

# Place and Opportunity

Using Federal Fair Housing Data to Examine Opportunity across US Regions and Populations

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Growing evidence demonstrates that where you live affects your well-being and ability to thrive (Chetty et al. 2018; Turner and Gourevitch 2017). This brief highlights new connections between place and access to opportunity across regions and populations. We analyze data on neighborhood-level exposure to opportunity that the US Department of Housing and Urban Development (HUD) originally released in 2015 to help local communities reduce segregation and comply with the Fair Housing Act. We find that, on average, metropolitan regions are more opportunity rich than rural areas but have wider disparities in access to opportunity between different racial and ethnic groups. Metropolitan areas with higher levels of segregation also have wider racial and ethnic disparities in labor market engagement, high-performing schools, and toxin-free environments. Not only do these findings provide further insights into the relationship between place and opportunity, but they highlight the importance of examining opportunity through a multidimensional set of indices, rather than one composite opportunity measure.

The US Congress adopted the Fair Housing Act in 1968 to remedy past discrimination and to provide tools to create more inclusive and prosperous communities so that all families could have access to neighborhoods of opportunity. Five decades after the passage of the Fair Housing Act, however, the US still faces significant challenges to creating inclusive communities. Despite legal protections, opportunities for black and Hispanic residents remain limited compared with those for white residents (De la Roca, Ellen, and O'Regan 2015). Children of color growing up in metropolitan

areas tend to experience much lower levels of opportunity compared with white children in the same city (Acevedo-Garcia et al. 2014). Though racial segregation has decreased over the last decade, both explicit and subtle forms of racial segregation persist today (Greene, Turner, and Gourevitch 2017).

In 2015, HUD adopted a new rule interpreting and enforcing the federal Fair Housing Act's requirement that every state and local government that receives federal housing and community development funding take affirmative steps to address racial segregation and remove barriers to housing choice (the Affirmatively Furthering Fair Housing or AFFH rule). To implement this rule, HUD required that jurisdictions complete an Assessment of Fair Housing, which identifies factors that contribute to fair housing issues in their region. To aid in this process, HUD developed the AFFH Data and Mapping Tool, which allows users to map different characteristics of their region at the census-tract level. This tool also includes a set of neighborhood-level opportunity indices, allowing users to compare access to different types of opportunity between neighborhoods in their jurisdiction. The raw data behind the AFFH Data and Mapping Tool, which we refer to here as the AFFH dataset, have been available for public use since 2015, with HUD providing periodic updates (most recently in November 2017). Though HUD suspended the requirement that communities prepare Assessments of Fair Housing in May 2018, HUD continues to make available the AFFH dataset on its website.<sup>2</sup>

Between the time HUD adopted the AFFH rule in 2015 and suspended implementation of it in early 2018, 49 cities and counties used the AFFH data, including the opportunity indices, to assess disparities in access to opportunities across racial and ethnic groups and neighborhoods (HUD 2017).<sup>3</sup> Several jurisdictions have also announced plans to continue to use these data as part of their fair housing planning process even after HUD's suspension.<sup>4</sup> Researchers and advocates have emphasized the value of these opportunity indices to better understand the geography of opportunities in neighborhoods, cities, and regions across the US (Ellen, Horn, and Kuai 2017; Hendey and Cohen 2017; Mast 2015; Silverman, Yin, and Patterson 2017; Smedley and Tegeler 2016; Smith 2015). This study, however, is the first to use these opportunity indices to analyze differences in access to opportunity between metropolitan and rural areas and examine how subgroup populations compare on different dimensions of opportunity.

We use these national data to better understand neighborhood-level access to opportunities across regions and populations. Specifically, we address the following research questions:

- 1. How does access to opportunity vary across types of urban and rural regions in the US?
- 2. To what extent does the landscape of opportunity vary between subgroups across metropolitan areas (by race and ethnicity, poverty, national origin, and housing tenure)?
- 3. What is the relationship between segregation and access to opportunity in metropolitan areas?

# Methodology

#### The AFFH Dataset

The AFFH dataset draws upon data from the American Community Survey, Decennial Census, Public and Indian Housing Information Center, Tenant Rental Assistance Certification System, National Low-Income Housing Tax Credit Database, and other sources (see appendix for a full list of data sources). In addition, HUD created seven opportunity indices to allow jurisdictions to measure exposure to opportunity in their neighborhoods (table 1).<sup>5</sup> Each opportunity index is percentile ranked on a 0–100 scale, with a score closer to 100 indicating a higher level of opportunity (HUD 2017).<sup>6</sup>

TABLE 1
The AFFH Neighborhood-Level Opportunity Indices

Index	Level of geography	Description
Jobs proximity	Block group	Quantifies the accessibility of a neighborhood to job locations within the larger region, with larger employment centers weighted accordingly
Environmental health	Tract	Describes potential exposure to harmful toxins at the neighborhood level
Labor market engagement	Tract	Describes the relative intensity of labor market engagement and human capital in a neighborhood, using the unemployment rate, labor force participation rate, and educational attainment
Low poverty	Tract	Captures poverty in a neighborhood using the poverty rate
Low transportation cost	Tract	Estimates the transportation costs for a three-person single-parent family with income at 50 percent of the median income for renters
School proficiency	Block group	Uses fourth-grade performance to assess the quality of an elementary school in a neighborhood.
Transit trips	Tract	Quantifies the number of public transit trips taken annually by a three-person single-parent family with income at 50 percent of the median income for renters

**Source:** Adapted from Affirmatively Furthering Fair Housing Data and Mapping Tool (AFFH-T) Data Documentation" (Washington, DC: US Department of Housing and Urban Development, 2017),

https://www.hudexchange.info/resources/documents/AFFH-T-Data-Documentation-AFFHT0002-September-2017.pdf.

