Data-for-Equity Research Brief

Rental Cost, Unit Size and Neighborhood Opportunity

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Low-Income Families with Children Face Affordability/ Unit Size/Neighborhood Opportunity Tradeoff in Housing Search

Equity Highlights

- In the 100 largest metro areas, rental units that are large or lower-cost are highly concentrated in the lowest-opportunity neighborhoods, and this concentration is especially pronounced for rentals units that are both large and lower-cost
- The extent to which large rental units are located in higher-opportunity neighborhoods varies considerably across metro areas
- Restrictive zoning in Northeastern metros may partially explain the relatively small share of large rental units located in the higher-opportunity neighborhoods of these metros
- Minority households, especially Hispanic households, disproportionately face an affordability/ size/neighborhood opportunity housing dilemma, as they are more likely to be renters, have larger households, have children, and have lower incomes
- Explore the distribution of rental units by rent level and size across neighborhood opportunity for any of 100 large metros with this interactive charting tool

Families weigh many factors when considering where to live, including a housing unit's physical attributes, price, and whether neighborhood characteristics meet the family's needs and preferences. Lower-income families with children face significant constraints because they often need larger, more affordable housing units in neighborhoods with resources especially relevant to child wellbeing, such as proximity to high-quality early childhood education centers and schools. Past research suggests that low-income families that receive rental housing subsidies, being confident

in their ability to avoid the potential dangers and drawbacks of living in lower-opportunity neighborhoods, may trade higher-opportunity neighborhoods for larger units that can better accommodate family needs (Rosenblatt and DeLuca 2012). The long-term effects of such difficult tradeoffs are becoming increasingly clear as research continues to show the importance of neighborhood context for child development and its long-term effects on socioeconomic outcomes in adulthood (Chetty, Hendren et al. 2016). This research brief explores the extent to which families are forced to trade off neighborhood opportunity for affordable and suitable housing in today's rental market. We examine the distribution of housing units by size (number of bedrooms) and rent across levels of neighborhood opportunity, as defined by the diversitydatakids.org—Kirwan Institute Child Opportunity Index. We find that large rental units, and especially large units with lower rents, are disproportionately concentrated in lower-opportunity neighborhoods. The concentration of large rental units in low-opportunity neighborhoods varies considerably across metro areas. Hispanic households, which are significantly larger than non-Hispanic households (average household size of 3.25 persons compared to 2.43) and have relatively low incomes, are likely to be especially negatively impacted by the tradeoff between affordability, size and neighborhood opportunity.

Data

We obtained data on rental housing units by number of bedrooms and gross rent levels from the U.S. Census Bureau's American Community Survey (2015 5-year estimates) at the neighborhood level (defined as census tracts). We classify rental units into five size categories by number of bedrooms, as shown below. The data capture larger units through two definitions: 2 or more bedrooms and 3 or more bedrooms. Throughout this brief, large units will be defined as those having 3 or more bedrooms.

- All rentals
- 0 to 1 bedrooms
- 2 bedrooms
- 2 or more bedrooms
- 3 or more bedrooms

We also classified rental units into six categories by monthly gross rent (measured in 2015 dollars), as shown below.

- All rentals
- Less than $500
- $500 to $749
- $750 to $999
- $1,000 to $1,499
- $1,500 or more

We measure neighborhood opportunity using the Child Opportunity Index (COI), developed by diversitydatakids.org and the Kirwan Institute for the Study of Race and Ethnicity (Acevedo-Garcia 2016). The COI is a measure of relative neighborhood opportunity for all neighborhoods (i.e., census tracts) in a given metropolitan area. It is available for each of the 100 largest metropolitan areas. The Index combines 19 separate component indicators in three opportunity domains (Education, Health and Environment, and Social and Economic) into a single metric (Exhibit 1). Each of the indi-

vidual indicators was vetted for its relevance to child development using empirical literature on neighborhood effects and/or conceptual frameworks of neighborhood influences on children. In addition to relevance, data availability guided indicator selection for each domain.

