares of affordable units. In the earlier years of the 2010s, when New York City’s residential rental market was rebounding from its Great Recession-era slump, developers showed noticeable interest in new developments with a small number of affordable units. The large share of market-rate units in these developments would lower the need for substantial subsidies, which increases the likelihood of using LIHTC as the only source of subsidy. However, over time, New York State decided to focus its support on developments with larger shares of affordable homes, which

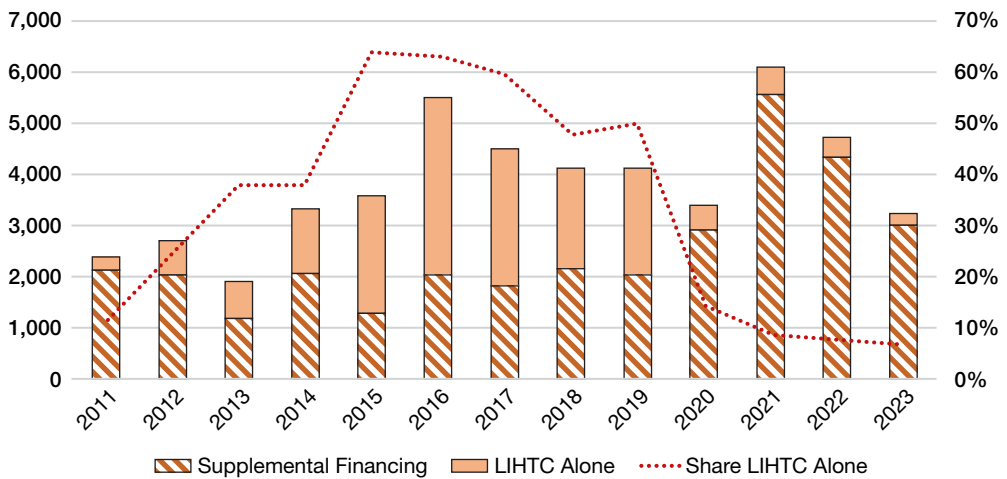
<sup>21</sup> These credits include funding through the State’s Housing Trust Fund, capital funding appropriated by the State Legislature as part of the Five-Year Capital Plan, or federal sources such as the Federal Housing Trust Fund and the HOME Investment Partnership.



typically require additional financial support due to their restricted rent income.<sup>22</sup> As a result, units in LIHTC-only properties comprise a smaller share of all newly built units after 2019. Exhibit 12 shows the distribution of units by source of subsidy over time.

### Exhibit 12

Affordable Units by Type of Subsidy



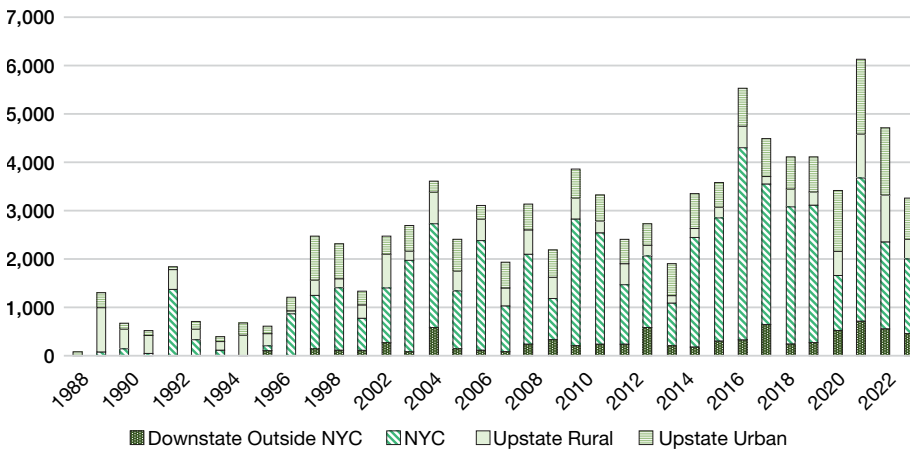
Source: Authors' analysis of Homes and Community Renewal's (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data

**New York City leads other regions in number of affordable units by far.** Given that more than 43 percent of the state's population and two-thirds of its rental units are within the boundaries of New York City, it is not surprising that the city has the largest number of LIHTC units among the four regions. Factors such as a large low-income population, a history of local low-income housing assistance programs, strong tenant political representation, and land use policies that accommodate multifamily developments also make New York City a relatively easier place to develop subsidized housing. In the study sample, 56 percent of all units are located in New York City, as demonstrated in exhibit 13.

