ULI Terwilliger Center Home Attainability Index

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About the Urban Land Institute

The Urban Land Institute is a global, member-driven organization comprising more than 46,000 real estate and urban development professionals dedicated to advancing the Institute's mission of providing leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.

ULI's interdisciplinary membership represents all aspects of the industry, including developers, property owners, investors, architects, urban planners, public officials, real estate brokers, appraisers, attorneys, engineers, financiers, and academics. Established in 1936, the Institute has a presence in the Americas, Europe, and Asia Pacific regions, with members in 80 countries.

The extraordinary impact that ULI makes on land use decision-making is based on its members sharing expertise on a variety of factors affecting the built environment, including urbanization, demographic and population changes, new economic drivers, technology advancements, and environmental concerns.

Peer-to-peer learning is achieved through the knowledge shared by members at thousands of convenings each year that reinforce ULI's position as a global authority on land use and real estate. In 2019 alone, more than 2,400 events were held in about 330 cities around the world.

Drawing on the work of its members, the Institute recognizes and shares best practices in urban design and development for the benefit of communities around the globe.

More information is available at uli.org. Follow ULI on Twitter, Facebook, LinkedIn, and Instagram.

About the ULI Terwilliger Center for Housing

The goal of the Urban Land Institute Terwilliger Center for Housing is to advance best practices in residential development and public policy and to support ULI members and local communities in creating and sustaining a full spectrum of housing opportunities, particularly for low- and moderate-income households.

Established in 2007 with a gift from longtime member and former ULI chairman, J. Ronald Terwilliger, the Center integrates ULI's wide-ranging housing activities into a program of work with three objectives: to catalyze the production of housing, provide thought leadership on the housing industry, and inspire a broader commitment to housing. Terwilliger Center activities include developing practical tools to help developers of affordable housing, engagement with members and housing industry leaders, research and publications, a housing awards program, and an annual housing conference.

Acknowledgments

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The Big Picture

Home Attainability and Income Segregation Remain Major Challenges for Families and Communities in Spite of Economic Gains

The ULI Terwilliger Center's initial analysis of data from its pilot Home Attainability Index reveals that even as some observers have recently noted easing in home affordability challenges in some locations,

- Attainability gaps continue to be observed around the country, even though severe cost burdens among middle-income households tend to be concentrated in high-cost metropolitan areas;

- The income premium workers enjoy in high-cost areas is often overwhelmed by dramatically higher housing costs;

- Lower-income workers face more universal struggles finding rental housing they can afford; and

- Residential income segregation remains deeply embedded throughout the country, threatening long-term health, education, economic, and other outcomes for lower-income residents and the communities in which they live.

Promising Performers across the Spectrum

Five regions stand out as promising performers, with Index values that were average or better across all indicators:

- Buffalo-Cheektowaga-Niagara Falls
- Ogden-Clearfield
- Pittsburgh
- Provo-Orem
- Virginia Beach-Norfolk-Newport News

Minneapolis-St. Paul-Bloomington receives an honorable mention for achieving better-than-average rankings across all categories except housing production.

These regions are particularly notable for two reasons:

- Both rental and homeownership are broadly attainable, while still performing well on indicators of neighborhood opportunity and access.

- The regions indicate that broad attainability is possible in various contexts, with the six regions representing a range of geographies, market types, and levels of economic strength.

ULI's Home Attainability Index and District Council Dashboards

Since 2007, the ULI Terwilliger Center for Housing has conducted research and analysis to integrate ULI's wide-ranging housing activities into a program of work that furthers the development of mixed-income communities with a range of housing options. With the goal of supporting municipalities and members of the development community working to address longstanding home affordability challenges, the Terwilliger Center is piloting its Home Attainability Index (Index) and District Council Dashboards (Dashboards) in 2020. These resources will provide a high-level snapshot of the extent to which a housing market provides a range of attainable choices to the regional workforce. This information will help identify gaps in home attainability, provide better context to understand residential markets, and, over time, enable national and regional comparisons to inform housing production, policy, and financing decisions.

Description and Methodology

This research effort includes three core components: the Home Attainability Index and District Council Dashboards, each of which includes Occupational Analyses.

- The Index is an array of housing-related metrics for the metropolitan statistical areas (MSAs)[1] served by ULI's District Councils. It includes several standard metrics of affordability, such as cost-burden rates and the number of units affordable at different income levels (see next section for a more detailed description). These metrics can be used to compare metropolitan areas with each other and the average across the ULI service area.[2]

- Data from the Index were then used to produce a Dashboard for each District Council, which includes the Index measures, comparisons to ULI service area benchmarks, and supplemental metrics to provide context to those included in the Index.