#### **Analysis**

For this analysis, we define access to opportunity as residents' exposure to high values on the individual opportunity indices at the neighborhood (or census-tract) level. As table 1 shows, five of the seven opportunity indices are available at the census-tract level. Block groups are smaller levels of geography and can be combined into census tracts. Therefore, to create a complete tract-level dataset with all seven opportunity indices, we aggregated the two block-group level indices (labor market engagement and school proficiency indices) to the tract level by calculating the average index value for all block groups within a tract, weighted by population.

Importantly, some of the AFFH opportunity indices are positively correlated at the tract level, but others are not (table 2). Increased access to low-cost transportation strongly correlates with an increase in public transportation usage (transit trips index). In addition, a strong labor market in a neighborhood correlates with higher-performing schools. The labor market engagement index is positively, but not strongly, correlated with the environmental health, low transportation cost, and transit trips indices. On the other hand, increased tract-level exposure to high-performing schools is associated with higher transportation costs and fewer transit trips. And better environmental health is negatively correlated with affordable transportation options.

TABLE 2
Correlations between AFFH Opportunity Indices at the Tract Level

	Labor market engagement	School proficiency	Environmental health	Low transportation cost
School proficiency	0.5334			
Environmental health Low transportation	0.0535	0.1525		
cost	0.2229	-0.0522	-0.5717	
Transit trips	0.1314	-0.0702	-0.6505	0.8030
Total number of tracts	72,427	71,141	52,534	72,129

Source: Urban Institute analysis of HUD AFFH dataset.

**Notes:** The environmental health index is missing data for approximately 20 percent of census tracts. The school proficiency index is missing data on Kansas, West Virginia, and Hawaii because Great Schools Data, one of the data sources used for the school proficiency index, are not available for these states.

Most of this analysis focuses on only a subset of the AFFH opportunity indices. We exclude the low poverty index, as we assume that a low poverty rate is not necessary to achieve access to opportunity at the neighborhood level (Turner et al. 2018). Rather, we examine neighborhood-level poverty rates in our subgroup analysis to assess exposure to opportunity for people living in poverty. We exclude the transit trips index since our correlation analysis shows that it closely tracks the low transportation cost index across tracts (see table 2). We also believe that transit trips are a poor measure of access to opportunity in many of the rural regions and small cities we include in our analysis. Lastly, the jobs proximity index is the only index based on a percentile ranking within the core-based statistical area

(CBSA) level rather than the national level, meaning every CBSA will have census tracts ranked at every value of the index. For ease of comparability with the other opportunity indices we exclude the jobs proximity index from this analysis.

To understand how access to opportunity varies by region type, we look at three geographic types: metropolitan, micropolitan, and rural areas. We follow the US Office of Management and Budget in defining metropolitan and micropolitan regions, both of which are types of CBSAs. We define metropolitan regions as any CBSA with a population larger than 2.5 million and micropolitan CBSAs as any CBSA with a population between 50,000 and 2.5 million. We also created a "rural regions" category, which we define as any tract within a state that is not part of a CBSA. To compare the extent to which opportunity varies between these three geographic types, we take the average of each tractlevel opportunity index within that geographic type, weighted by population.

To examine the extent to which subgroup populations vary in their exposure to opportunity, we focus on five comparisons: across racial and ethnic groups; between people living in poverty and those who do not; between those living in racially and ethnically concentrated areas of poverty (R/ECAP)<sup>9</sup> and those who do not; between foreign-born and native-born people; and between renters and owners. To understand the level of exposure to opportunity for each subgroup, we compute the average index score across all tracts, weighted by the population of the relevant subgroup in the tract.

Lastly, to analyze the relationship between racial and ethnic segregation and differential access to opportunity between white, black, and Hispanic residents, we use the black-white and Hispanic-white dissimilarity index at the CBSA level. These indices are provided in the AFFH dataset for all metropolitan CBSAs. We calculate the gap between access to opportunity for white and black or Hispanic residents by taking the difference in index score between these two populations.

## **Findings**

#### Does Access to Opportunity Vary across Region Types?

Urban and rural regions vary in the extent to which they provide residents with neighborhood-level access to opportunity. Metropolitan regions tend to afford residents substantially better neighborhood-level exposure to low-cost transportation, access to stronger labor markets, and, to a lesser extent, access to high-performing elementary schools, compared with micropolitan CBSAs and rural regions (figure 1). However, residents living in metropolitan regions are more exposed, on average, to environmental health toxins compared with residents living in nonmetropolitan areas. Rural areas score worst on the labor market engagement, school proficiency, and low transportation cost indices, but residents living in these areas have the lowest exposure to environmental toxins.

The degree to which geographic region types vary in the extent they expose residents to opportunity differs by opportunity index. There are wide discrepancies between regions in access to affordable transportation and exposure to environmental health toxins. Conversely, there is smaller

variation in the average level of school quality afforded in different regions (though the lack of variation in school quality may be in part a function of the standardization of the school index at the state rather than the national level). Across opportunity indices, metropolitan areas generally provide greater average neighborhood-level access to opportunity than micropolitan and rural areas. The notable exception is environmental health, where tracts in metropolitan areas fare significantly worse on average than micropolitan or rural ones.