<sup>22</sup> New York City's local property tax structure, zoning code, and robust local administrative capacity make it somewhat unique in the state. A number of substantial incentives or programs exist for developers to build affordable housing in the city, including in its well-resourced neighborhoods. Examples include Mandatory Inclusionary Housing, which aims to permanently increase the stock of affordable units through zoning modifications, and the 421-a program, which provides property tax exemptions in return for developers setting aside a share of newly built units as affordable. These programs have shown sizeable impact, especially in motivating developments with a mix of market-rate and affordable units in well-resourced neighborhoods. Over time, New York State and New York City determined that these programs were more efficient and effective tools than LIHTC in encouraging multifamily housing in high-score areas, and gradually diverted away from using LIHTC as an incentive for those developments in New York City. This gradual shift of approach does not mean that new affordable units are not being built in New York City's well-resourced areas, but rather than other policy tools are used more heavily than LIHTC to incentivize them. Details of the State's policy change are explained at [https://www.craigslist.com/article/20140127/REAL\\_ESTATE/140129891/state-tweaks-affordable-housing-incentive](https://www.craigslist.com/article/20140127/REAL_ESTATE/140129891/state-tweaks-affordable-housing-incentive).

**Exhibit 13**

Affordable Units by Region



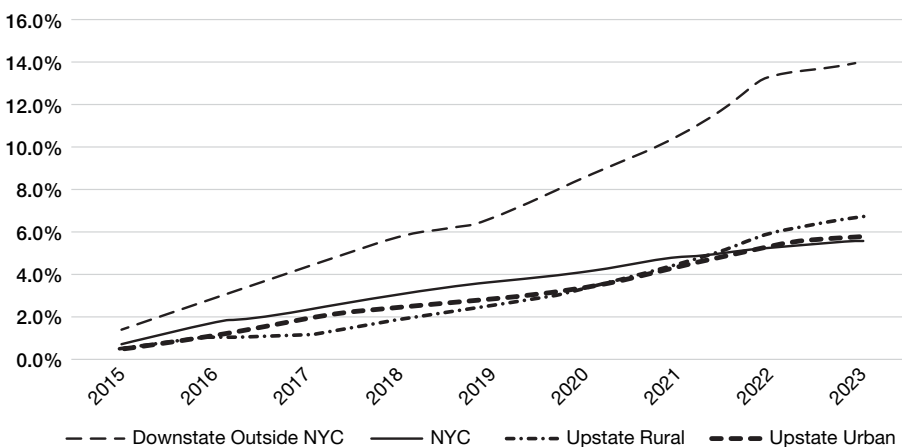
NYC = New York City.

Source: Authors' analysis of Homes and Community Renewal's (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data

**Siting of LIHTC developments has been expanding to more neighborhoods.** On an annual basis, LIHTC developments occur in a range between 0.4 and 4.5 percent of neighborhoods, depending on the region. The authors' analysis shows that over time, developments have been expanding over a growing number of neighborhoods since 2015. Exhibit 14 shows the growth in the share of neighborhoods with LIHTC development each year—or the percent change in the new neighborhoods with LIHTC developments. Upstate Urban leads other regions in diversifying LIHTC buildings across space. This trend may be driven in part by the noncontiguous geography of this region according to the authors' definition, which is comprised of cities in different locations of the state.

**Exhibit 14**

Cumulative Share of Neighborhoods with LIHTC Developments



Source: Authors' analysis of Homes and Community Renewal's (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data