Exhibit 1: Indicators by Domain
Educational Opportunity
• Student poverty rates in local schools • Neighborhood schools' student proficiency in Reading • Neighborhood schools' student proficiency in Math • Proximity to licensed early childhood education (ECE) centers • Proximity to quality early childhood education (ECE) centers • Early childhood education participation rate • High school graduation rate • Adult educational attainment
Health and Environmental Opportunity
• Proximity to health facilities • Retail healthy food environment • Proximity to toxic waste and release sites • Volume of nearby toxic release • Proximity to parks and open spaces • Housing vacancy rate
Social and Economic Opportunity
• Foreclosure rate • Poverty rate • Unemployment rate • Public assistance rate • Proximity to employment

The COI is the first opportunity index that focuses specifically on child opportunity across the 100 largest metropolitan areas[1]. Within each metropolitan area, we ranked neighborhoods according to their COI score and divided them into quintiles. Then we assigned each neighborhood a COI category (very low-, low-, moderate-, high-, or very high-opportunity). Quintile categories are created for the COI overall and for each of the three opportunity domains: Education, Health and Environment, and Social and Economic.

Analysis

For each neighborhood within the 100 largest metro areas, we calculate the number of rental units for each size and gross rent category and for each size/rent combination. We subsequently calculate the distribution of rental units by size, rent, and size/rent combination across COI levels.

Users can explore the distribution of rental units with an interactive charting tool available here. Choose any of the 100 largest metro areas (or all large metros combined) and examine the distribution of rental units by size and gross rent category across levels of child neighborhood opportunity. Opportunity can be defined using either the overall Child Opportunity Index or any of the three opportunity domain indices: Education, Health and Environment, and Social and Economic.

While this unique neighborhood-level database allows for a variety of analyses, this research brief focuses on the overall COI and addresses three specific questions:

1. Where are rental housing units of different size (number of bedrooms) in relation to neighborhood opportunity levels?
2. Where are rental housing units of different gross rent levels in relation to neighborhood opportunity levels?
3. Where are large, more affordable rental units in relation to neighborhood opportunity levels?

1. Technical documentation for the Child Opportunity Index can be found here, and interactive Child Opportunity Index maps for each metropolitan area can be found here.

After examining these aggregate patterns across the 100 largest metros, we then turn to look more closely at variation between the 100 large metros. We rank the 100 largest metros according to the percentage of large rental units (i.e., 3 or more bedrooms) in high- or very high-opportunity neighborhoods. In this way, we identify metro areas that ease the unit size and neighborhood opportunity dilemma faced by large renter families by having greater shares of their large rental units located in higher-opportunity neighborhoods.

In this brief, we do not compare metropolitan areas according to their distribution of lower-rent units or large, lower-rent across levels of opportunity. Comparing metro areas by unit rent levels and neighborhoods of opportunity is problematic with our currently constructed dataset, which classifies rent by absolute rent categories (e.g., $500 to $749.) Due to variation in rent levels across metros, it is difficult to choose an appropriate absolute rent cut-off to define "lower-rent" units. For example, a "lower-rent" absolute cut-off of $1,000 would result in most units in some metro areas to be deemed lower-rent (e.g., McAllen, TX where median rent for a three bedroom rental is $792), while in other metros most rental units would be deemed higher-rent (e.g., San Jose, CA where median rent for a three bedroom rental is $2,122). Therefore, while we do present aggregate unit rent data for all 100 metros combined, in this data brief we restrict our inter-metropolitan comparative analysis to examining the relative location of large rental units across metros' distribution of neighborhood opportunity, irrespective of rent level.