#### BOX 1

#### A Case for Examining Opportunity Indices in the Disaggregate

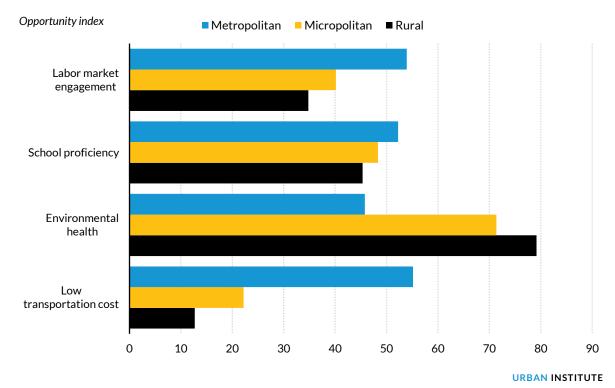
Though it is clear to researchers and practitioners alike that disparities in access to opportunity exist based on demographic factors and neighborhood location, it remains a challenge to determine how best to assess the level of opportunity that a place affords to its residents in a meaningful and actionable manner. Some use an opportunity score based on a combination of factors.<sup>a</sup> However, critics have noted that this composite score does not provide the multidimensional detail needed to fully understand the landscape of opportunity in a region. <sup>b</sup> Composite opportunity measures can hide differences in access to opportunity within and between regions that might be relevant for policy or programmatic interventions. In addition, composite opportunity measures might obscure differences across places by combining scores that pull in different dimensions of opportunity, which could, in turn, make places seem more similar than they really are. Lastly, classifying places as low opportunity can have the detrimental consequence of implying that an area is less good or less worthy of residence, which can further stigmatize those residing in the area. Using the AFFH dataset's opportunity indices in this analysis provides a more detailed understanding of opportunity. For example, in a composite score that combines all the indices used in this analysis, metropolitan regions would appear to be better off than rural regions. However, as shown in this interregional analysis, metropolitan areas are not better off than rural regions on every dimension of opportunity. For example, metropolitan regions tend to have higher neighborhood-level exposure to harmful toxins relative to other regions.

<sup>&</sup>lt;sup>a</sup> "Opportunity Mapping Initiative and Project Listing," Kirwan Institute, Ohio State University, accessed June 4, 2018, http://kirwaninstitute.osu.edu/researchandstrategicinitiatives/opportunity-communities/mapping/.

<sup>&</sup>lt;sup>b</sup> Goetz, Edward. 2017. "Your 'Opportunity' Map is Broken. Here are Some Fixes. Shelterforce, accessed June 4, 2018. https://shelterforce.org/2017/11/16/your-opportunity-map-is-broken-here-are-some-fixes/

<sup>&</sup>lt;sup>c</sup> Raisa Johnson, "The Dangers of Classifying Communities as "Low Opportunity," National Housing Trust, April 7, 2017, http://www.nationalhousingtrust.org/news-article/dangers-of-classifying-communities-as-low-opportunity.

FIGURE 1
Weighted Average Access to Opportunity by Region Type



Source: Urban Institute Analysis of AFFH Dataset (AFFHT0001).

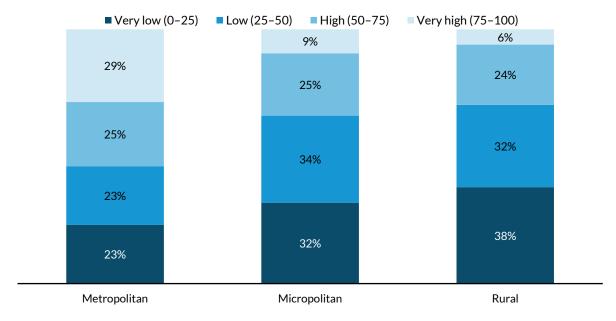
**Note:** These index scores represent the average index value of all the census tracts within a region type (metropolitan CBSA, micropolitan CBSA, rural area), weighted by population.

In addition to examining the average opportunity score for each region type in the US, we look at the variation in index scores across tracts. Overall, we find that the percentile variation in access to opportunity varies based on both region type and opportunity measure. <sup>10</sup> Metropolitan regions have more tracts with very high levels of labor market engagement compared with micropolitan and rural tracts. A greater share of rural tracts have very low levels of environmental health toxins compared with metropolitan tracts. And more metropolitan tracts have access to low-cost transportation relative to rural tracts.

#### LABOR MARKET ENGAGEMENT

Neighborhood-level labor markets are stronger on average in metropolitan areas (figure 2). Micropolitan and rural areas have a similar share of tracts scoring below 50 on the index, indicating limited access to labor market engagement opportunities. The extent to which a region has strong labor market engagement varies geographically, with concentrations of strong labor market engagement in the northern Midwest and coastal Northeast (figure 3).