**More homes are built in high-resource areas now than before.** Overlaying geocoded LIHTC developments with census tracts reveals two points. First, neighborhoods with any LIHTC developments since 2015 have lower average resource scores than their counterparts without LIHTC buildings. This finding can be explained in part by the structure of the LIHTC program, as described in the Review of Theoretical and Empirical Literature section of this article. This score differential between neighborhoods with and without LIHTC developments ranges from 4 points in the Upstate Rural region to nearly 16 points in Upstate Urban. Given the scaling of the Neighborhood Resource Index in this article, this means that LIHTC buildings are in neighborhoods with an average of 4 to 16 percent fewer resources. When quintiles of resource score are considered, the majority of LIHTC units built after 2015 are in census tracts in the bottom quintile. This observation is shown in exhibit 15, which documents that the percentage of LIHTC units built in the highest quintile of the Neighborhood Resource Index is small in all regions and usually disproportionate to the renter share of residents. New York City stands out because it has placed a noticeable 28 percent of its units in top-scoring neighborhoods. However, as can be calculated from the information in exhibit 15, the average number of units per building is much higher in the top quintile tracts of NYC than in lower quintiles. This result implies that a relatively small number of high-density developments in a high-scoring neighborhood could considerably move the share of total units in high-resource neighborhoods in that region.<sup>23</sup>

Secondly, the analysis also shows that despite the scarcity of LIHTC in high-scoring neighborhoods, more units have been built in well-resourced neighborhoods after 2015 than before. As exhibit 15 lays out, the share of new units built in the highest-scoring neighborhoods has grown in all regions except New York City, with some variation among them. Gains are more pronounced in the downstate suburban and upstate rural regions, where the top-scoring neighborhoods go from having no affordable units in the 2010–15 period to hosting 4 to 8 percent of the region's units after 2015. As previously discussed in the Incorporation of Well-Resourced Areas into HCR Programs section of this article, these gains can at least partly be attributed to New York State's proactive efforts to motivate building in well-resourced neighborhoods in recent years.

New York City is the exception again. As explained previously, the availability of LIHTC credits in the early years of the 2010s for developments with very small shares of affordable housing allowed developers to place income-restricted units in well-resourced neighborhoods—in the same building as the upscale ones—without much need for substantial additional subsidies. This situation created a higher baseline in New York City for the share of new units in well-resourced neighborhoods in the early 2010s. As the state has gradually moved away from supporting this type of development, New York City has been converging toward the typical pattern in other regions. Therefore, the city does not demonstrate the same growth observed in all other regions in the share of new LIHTC units in well-resourced neighborhoods. It is important to note that this analysis includes only the affordable units supported by LIHTC, whereas New York City has several other mechanisms

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<sup>23</sup> The study's data confirm that this was evidently a common pattern in NYC: Of the 6,237 units located in the top quintile of resource score in NYC, 5,975 (96 percent) were in 80/20 buildings with relatively small shares of affordable housing (20 percent or less), which enabled developers to build in high-income neighborhoods.

for promoting the development of new affordable units in well-resourced areas (see footnote 21). Exhibit 16 visualizes this growth in each region.<sup>24</sup>

**Exhibit 15**

Distribution of LIHTC Units in Quintiles of Neighborhood Resource Score										
	Downstate Outside NYC					NYC				
	Lowest Quintile of Resource Score	Quintile 2	Quintile 3	Quintile 4	Highest Quintile of Resource Score	Lowest Quintile of Resource Score	Quintile 2	Quintile 3	Quintile 4	Highest Quintile of Resource Score
Mean Resource Score	51.2	64.8	72.8	79.1	85.9	44.3	55.2	61.7	67.6	77.8
Number of Tracts	196	196	196	196	196	447	447	447	447	447
Share of Households	0.21	0.40	0.12	0.18	0.09	0.49	0.18	0.08	0.05	0.20
Share of Renters	0.36	0.36	0.11	0.13	0.04	0.51	0.17	0.08	0.05	0.19
LIHTC Buildings	39	57	22	28	22	102	41	11	9	24
Percent LIHTC Buildings	23%	34%	13%	17%	13%	55%	22%	6%	5%	13%
LIHTC Units	1,698	1,388	383	303	319	9,288	2,939	1,464	2,485	6,237
Percent LIHTC Units: 2015–23	42%	34%	9%	7%	8%	41%	13%	7%	11%	28%
Percent LIHTC Units: 2010–14	61%	24%	9%	6%	1%	18%	13%	7%	17%	45%
	Upstate Rural					Upstate Urban				
	Lowest Quintile of Resource Score	Quintile 2	Quintile 3	Quintile 4	Highest Quintile of Resource Score	Lowest Quintile of Resource Score	Quintile 2	Quintile 3	Quintile 4	Highest Quintile of Resource Score
Mean Resource Score	45.9	57.3	64.2	71.0	81.5	28.5	46.9	60.2	69.2	79.4
Number of Tracts	208	210	209	209	208	202	202	203	202	202
Share of Households	0.22	0.12	0.13	0.37	0.16	0.33	0.25	0.20	0.14	0.08
Share of Renters	0.33	0.10	0.13	0.34	0.10	0.44	0.30	0.14	0.09	0.03
LIHTC Buildings	74	39	55	97	49	341	185	104	86	40
Percent LIHTC Buildings	24%	12%	18%	31%	16%	45%	24%	14%	11%	5%
LIHTC Units	1,694	645	423	1,111	611	3,230	1,472	1,500	1,688	343
Percent LIHTC Units: 2015–23	38%	14%	9%	25%	14%	39%	18%	18%	21%	4%
Percent LIHTC Units: 2010–14	32%	28%	17%	11%	12%	34%	26%	19%	20%	0%