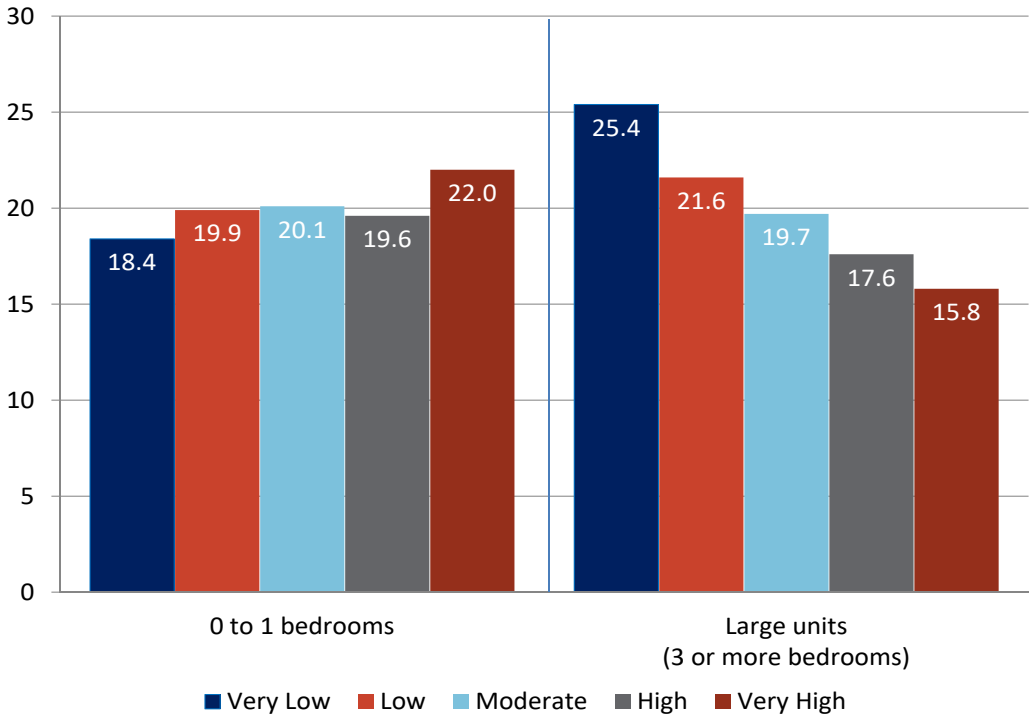
Findings

Unlike smaller rentals, large housing units (i.e., 3 or more bedrooms) are disproportionately concentrated in lower-opportunity neighborhoods (Exhibit 2). Child Opportunity Index categories are constructed such that one fifth (20%) of neighborhoods in each metro area fall into each of five opportunity categories (very low- to very high-opportunity). Hence, if rental units were distributed equally across neighborhood opportunity levels, each category would contain approximately 20% of rental units, and the bars in the following charts would each stand at the 20% mark. In fact, smaller rental units with zero or one bedroom are fairly evenly distributed across opportunity categories, with a slightly higher share (22%) in the very highest-opportunity neighborhoods. In contrast, the share of large units is inversely related with neighborhood opportunity; 25.4% of large rentals are in very low-opportunity neighborhoods, and only 15.8% in very high-opportunity neighborhoods.

Across the 100 largest metros, rents are more expensive in higher-opportunity neighborhoods (Exhibit 3). Predictably, neighborhoods with characteristics associated with greater opportunity command higher rents in the housing market because housing prices reflect locational (not just housing unit) attributes such as high-performing schools (Nguyen-Hoang and Yinger 2011, Rockwell 2012). In addition, publicly subsidized, affordable rentals are disproportionately concentrated in lower-opportunity neighborhoods (McClure and Johnson 2015). Together, these forces result in a strong positive relationship between rent level and opportunity. Units with rents below $1,000 are more common in lower-opportunity neighborhoods, while they are scarce in higher-opportunity neighborhoods. For example, 37% of units with rents below $500 are located in very low-opportunity neighborhoods, while only 10% are in very high-opportunity neighborhoods. In stark contrast, 10% of units renting at $1,500 or more are located in very low-opportunity neighborhoods, compared to 33% in very high-opportunity neighborhoods.

Exhibit 2

Percent of rental housing units in each neighborhood opportunity category, by number of bedrooms



Note: Data are for 100 largest metro areas combined.
Sources: diversitydatakids.org-Kirwan Institute Child Opportunity Index and U.S. Census Bureau, American Community Survey, 2015 (5 year estimates)

Larger, lower-cost rental units are highly concentrated in the lowest-opportunity neighborhoods (Exhibit 4). In the largest 100 metro areas combined, 43% of large units renting below $750 are located in very low-opportunity neighborhoods, while only 7% are in very high-opportunity neighborhoods. This pattern persists into the higher $750 to $1,000 rent range, with 36% of large units located in very low-opportunity neighborhoods, but just 7% in very high-opportunity neighborhoods.