FIGURE 2
Percentile Variation in Tract-Level Labor Market Engagement Index Values across Regions

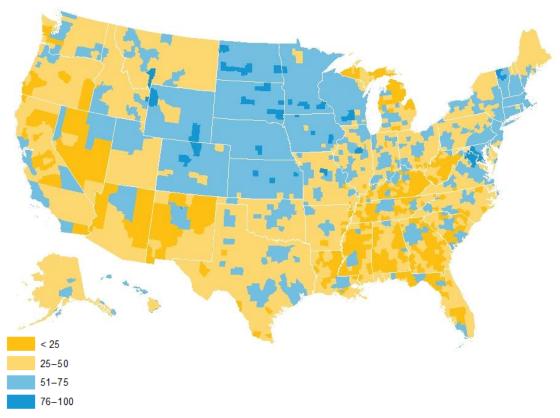


Source: Urban Institute analysis of the AFFH Dataset (AFFHT0001).

**Notes:** To calculate the percentile variation in tract level for each region type, we sorted each metropolitan, micropolitan, and rural tract into its appropriate percentile range (0-25, 25-50, 50-75, 75-100). The scores represent the share of tracts within a region type that correspond to each percentile range.

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FIGURE 3
Percentiles for CBSAs and Rural Areas for the Labor Market Engagement Index



Source: Urban Institute analysis of the AFFH Dataset (AFFHT0001).

**Note:** To make our maps clearer, we aggregate the opportunity scores for entire CBSAs and rural areas by creating a weighted average of tract-level exposure to opportunity within a region (metropolitan CBSA, micropolitan CBSA, or rural area).

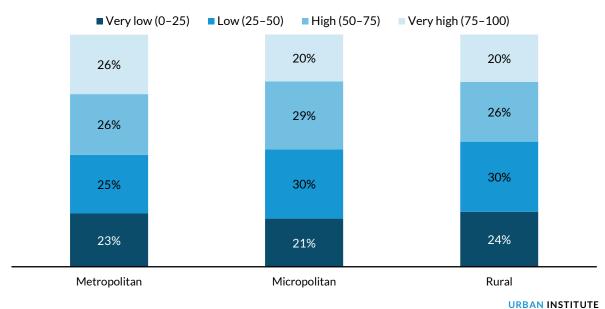
#### SCHOOL PROFICIENCY INDEX

There is an even spread of index values across metropolitan, micropolitan, and rural tracts (figure 4). There is a slightly larger share of metropolitan tracts that have access to very proficient schools compared with tracts in micropolitan and rural areas. There is no notable geographic concentration of high-quality schools across the country.

#### **ENVIRONMENTAL HEALTH INDEX**

Overall, tracts in metropolitan regions have the worst access to environmentally healthy places, with 22 percent of tracts having very high exposure to environmental health toxins (figure 5). In rural areas, on the other hand, there is much better access to environmentally healthy places.

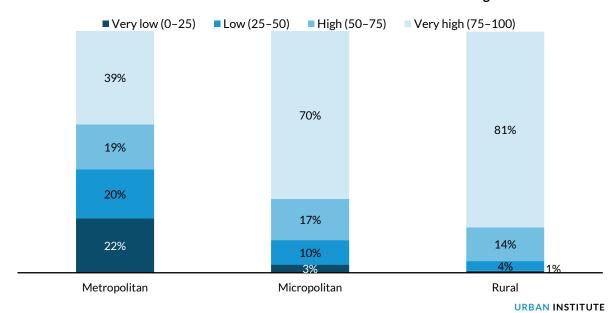
FIGURE 4
Percentile Variation in Tract-Level School Proficiency Index Values across Regions



Source: Urban Institute analysis of the AFFH Dataset (AFFHT0001).

**Notes:** To calculate the percentile variation in tract level for each region type, we sorted each metropolitan, micropolitan, and rural tract into its appropriate percentile range (0-25, 25-50, 50-75, 75-100). The scores shown above represent the share of tracts within a region type that correspond to each percentile range.

FIGURE 5
Percentile Variation in Tract-Level Environmental Health Index Values across Regions



Source: Urban Institute analysis of the AFFH Dataset (AFFHT0001).

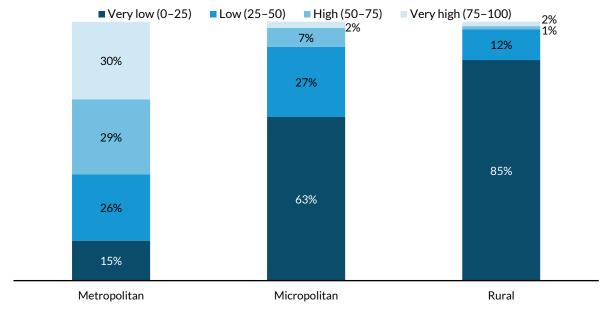
**Notes:** To calculate the percentile variation in tract level for each region type, we sorted each metropolitan, micropolitan, and rural tract into its appropriate percentile range (0-25, 25-50, 50-75, 75-100). The scores shown above represent the share of tracts within a region type that correspond to each percentile range.

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#### LOW TRANSPORTATION COST INDEX

Metropolitan areas have a larger share of tracts with very affordable transportation options compared with micropolitan areas and rural areas (figure 6). In addition, the majority of rural tracts score very low on the low transportation cost index, meaning they have very high transportation costs. Metropolitan areas along the coastal Mid-Atlantic, Northeast, and West Coasts tend to have more transportation affordability than regions elsewhere (figure 7).

FIGURE 6
Percentile Variation in Tract-Level Low Transportation Cost Index Values across Regions



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Source: Urban Institute analysis of the AFFH Dataset (AFFHT0001).