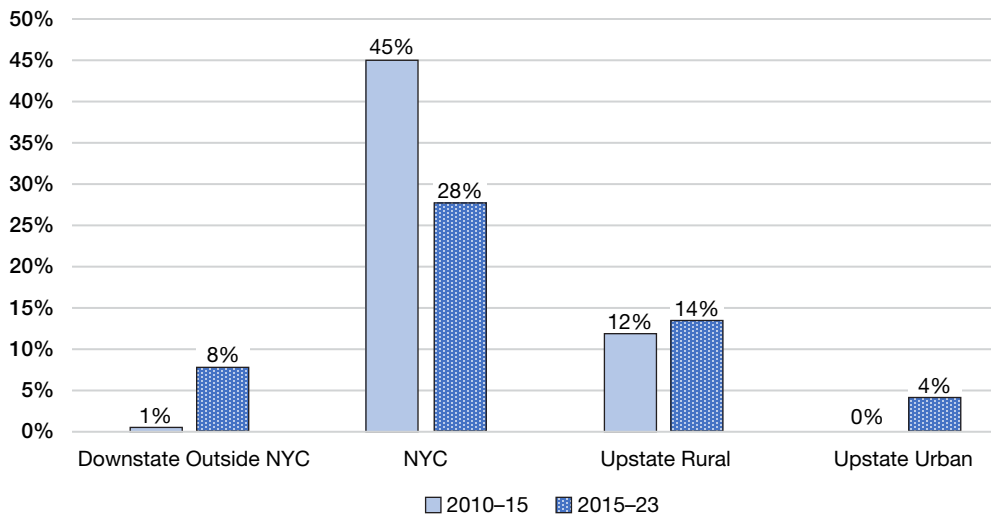
NYC = New York City.

Sources: Homes and Community Renewal’s (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data; Authors’ analysis of the following data sources: American Community Survey 5-year estimates, 2021; Longitudinal Employer-Household Dynamics, 2020; New York State Division of the Budget Enacted Budget Financial Plan for Fiscal Year, 2023; New York State Education Department, 2023; New York State GIS Clearinghouse

<sup>24</sup> Ideally, the comparison between the two periods shown on exhibit 7 (2010–15 vs. 2015–23) would allow the neighborhood resource scores to vary by year or to reflect the existing local condition of resources in any given year. However, given that the score draws on data from multiple sources, the authors were not able to obtain consistent data for the earlier period to replicate the indexed score for 2010 to 2015. Given that limitation, the analysis applies the measure of neighborhood resources in the 2015–23 period to the earlier period, which is imperfect but the only practical option.