Prior analysis by diversitydatakids.org of the relationship between HUD's Location Affordability Index and the Child Opportunity Index shows that even to live in a very-low opportunity neighborhood, the median rent burden for low-income families [2] would be 40% of income (across the 100 largest metro areas), well above the recommended housing cost-burden threshold of 30%. To live in a very-high opportunity neighborhood, their expected rent burden would increase to 47.7% of income. Furthermore, poor black and Hispanic children are most likely to live in neighborhoods where cost burdens exceed relative neighborhood opportunity levels (Acevedo-Garcia, McArdle et al. 2016).

While, across the 100 largest metro areas combined, large units are disproportionately concentrated in lower-opportunity neighborhoods, there is considerable variation between individual metros. In only eleven metro areas does the concentration of large rentals located in the two highest opportunity categories exceed 40%, the share that would be expected if large rental units were distributed evenly across opportunity categories. The metros with the highest share of large rentals located in

2. Low-income families were defined in that analysis as single-parent family renters with a household size of three, one commuter, and income at 50% of the metro area median.

Exhibit 3

Percent of rental housing units in each neighborhood opportunity category, by gross rent

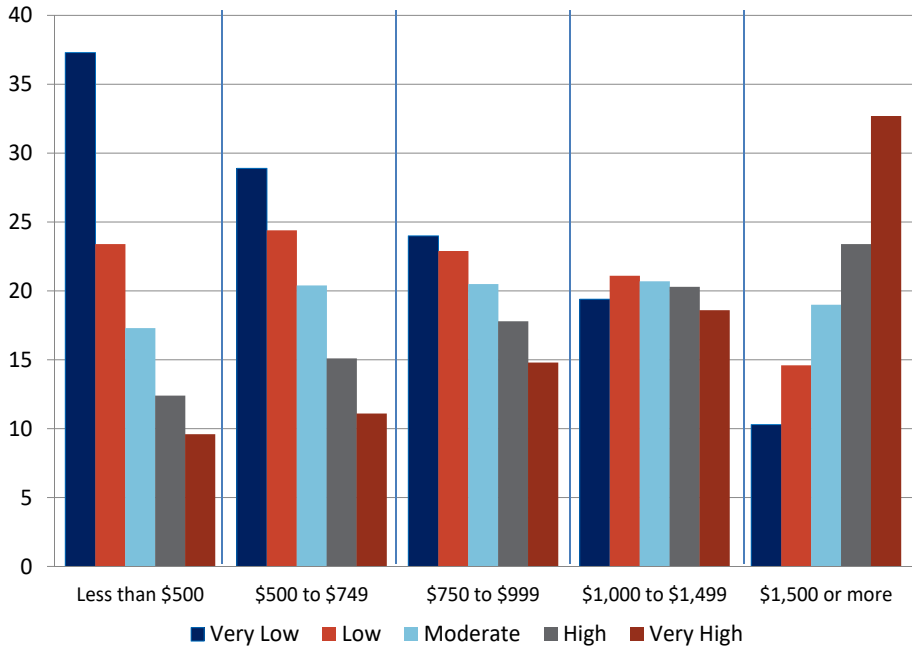
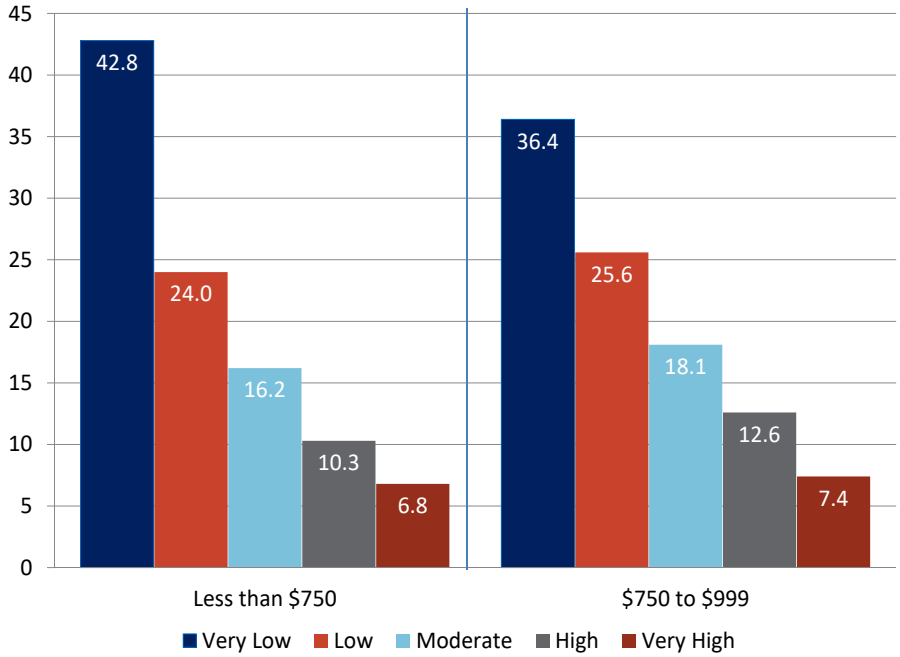