**Notes:** To calculate the percentile variation in tract level for each region type, we sorted each metropolitan, micropolitan, and rural tract into its appropriate percentile range (0-25, 25-50, 50-75, 75-100). The scores shown above represent the share of tracts within a region type that correspond to each percentile range.

Percentiles for CBSAs and Rural Areas for the Low Transportation Cost index
25
25-50
51-75

FIGURE 7
Percentiles for CBSAs and Rural Areas for the Low Transportation Cost Index

Source: Urban Institute analysis of the AFFH Dataset (AFFHT0001).

**Note:** To make our maps clearer, we aggregate the opportunity scores for entire CBSAs and rural areas by creating a weighted average of tract-level exposure to opportunity within a region (metropolitan CBSA, micropolitan CBSA, or rural area).

#### How Much Does the Landscape of Opportunity Vary between Subgroups?

Previous research shows that disparities in access to opportunities exist based on demographic factors. For example, in recent research, Chetty and his colleagues (2018) describe how children of different races and ethnicities growing up in the same neighborhood are afforded differential access to opportunity. Sanchez, Ross, and Gordon (2015) assert that low-income households and renters also have limited access to opportunity based on where they live. This analysis further examines disparities in access to opportunity-rich areas between subgroups.

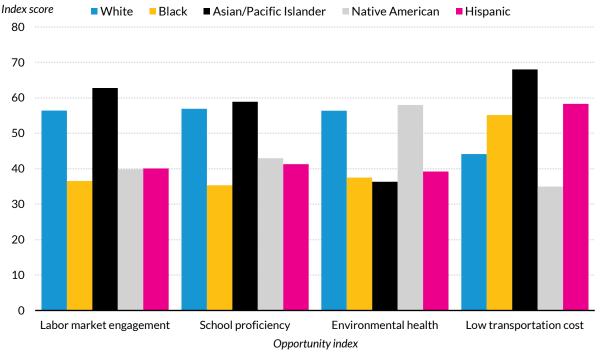
#### **EXPOSURE TO OPPORTUNITY**

#### Race and Ethnicity

Tract-level exposure to opportunities varies across races and ethnicities (figure 8). White and Asian or Pacific Islander residents have greater access to neighborhoods with strong labor markets and high-performing schools compared with black, Hispanic, and Native American residents. Black residents tend to live in places with weaker labor markets and worse school quality than those of all other races and ethnicities.

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FIGURE 8
Weighted Average Opportunity Indices by Race and Ethnicity

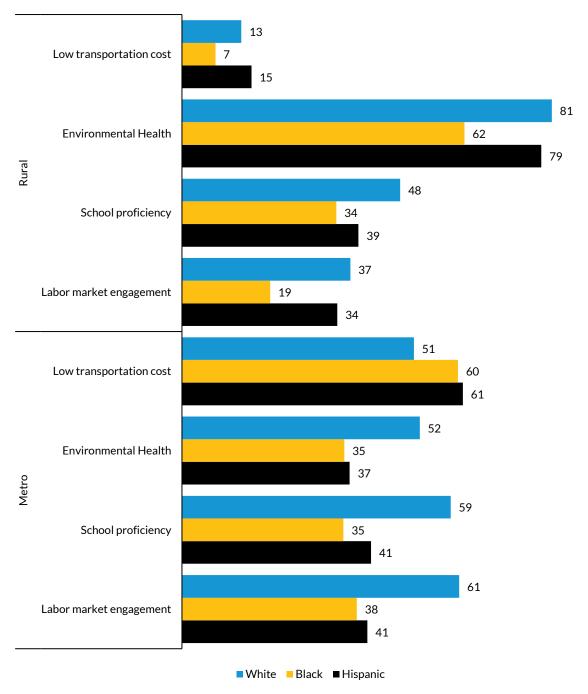


 $\textbf{Source:} \ \textbf{Urban Institute analysis of AFFH dataset (AFFHT0001)}.$ 

**Note:** To understand the level of exposure to opportunity for each subgroup, we compute the average index score across tracts, weighted by the population of the relevant subgroup in the tract.

Black and Hispanic residents have less access to opportunity compared with whites across all dimensions of opportunity except transportation affordability (figure 9). These disparities persist across all region types but are most pronounced in metropolitan areas and least pronounced in rural areas.

FIGURE 9
Disparity in Access to Opportunity for Black and Hispanic Residents Compared with White Residents in Metropolitan and Rural Regions



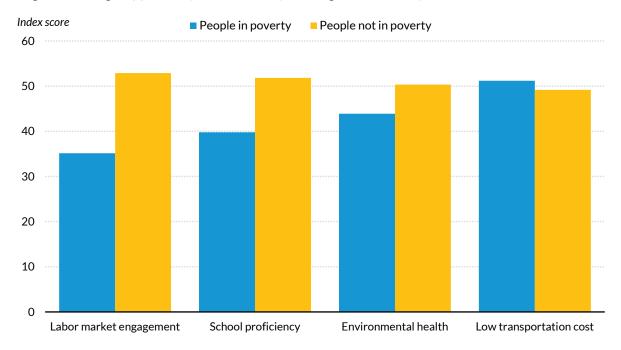
Source: Urban Institute analysis of AFFH dataset (AFFHT0001).