## Exhibit 16

### Gains and Losses of New LIHTC Units in the Top Quintile of Neighborhood Resource Score Distribution



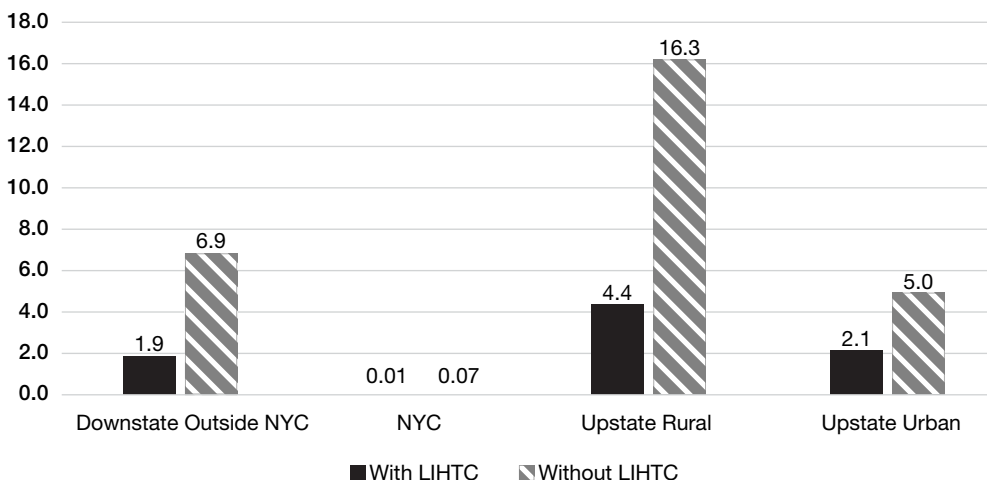
NYC = New York City.

Sources: Homes and Community Renewal's (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data; Authors' analysis of the following data sources: American Community Survey 5-year estimates, 2021; Longitudinal Employer-Household Dynamics, 2020; New York State Division of the Budget Enacted Budget Financial Plan for Fiscal Year, 2023; New York State Education Department, 2023; New York State GIS Clearinghouse

**Affordable units are built in areas with an existing stock of multifamily housing.** The authors propose that the scarcity of apartment buildings in a neighborhood could be a proxy for restrictive land use regulations that hinder the development of multifamily buildings in general and low-income multifamily housing in particular. This hindrance of development is well documented in the urban economics literature, as reviewed in a previous section. To examine this proposition, the authors compare the prevalence of multifamily buildings in neighborhoods with LIHTC units with those without. Exhibit 17 visualizes the comparison in terms of the ratio of single-family to multifamily structures (multifamily here is defined as structures with five or more units; see the description of the equity and diversity metrics in the appendix). Across all regions of the state, more LIHTC units have been built in neighborhoods with a larger stock of multifamily residences. This circumstance highlights the likely role of local regulatory infrastructure in the development of low-income rental homes.

**Exhibit 17**

Multifamily Stock in Neighborhoods With and Without LIHTC Units



NYC = New York City.

Sources: Homes and Community Renewal's (HCR) administrative Low-Income Housing Tax Credits (LIHTC) data; Authors' analysis of the following data sources: American Community Survey 5-year estimates, 2021; Longitudinal Employer-Household Dynamics, 2020; New York State Division of the Budget Enacted Budget Financial Plan for Fiscal Year, 2023; New York State Education Department, 2023; New York State GIS Clearinghouse

## Conclusions

This study's main contribution was to set up an inclusive, regionally focused measure of neighborhood resources in New York State and to demonstrate the measure's practical application by using it to assess the siting pattern of LIHTC projects in the state. The analyses presented in this article augment existing measures of local opportunity by diversifying the underlying metrics and allowing the Neighborhood Resource Index to vary based on regional conditions. The article finds that the state's LIHTC units have been concentrated in a relatively small number of neighborhoods and that those neighborhoods typically scored lower in terms of neighborhood resources, as measured by the presented index. However, the analysis of recent siting patterns suggests that units are being built in an increasing number of neighborhoods, including more areas with higher Neighborhood Resource Index scores, with some regional variability. These findings offer some useful insights into the challenges to developing affordable housing in well-resourced areas, the strategies to address this disparity, and the issue of equitable access to resources more broadly.

The article offers some potential explanations for why LIHTC units have not been built where local resources are greatest. The most straightforward explanation is higher financing, land acquisition, and construction costs. Developing housing with below-market rents is more burdensome in high-resource, high-cost neighborhoods than elsewhere due to higher opportunity costs (the market rent that could be charged absent the subsidy) and general costs attached to land acquisition, permit fees, and construction. The article's findings acknowledge that, at least in New York State, most newly built units augment LIHTC with other capital funding. Nonetheless, the ability of the

program to move low-income renters to high-resource areas, as measured by the share of units built in those areas, is limited, especially outside of New York City.

Another possible explanation for the concentration of affordable units in low-resource neighborhoods—apart from the structure of the program itself—is rooted in land use regulations. As the article documents, new LIHTC units are rare in neighborhoods where single-family homes dominate and are built mostly in census tracts with low existing ratios of single-to-multifamily housing. This situation implies that restrictive zoning may play a role in the distribution pattern of LIHTC developments. Although the analysis does not include a formal analysis of land use regulations in the study areas, it finds evidence that high-resource neighborhoods are exclusive and homogenous, including with respect to housing types and income groups.