Exhibit 4

Percent of large, lower-rent housing units in each neighborhood opportunity category



Note: Large rentals defined as those with 3 or more bedrooms. Data are for the 100 largest metro areas combined.
Sources: diversitydatakids.org-Kirwan Institute Child Opportunity Index and U.S. Census Bureau, American Community Survey, 2015 (5 year estimates)

higher-opportunity neighborhoods are McAllen, TX; Augusta, GA; and El Paso, TX. In contrast, Philadelphia, PA; Worcester, MA; and New Haven, CT head the list of metros with the lowest share of large rentals in higher-opportunity neighborhoods (Exhibit 5).

Exhibit 5

Metros ranked by percent of large rental housing units in higher-opportunity neighborhoods

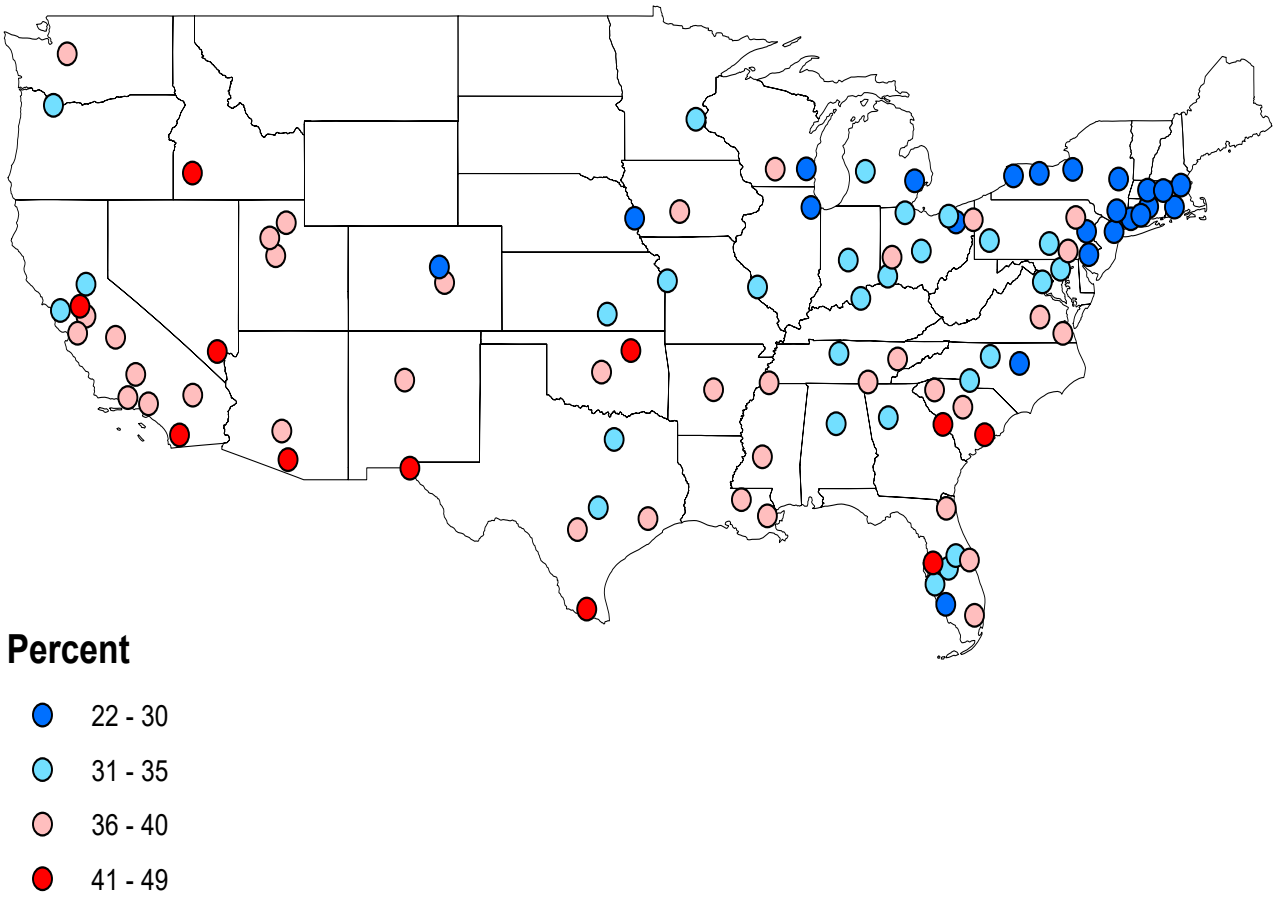
Highest	Percent	Lowest	Percent
McAllen, TX	48.5	Philadelphia, PA-NJ-DE-MD	22.0
Augusta, GA-SC	45.4	Worcester, MA	23.5
El Paso, TX	42.2	New Haven, CT	24.7
Tucson, AZ	41.7	Hartford, CT	24.9
Stockton, CA	41.2	Akron, OH	25.8
Charleston, SC	41.2	Poughkeepsie, NY	26.1
Boise City, ID	41.0	Allentown, PA-NJ	26.4
Tulsa, OK	40.8	Providence, RI-MA	26.4
Tampa-St., FL	40.8	Milwaukee, WI	26.7
Las Vegas, NV	40.5	Cape Coral, FL	26.8