**Note:** To understand the level of exposure to opportunity for each subgroup, we compute the average index score across tracts within a region type, weighted by the population of the relevant subgroup in the tract.

#### **People Living in Poverty**

People living below the federal poverty level tend to have lower tract-level exposure to opportunity than those living above the federal poverty level for all indices except for transportation cost (figure 10). The largest difference in opportunity access for those living below the federal poverty level and those living above the federal poverty level is in the labor market engagement index (average index value of 35 for those living below the poverty level, compared with 53 for those living above it).

FIGURE 10
Weighted Average Opportunity Index for People Living below Poverty Level



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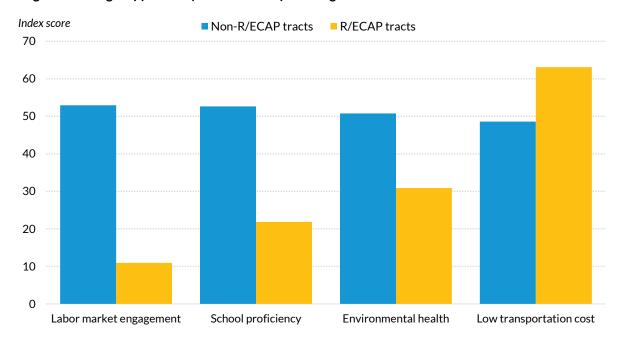
Source: Urban Institute analysis of AFFH dataset (AFFHT0001).

**Note:** All index scores shown in this figure represented the average score for an index across all tracts, weighted by the subgroup population.

#### People Living in Racially and Ethnically Concentrated Areas of Poverty

There are large differences in the average exposure to opportunity between people living in R/ECAPs and those who live outside of R/ECAP-designated tracts (figure 11). The difference in labor market engagement is most stark, with a 42-point disparity in index score between those living in R/ECAPs and those living elsewhere. <sup>11</sup> In addition, the school proficiency index shows children in R/ECAPs have much less exposure to high-performing schools than do children who live elsewhere. Similar to the previous subgroup analyses, people residing in R/ECAP tracts have better access to affordable transportation than those living elsewhere.

FIGURE 11
Weighted Average Opportunity Index for People Living in R/ECAP Tracts



Source: Urban Institute analysis of AFFH dataset (AFFHT0001).

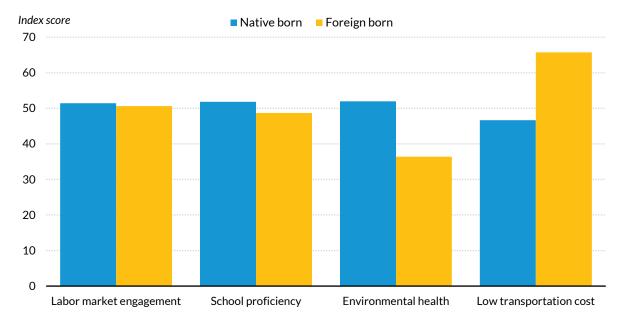
**Notes:** All index scores shown in this figure represented the average score for an index across all tracts, weighted by the subgroup population. R/ECAP = racially and ethnically concentrated areas of poverty.

#### **National Origin**

Differences in exposure to opportunity based on national origin are less pronounced than for other subgroups described above for most dimensions of opportunity (figure 12). Our analysis shows almost no differences in tract-level exposure to labor market engagement or high-performing schools between the foreign-born and native-born population. However, the foreign-born population tends to live in places with higher levels of environmental health risks and places with lower transportation costs compared with the native-born population.

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FIGURE 12
Weighted Average Opportunity Index for Foreign-Born and Native-Born Populations



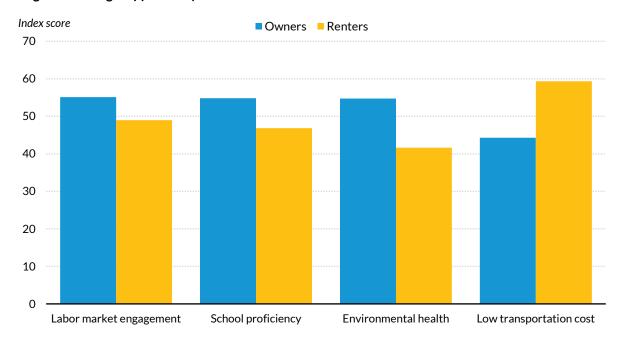
Source: Urban Institute analysis of AFFH dataset (AFFHT0001).

**Note:** All index scores shown in this figure represented the average score for an index across all tracts, weighted by the racial/ethnic subgroup population.

#### **Housing Tenure**

Exposure to opportunity differs between renters and owners (figure 13). Renters have slightly less access to areas with strong labor markets and high-performing schools. The difference in access to toxin-free environments is larger (13-point difference in index value), with renters tending to reside in places that have more environmental health issues. Renters have better access to affordable transportation, which is likely explained by their residence in denser urban areas relative to homeowners.

FIGURE 13
Weighted Average Opportunity Index for Renters and Owners



Source: Urban Institute analysis of AFFH dataset (AFFHT0001).

**Note:** All index scores shown in this figure represented the average score for an index across all tracts, weighted by the subgroup population.