Based on these findings, the article recommends a few strategies that can facilitate achieving the goals of Fair Housing and moving to opportunity. States should be proactive in rewarding new developments in high-resource areas to alleviate the cost burden for potential developers. New York State has taken this initiative by announcing a specific housing goal dedicated to building homes in Well-Resourced Areas in its Qualified Allocation Plans and setting aside capital funding for developments in these areas.<sup>25</sup> The results from the analysis comparing siting patterns of a subset of New York's LIHTC units produced before and after 2015 suggest that these efforts are having positive impacts.

Obstacles that arise from zoning restrictions can also be addressed at various levels. Where local governments are pressured by their electoral base to deflect new multifamily units for the sake of property-value protection, states may have a role to play. Several states, including California, Massachusetts, and Oregon, have passed laws in recent years to either incentivize local communities to allow for more multifamily housing or denser development patterns or provide a remedy for developers seeking to develop qualifying multifamily projects in areas with restrictive zoning codes.<sup>26</sup> It should be noted, however, that states' ability to impose such influence over local land use regulations may be limited by home rule, which grants municipalities the ability to pass laws to govern themselves with respect to issues not expressly prescribed by the state in its constitution. New York State is one such home rule state.

Finally, the article's findings—and the scholarly literature—suggest that improving equitable access to resources and bettering future outcomes for low-income families cannot be achieved solely through increasing access to affordable housing in well-resourced neighborhoods. If, as the article's findings suggest, resources are inequitably distributed in well-resourced areas, and if, as the literature suggests, living in a well-resourced area does not guarantee access to opportunity, efforts to develop more affordable housing in well-resourced areas must be complemented with other

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<sup>25</sup> See <https://hcr.ny.gov/system/files/documents/2023/05/2023-fair-housing-matters-ny-public-cmt-draft-june-16-deadline.pdf>.

<sup>26</sup> With regard to land use reforms, Oregon requires all cities of more than 10,000 residents to allow two- to four-unit homes on all residentially zoned lots (Oregon Department of Land Conservation and Development, 2020). With regard to builder remedies, Massachusetts has passed laws that offer expedited permitting for sustainable development in designated sustainable growth areas (Galante, Reid, and Weinstein-Carnes, 2016); California has restricted the number of procedural steps that local governments could require developers to go through, among other policies (California Legislative Information, 2020).



strategies to address equity. In New York State, HCR employs mobility counseling programs<sup>27</sup> to help families move to well-resourced areas and to help connect them with the resources necessary to meet their needs.

Furthermore, investments in affordable housing in well-resourced areas should not come at the expense of neighborhoods with fewer resources. In other words, states must also continue to invest in these areas, but with a concerted effort to ensure that those investments improve equity and opportunity for new and existing residents. Indeed, as mentioned previously, the LIHTC program also provides financing for developments in high-poverty areas, and researchers have found that LIHTC developments can benefit low-income neighborhoods (e.g., Schwartz, 2010). The IRS specified in 2016 that LIHTC developments in high-poverty areas must contribute to a concerted community revitalization plan,<sup>28</sup> and New York State's QAP specifically awards points to LIHTC projects that complement neighborhood revitalization efforts that "seek to fundamentally improve the quality of life and opportunities for neighborhood residents."<sup>29</sup> Strategies of this nature can help more low-income households find homes in well-resourced areas while also facilitating improvements to neighborhoods that have historically experienced long-term disinvestment and a shortage of adequate housing. The scoring tool presented in this article helps policymakers navigate their options for achieving those objectives and affirmatively furthering fair housing.

## Appendix

### Description of Equity and Diversity Metrics

#### High- to Low-Wage Workers Ratio

The ratio for high- to low-wage workers was calculated by dividing the number of jobs with earnings greater than \$3,333/month by the number of jobs with earnings of \$1,250/month or less in each tract.

#### White to Non-White workers Ratio

The ratio of White to non-White workers was calculated by dividing the number of jobs held by White people by the number of jobs held by non-White people. The variable for number of jobs held by non-White people was generated by subtracting the number of jobs held by White people from the total number of jobs.