Notes: Metro names abbreviated to include only name of first principal city. Large rentals defined as those with 3 or more bedrooms. Higher-opportunity neighborhoods defined as the 40% of census tracts with the highest Child Opportunity Index scores within the specified metro.
Sources: diversitydatakids.org-Kirwan Institute Child Opportunity Index and U.S. Census Bureau, American Community Survey, 2015 (5 year estimates).

A full examination of the extent to which metropolitan area characteristics are associated with the concentration of large rental units in higher-opportunity neighborhoods is beyond the scope of this brief. However, Exhibit 6 shows a strong regional pattern. The vast majority of Northeastern metro areas have relatively low shares of large units located in higher-opportunity neighborhoods. This pattern may be associated with more restrictive land use regulations in the Northeast (Gyourko, Saiz et al. 2008), which often exclude larger, multifamily structures from being built in higher-opportunity neighborhoods. In the Northeast, larger multifamily structures, with more units per building, house a greater share of all rental units than they do in other regions. Thirty-five percent of rental units in the Northeast are in buildings with ten or more housing units, compared with 25% of rental units in the South. Therefore, zoning that results in the exclusion of multifamily buildings from higher-opportunity neighborhoods has a stronger impact on limiting the availability of rental units in such neighborhoods in the Northeast than in other regions. The fact that the Northeast has a higher percentage of rental units in large buildings is related not only to the location of the units, but also to their size. Rentals located in large multi-unit buildings tend to have fewer bedrooms per unit. Nationally, just 7% of rental units in buildings with ten or more units have three or more bedrooms. In contrast, 43% of rental units in buildings with fewer than ten units have three or more bedrooms (U.S. Census Bureau 2015).

Exhibit 6

Percent of large, rental housing units in metro area's higher opportunity neighborhoods



Note: Large rentals defined as those with 3 or more bedrooms. Higher-opportunity neighborhoods defined as the 40% of census tracts with the highest Child Opportunity Index scores within the specified metro.
Sources: diversitydatakids.org-Kirwan Institute Child Opportunity Index and U.S. Census Bureau, American Community Survey, 2015 (5 year estimates)