# What Is the Relationship between Racial Segregation and Access to Opportunity in Metropolitan Areas?

Racial segregation remains high in the US, with a typical white person living in a neighborhood that is 75 percent white and 8 percent black (Logan and Stults 2011). The gap in opportunity between white, Hispanic, and black residents is larger in metropolitan areas compared with rural regions (see figure 9) and varies between metropolitan areas. Though scholars have shown that segregation can limit access to opportunity for residents of color, the evidence base for understanding the economic and social costs of segregation is still developing (Acs et al. 2017; De la Roca, Ellen, and O'Regan 2015; Sharkey 2013).

Metropolitan regions with higher levels of black-white and Hispanic-white segregation have wider disparities in access to opportunity for Hispanic residents and black residents compared with non-Hispanic white residents across three opportunity indices (table 3). These findings further demonstrate that there is a cost to residential segregation, at least for black and Hispanic residents in metropolitan areas.

TABLE 3

Correlations between Weighted Average Opportunity Scores for Metropolitan Regions and Dissimilarity Indices

Index	Black-white dissimilarity index	Hispanic-white dissimilarity index
Labor market engagement gap	0.79*	0.77*
School proficiency gap	0.73*	0.76*
Environmental health gap	0.41	0.52

**Notes:** The dissimilarity indices in this table are provided in the AFFH dataset at the CBSA level for all metropolitan regions. The index scores in this table represent average scores, aggregated from the tract level to the metropolitan CBSA level, weighted by population. To calculate the gap, we found the difference in index score for the white population versus black population in a CBSA (the black-white dissimilarity index), or white population versus nonwhite Hispanic population in a CBSA (the Hispanic-white dissimilarity index).

### Conclusion

The AFFH opportunity indices shed new light on the connection between place and access to opportunity nationwide. Specifically, this analysis calls to attention several key takeaways that have strong implications for practitioners, policymakers, and researchers.

- Regions vary in the extent to which they provide residents with access to opportunity. Metropolitan regions tend to afford residents substantially better tract-level exposure to affordable transportation, stronger labor markets, and, to a lesser extent, access to high-performing schools, compared with micropolitan CBSAs and rural regions. However, residents living in metropolitan regions are more exposed, on average, to environmental health toxins compared with residents living in nonmetropolitan areas.
- Exposure to opportunity varies by race, ethnicity, poverty status, country of origin, and housing tenure. Black households tend to live in tracts with much weaker labor markets and worse school quality than all other races and ethnicities, and residents of areas of racially concentrated poverty are significantly disadvantaged on all opportunity indices except the low transportation cost index. People living below the poverty level experience more limited access to high-achieving schools and labor market engagement opportunities compared with those living above the poverty level. Renters tend to live in areas with substantially more environmental health toxins compared with owners. Interestingly, across most subgroup analyses, transportation affordability emerged as an indicator of higher opportunity for demographic groups who had lower access to opportunity on other indices.
- Racially segregated metropolitan regions have wider disparities in access to opportunity between racial and ethnic groups. The differences in access to opportunity between white

<sup>\*</sup> indicates a strong correlation

residents and residents of color are larger in areas with higher levels of segregation. In segregated areas, there are especially stark differences in labor market engagement and school quality between white residents and residents of color. These findings add to a growing literature on the detrimental impacts of racial segregation for all residents in metropolitan areas and highlight the need to explicitly target racial segregation as a lead driver in differential access to opportunity for people of color.

Examining opportunity in the disaggregate provides a clearer understanding of the nuanced landscape that areas face around opportunity challenges. In analyzing several opportunity indices, this brief highlights how these indices relate to one another. Though some places lack some aspects of opportunity, they might have access to other opportunities. This more-detailed snapshot of opportunity in a region or neighborhood allows practitioners and policymakers to more effectively design interventions and capitalize on assets already present in a place to enhance the well-being of its residents. Furthermore, it departs from a one-dimensional understanding of opportunity that has the potential to paint a neighborhood or region as "bad" if it has a low composite score. This can further stigmatize people living in these places, as opposed to highlighting the assets of their communities in addition to addressing barriers to opportunity.

# Appendix. AFFH Dataset Sources

The following table describes the combination of data sources used to create the AFFH demographic and opportunity indices dataset used for this analysis.

TABLE A.1

AFFH Data Sources

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Data category	Variables	Geographic level or primary sampling unit	Sources and years
Demographics	Race/ethnicity population in 2010	Block group	Decennial census, 2010
	Race/ethnicity population in 1990, 2000, and 2010	Tract	LTDB based on decennial census data, 1990, 2000, and 2010
	Limited English proficient population; foreign-born population; foreign-born population place of birth (national origin); languages spoken by foreign-born population	Tract	ACS, 2009–13; Decennial census, 1990and 2000
	Disability type population; disabled population by age	Tract	ACS, 2009-13
	Population by age, sex, and family type	Tract	Decennial census, 1990, 2000, and 2010

Socioeconomic	R/ECAP	Tract	ACS, 2009–13; Decennial Census, 2010; LTDB based on decennial census data, 1990, 2000, and 2010
Housing	Population, housing units, occupied housing units, race/ethnicity, age, disability status, household type, and household size by housing type	Development; tract	IMS/ PIC, 2016; TRACS, 2016; LIHTC database, 2014
	Households with housing problems; households with severe housing problems; households with income less than 31% of AMI; households with severe housing cost burden; households with housing problems by race, household type, household size, housing tenure	Tract	CHAS, 2009-13
Opportunity indices	Dissimilarity index	CDBG; HOME; CBSA	Decennial census, 2010; LTDB based on decennial census data, 1990, 2000, and 2010
	Low poverty index, labor market engagement index	Tract	ACS, 2009-13
	School proficiency index	Block group	Great Schools (proficiency data), 2013–14; Common Core of Data (4th grade enrollment and school addresses), 2013–14; Maponics School Attendance Zone database, 2016
	Low transportation cost index, transit trips index	Tract	LAI data, 2008–12
	Jobs proximity index	Block group	LEHD, 2014
	Environmental health index	Tract	NATA data, 2011