#### Male to Female Workers Ratio

The ratio of male to female workers was calculated by dividing the number of jobs held by males by the number of jobs held by females.

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<sup>27</sup> See <https://hcr.ny.gov/mobility>.

<sup>28</sup> See Rev. Rul. 2016-77, 2016-52 I.R.B. 914 ([https://www.irs.gov/irb/2016-52\\_IRB](https://www.irs.gov/irb/2016-52_IRB)).

<sup>29</sup> See <https://hcr.ny.gov/system/files/documents/2021/05/qap-9-lihtc-part-2040.1-2040.13.pdf>.

### **Top to Bottom Income Ratio**

The ratio of top to bottom earners was calculated by splitting earners into two groups. Top earners were those with a household income of \$100,000 or more. Bottom earners were those with a household income of \$25,000 or less. The ratio between the groups was created by dividing the number of top earners by the number of bottom earners.

### **Herfindahl–Hirschman Index**

The Herfindahl–Hirschman Index describes the mix of jobs from various industries within each tract. The industry mix in a tract of residence was calculated by determining the proportion each North American Industry Classification System (NAICS) sector makes up in the total number of jobs in a tract. The NAICS sectors are as follows: 11 (Agriculture, Forestry, Fishing and Hunting), 21 (Mining, Quarrying, and Oil and Gas Extraction), 22 (Utilities), 23 (Construction), 31-31 (Manufacturing), 42 (Wholesale Trade), 44-45 (Retail Trade), 48-49 (Transportation and Warehousing), 51 (Information), 52 (Finance and Insurance), 53 (Real Estate and Rental and Leasing), 54 (Professional, Scientific, and Technical Services), 55 (Management of Companies and Enterprises), 56 (Administrative and Support and Waste Management and Remediation Services), 61 (Educational Services), 62 (Health Care and Social Assistance), 71 (Arts, Entertainment, and Recreation), 72 (Accommodation and Food Services), 81 (Other Services [except Public Administration]), and 92 (Public Administration). The Herfindahl–Hirschman Index of industry mix was then calculated by summing the squares of the portion of jobs each sector makes up.

### **Homeowner to Renter Ratio**

The homeowner to renter ratio was calculated by dividing the number of homeowners by the number of renters.

### **Single to Multifamily Ratio**

The single to multifamily ratio was calculated by dividing the number of residences with one detached unit by the number of multifamily residences. The variable for multifamily residences was created by summing the number of structures with 10 or more units in each tract.

### **Rent to Mortgage Ratio (Housing Cost Burdens)**

The ratio between owner and renter housing cost burdens was calculated by dividing median gross rent by median mortgage cost in each tract.

### **High to Low Home Value Ratio**

The ratio for top to bottom home value was calculated by dividing the number of high-value owner-occupied units by the number of low-value owner-occupied units. High-value units were determined by summing the number of owner-occupied units worth at least \$500,000 in each tract. Low-value units were determined by summing the number of owner-occupied units with a maximum value of \$149,999 in each tract.

**Exhibit A1**

**Descriptive Statistics for Equity and Diversity Metrics**

	<b>Min</b>	<b>Max</b>	<b>Median</b>	<b>Mean</b>	<b>N</b>	<b>SD</b>
High- to Low-Wage Worker Ratio	0.40	8.9	2.18	2.35	5,270	1.09
White to Non-White Worker Ratio	0.11	84.1	3.30	7.23	5,270	9.45
Male to Female Worker Ratio	0.53	1.7	0.94	0.94	5,270	0.13
Top to Bottom Earner Ratio (Count)	0.00	411.0	2.42	4.93	5,270	0.13
Herfindahl–Hirschman Index of Industry Mix	0.07	0.3	0.10	0.11	5,270	0.02
Owner to Renter Ratio	0.00	265.5	1.54	4.52	5,227	11.36
Single-Family to Multifamily Ratio	0.00	2,329.0	2.36	24.49	4,313	86.29
Rent to Mortgage Ratio (Median)	0.14	7.4	0.63	0.66	4,211	0.23
High to Low Home Value Ratio	0.00	1,078.0	1.57	14.16	4,288	35.39

*SD = Standard Deviation.*

*Sources: Authors' analysis of the following data sources: American Community Survey 5-year estimates, 2021; Longitudinal Employer-Household Dynamics, 2020*

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