Discussion

This brief has documented the limited availability of large rental units, particularly large and affordable rental units, in higher-opportunity neighborhoods. This type of housing is likely to meet the needs of low-income families with children, and a lack of such units in high-opportunity neighborhoods places families in the position of making difficult tradeoffs between cost, unit size, and location. There are several plausible explanations for the challenges that families face in finding larger, affordable units in higher-opportunity neighborhoods. First, neighborhood amenities and conditions associated with higher opportunity, for example, high-quality schools, are capitalized into housing prices, which are then passed on to renters in the form of higher rents (Nguyen-Hoang and Yinger 2011). Second, subsidized rentals have long been concentrated in lower-opportunity neighborhoods (McClure and Johnson 2015), both due to lower land/development costs and a de-

sire by some higher–income households to self-segregate from lower-income ones (Reeves 2017). This preference may stem from a belief (often unsubstantiated) that proximity to subsidized housing will lower their own property values (Ellen, Schwartz et al. 2007) or because they associate lower-income residents with negative behaviors (Rank, Yoon et al. 2003). These preferences are often expressed in zoning codes that restrict multifamily or higher density housing in higher-opportunity neighborhoods (Knaap, Meck et al. 2007, Reeves and Halikias 2016). Zoning may have an especially exclusionary effect on family households because, even when multifamily housing is allowed, suburban municipalities frequently encourage the construction of buildings with small apartments, often because of fears that larger apartments will house children, which may then drive up local school costs (McKim and Vallant 2013). Special zoning regulations may provide exceptions for older residents, allowing for multifamily housing or greater density only in age-restricted communities (Glaeser, Schuetz et al. 2006).

The concentration of large, affordable rental units in lower-opportunity neighborhoods and the relative scarcity of such units in higher-opportunity neighborhoods forces renter households to make difficult tradeoffs. Minority households, especially Hispanic households, face this dilemma disproportionately, as they are more likely to be renters, have larger households, have children in the household, and have lower incomes than white households. (Exhibit 7). Families who choose to double up, trading off space for potentially lower rents and/or better neighborhoods, risk the negative effects of crowding, which can have persistent detrimental impacts on children's wellbeing (Solari and Mare 2012). Those who devote more substantial shares of their incomes to housing in order to attain additional space and/or better neighborhoods have fewer resources to devote to other needs such as food, healthcare, and child enrichment (Newman and Holupka 2014, Joint Center for Housing Studies of Harvard University 2015). And children who remain in lower-opportunity neighborhoods may face risks related to exposure to violence and poor outcomes in many areas such as physical and behavioral health, education, marriage and childbearing, and employment (Santiago, Galster et al. 2014), as well as lower future earnings and college attendance (Chetty, Hendren et al. 2016).

Exhibit 7

Characteristics of U.S. households by race/ethnicity

	White Non-Hispanic	Hispanic	Black	Asian
Rentership rate	28.1	54.4	57.7	43.9
Average household Size	2.37	3.25	2.48	2.88
Average number of children under 18	0.49	1.00	0.66	0.64
Median household income	$62,950	$45,148	$36,898	$77,166

Notes: Hispanics may be of any race. All data for whites refer to non-Hispanic whites. Data for average household size and number of children for blacks and Asians refer to only non-Hispanic members of those races. Racial groups refer to those who indicated the specified race "alone". Median household income is for 2015, measured in 2015 dollars.
Sources: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2016; Current Population Survey/Housing Vacancy Survey, 2015.

Lower-income families are unlikely to be able to untie this Gordian knot of housing cost, unit size, and neighborhood opportunity by themselves, and the repercussions of their children's future success will impact the nation as a whole. Policies aimed at attacking affordability directly through raising family economic prospects and/or reducing housing costs are one part of the puzzle. Additionally, programs that enhance child-related opportunity in neighborhoods where lower-income children already live should be matched with initiatives to further open up existing higher-opportunity communities. One such initiative is the implementation of Small Area Fair Market Rents (SAFMR) as part of the Housing Choice Voucher program (U.S. Department of Housing and Urban Development 2015b). This rule, which increases subsidy levels for families that move to lower-poverty neighborhoods, is an improvement over the existing policy which set maximum allowable rents metro-wide, ignoring the large differences in opportunity and housing costs between neighborhoods within the same metro area. Evidence from HUD's demonstration study suggests that SAFMR may facilitate moves to higher-opportunity neighborhoods (Fischer 2015, U.S. Department of Housing and Urban Development 2015b). Although the rule mandating use of SAFMRs in 23 metro areas was scheduled to go into effect in 2017, it has been the subject of ongoing legal battles. HUD proposed a two-year suspension of the rule, but in early 2018 the Federal District Court of Washington, D.C. decided that the SAFMR rule implementation should proceed without delay. While SAFMRs would be an improvement over the status quo, a further improvement could be made by replacing neighborhood poverty rates as the basis for setting differing SAFMR levels with either a composite measure of neighborhood opportunity, such as the COI, or a particular dimension of opportunity neighborhood such as school quality, (Acevedo-Garcia, McArdle et al. 2016).