**Source:** "Affirmatively Furthering Fair Housing Data and Mapping Tool (AFFH-T) Data Documentation" (Washington, DC: US Department of Housing and Urban Development, 2017), table 3, https://www.hudexchange.info/resources/documents/AFFH-T-Data-Documentation-AFFHT0002-September-2017.pdf.

Notes: ACS = American Community Survey; AMI = area median income; CBSA = core-based statistical area; CDBG = Community Development Block Grant; CHAS = Comprehensive Housing Affordability Strategy HOME = HOME Investment Partnerships Program; IMS = Inventory Management System; LAI = Location Affordability Index; LEHD = Longitudinal Employer-Household Dynamics; LEP = limited English proficiency; LIHTC = Low Income Housing Tax Credit; LTDB = Longitudinal Tract Data Base (from Brown University); NATA = National Air Toxics Assessment; PIC = Public and Indian Housing Information Center R/ECAP = Racially and Ethnically Concentrated Areas of Poverty; TRACS = Tenant Rental Assistance Certification System.

### **Notes**

- <sup>1</sup> "The Assessment of Fair Housing," US Department of Housing and Urban Development, accessed May 16 2018, https://www.hudexchange.info/programs/affh/overview/.
- <sup>2</sup> For more information on the withdrawal of the AFFH rule, see Affirmatively Furthering Fair Housing (AFFH): Responsibility to Conduct Analysis of Impediments, 83 Fed Reg. 23,927 (May 23, 2018), https://www.gpo.gov/fdsys/pkg/FR-2018-05-23/pdf/2018-11145.pdf. See also "AFFH-T Raw Data," HUD, last updated December 2017, https://www.hudexchange.info/resource/4868/affh-raw-data/.
- <sup>3</sup> Affirmatively Furthering Fair Housing: Withdrawal of the Assessment Tool for Local Governments, 83 Fed. Reg. 23,922 (May 23, 2018).
- <sup>4</sup> Eleanor Goldberg, "Trump Administration Killed a Housing Discrimination Rule. Some Cities Are Following It Anyway," *Huffington Post*, June 1, 2018, https://www.huffingtonpost.com/entry/cities-following-suspended-housing-discrimination-rule\_us\_5b1195cbe4b0d5e89e1fa5c8; Amy Plitt, "NYC launches fair housing planning process, despite HUD delays," *Curbed New York*, March 9, 2018. https://ny.curbed.com/2018/3/9/17097132/new-york-fair-housing-hud-ben-carson.
- <sup>5</sup> There are seven opportunity indices in the AFFH dataset available at the census-tract or block-group level, but eight opportunity indices altogether. The dissimilarity index is provided at the core-based statistical area (CBSA). In our analysis, we use the dissimilarity index to compare racial segregation with neighborhood-level exposure to opportunity.
- <sup>6</sup> For more information on the AFFH opportunity indices and how they compare with other national-level, publicly available databases on opportunity, see Mast 2015. The level of geography that each opportunity index is scaled to varies by index. The school proficiency index is percentile ranked at the state level, and the jobs proximity index is percentile ranked at the CBSA level. All other opportunity indices are percentile ranked nationally.
- <sup>7</sup> Recent critiques of location affordability measures call into question the accuracy of the location affordability indices, which are used to calculated the transportation-related AFFH opportunity indices (see Smart and Klein 2018).
- <sup>8</sup> The CBSA level of geography, created by the Office of Management and Budget in 2003, combines densely populated areas with adjacent communities that are economically and socially tied to the dense area. For more information, see "Geographic Terms and Concepts: Core Based Statistical Areas and related Statistical Areas," US Census Bureau, last updated December 6, 2012, www.census.gov/geo/reference/gtc/gtc\_cbsa.html.
- <sup>9</sup> HUD created a census-tract-based definition of racially/ethnically-concentrated areas of poverty (R/ECAP) to help jurisdictions identify areas of racial or ethnically concentrated poverty. A R/ECAP is defined as a tract that is at least 50 percent nonwhite and a poverty rate that exceeds 40 percent. For more information on R/ECAPs, see HUD 2017.
- <sup>10</sup> The following analysis uses percentile variations. We classify an index score below 25 as "very low," an index score between 25 and 49 as "low," and index score between 50 and 74 as "high," and an index score above 74 as "very high." A very high index score implies that a place is more opportunity rich.
- <sup>11</sup> This disparity may in part because the components of the labor market engagement index include a measure of unemployment and educational attainment, which strongly trend with poverty.
- <sup>12</sup> For this analysis, we categorize all non-US-born individuals as foreign born. However, within the foreign-born population, exposure to opportunity varies widely based on country of origin, and future research using the AFFH dataset should consider using the detailed country of origin information HUD provides to further analyze differential exposure to opportunity based on place of birth.

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