To the extent that zoning has been a barrier to the development of multifamily rental housing (Pendall 2000), especially units which may accomodate children (Reeves and Halikias 2016, Furth 2017), thoughtful zoning reform may improve the likelihood that children can live in neighborhoods which provide better opportunities to grow, thrive and succeed. Some communities have already taken steps to require or incentivize larger family-size units. In 2016, Emeryville, CA enacted a policy requiring a certain percentage of two- and three-bedroom units in new market-rate construction of ten or more residential units. San Francisco has also adopted certain neighborhood plans requiring that a percentage of new units include 2 or more bedrooms. In one neighborhood in Washington, DC, new zoning overlays provide density incentives for three-bedroom units (Hickey 2016). Zoning reforms such as these can help to open up previously inaccessible communities and neighborhoods to larger families, though extending these opportunities to families with affordability constraints would likely require additional resources such as government subsidies or inclusionary zoning. Such zoning provisions were enacted in Cambridge, MA in 2017. Cambridge's new zoning requires that developments of ten or more units preserve 20% of the units for low- and moderate-income tenants and "to preserve options for families. . . affordable units be created in developments of 50,000 square feet or larger, allowing space for three-bedroom units" (City of Cambridge 2017). By providing for larger, affordable units in a higher-opportunity community, Cambridge demonstrates how all three of the constraints considered in this analysis—affordability, unit size, and opportunity—can be addressed.

Using Equity Data in Your Community

Data on the location of rental housing by monthly rent, number of bedrooms, and neighborhood opportunity level for each of the 100 largest metro areas can be used by local decision makers, government officials, advocates, service providers, the press, and others in a variety of ways:

To guide conversations about equity in a region

While the benefits to children of living in higher-opportunity neighborhoods are increasingly clear, there is likely much less understanding of the extent to which affordable, large housing is available in such neighborhoods. This unique, accessible database can foster a shared understanding of the degree to which the location of the existing rental stock within a metro area may be a boon or a detriment to providing low-income families access to higher-opportunity neighborhoods. The data can be considered in combination with other diversitydatakids.org/Kirwan Institute resources, such as the Child Opportunity Index maps and map overlays showing the location of children by race/ethnicity, to further understand the patterns of inequity in access to neighborhood opportunity. In the past, such discussions have led to new community organizations and collaborations, such as the creation of the Southside First Economic Development Council in San Antonio, TX and a new collaboration among the school districts of New York's Capital Region.

To identify fair housing challenges and inform fair housing assessments

Familial Status (having children under 18 in a household) is a protected class under the federal Fair Housing Act. Local governments that receive HUD funding and any collaborating program participants are required to conduct and submit an Assessment of Fair Housing, which includes questions including:

- Are there disparities in access to opportunity in the jurisdiction and region affecting groups with protected characteristics?
- What factors significantly create, contribute to, perpetuate, or increase the severity of disproportionate housing needs, including availability of affordable units in a range of sizes, lack of access to opportunity due to high housing costs, and land use and zoning laws?

Understanding the location of affordable, suitably-sized housing for families with children relative to neighborhood opportunity would directly address these questions. Further, to the extent that families in need of larger, affordable units are more likely to be racial/ethnic minorities, these data can be helpful in addressing fair housing issues related to protected racial/ethnic groups as well.

To inform planning for construction of new affordable housing

Community development corporations, local governments, developers, interested residents, and others involved with or concerned about the provision and location of new affordable housing can use these data to understand the mismatch between the location of housing suitable for larger families and neighborhood opportunity as they consider the placement of new affordable

housing construction. Understanding what types of housing are concentrated in high-opportunity neighborhoods can serve as evidence in determining how existing zoning or community concerns impact the types of housing constructed in these neighborhoods.

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