What Does Home Attainability Mean?

The focus of the Index and Dashboards is the effectiveness of the broader housing market in providing robust and affordable housing options.

Though subsidized, income-restricted affordable housing (hereafter, affordable housing) plays a critical role in expanding housing choice, such homes generally constitute a relatively small portion of the region's overall housing stock. As such, the Index and Dashboards largely reflect the affordability of market-rate homes. Throughout this report, the terms "home attainability" and "attainable homes" refer to the relative affordability of the overall housing stock. This focus on home attainability reflects the Terwilliger Center's mission to address the "full spectrum of housing opportunities." It is also an acknowledgment of existing, high-quality research projects that highlight the housing needs of those that the market is least able to serve (especially extremely low-income households[3]), such as the National Low Income Housing Coalition's *Out-of-Reach* and *The Gap*.

- An Occupational Analysis was conducted using data provided by the National Housing Conference (NHC) through its Paycheck to Paycheck database (see accompanying description). This analysis involved selecting a sample of occupations and comparing region- and job-specific median wage information to housing costs for both rental and homeownership. The resulting attainability gap (i.e., the additional amount the household would need to earn to afford a given housing type) or surplus can be used to compare attainability across regions. The Paycheck to Paycheck data were also used to create "occupational benchmarks" for select Index metrics that were tied to specific income thresholds (such as median incomes or income percentiles).

Housing markets are influenced by multiple, interrelated submarkets differentiated by tenure, location, and income, among other factors. Any housing policy, production, or financing solution must be tailored to the specific regional and local context to be effective.

In designing the Index and selecting metrics, the Terwilliger Center was guided by the critical fact that no single indicator can adequately summarize the full spectrum of housing needs in a given region and that aggregate, metropolitan-level data can mask significant differences in affordability within regions. As such, instead of assigning a single "attainability score," the Index and Dashboards utilize a selection of metrics that address overall attainability, attainability by tenure, neighborhood opportunity and access, and housing production.

NHC's Paycheck to Paycheck Data

Data for the Index and Dashboard Occupational Analysis were provided by NHC, whose annual Paycheck to Paycheck data tool and report provide "insights into the ability of working households to afford typical housing in metropolitan areas across the country."

The full Paycheck to Paycheck data tool includes the following:

- Graphs that compare wages and housing costs in 259 metro areas and the nation;

- Median home prices and the income needed to afford them; and

- Fair-market rents and the income needed to afford them.

To further explore the Paycheck to Paycheck data tool and learn more about NHC's methodology, visit www.nhc.org/paycheck-to-paycheck/.

Components of the
Home Attainability Index

To develop the Index, the Terwilliger Center selected 11 metrics from existing, nationally recognized data sources and providers. Source data were collected, analyzed, and tabulated by the U.S. Census Bureau, the Harvard Joint Center for Housing Studies (JCHS), the National Low Income Housing Coalition, Freddie Mac, the Center for Neighborhood Technology (CNT), and Brown University.

The Index metrics fit into five core categories: overall affordability, homeownership attainability, rental attainability, neighborhood opportunity and access, and housing production. In addition, each category includes one or more supplemental metrics that provide additional context for the Index and are provided as part of the District Council Dashboards. This section briefly describes the categories and metrics, gives the rationale for inclusion in the Index or Dashboard (or both), and discusses the limitations and areas for further exploration. Full Index/Dashboard metric and data source information is included in the appendixes found at knowledge.uli.org/TCindex.

Category 1: Overall Affordability

The purpose of the overall affordability category is to provide a tenure-neutral snapshot of the extent to which middle-income households face substantial housing challenges. The metrics selected for this purpose are the percentages of households earning between $30,000 to $44,999 per year and $45,000 to $75,000 per year, respectively, that are severely cost burdened. The low-end threshold of the target income range ($30,000/year) is approximately equal to one full-time worker earning twice the federal minimum wage, or a household with two full-time minimum-wage workers, and as such these data capture a large segment of households that the market may be reasonably expected to serve. The Center selected "severe cost burden" (spending more than 50 percent of income on housing—rather than the "cost-burden" standard of 30 percent of income) in order to focus on households facing significant home affordability challenges. Though many cost-burdened households face similar housing struggles, the middle-income household category (particularly in the $45,000 to $75,000/year cohort) may include households that elect to spend slightly more than 30 percent of income on housing to meet location, amenity, or other consumer preferences without significant financial strain.

The supplemental metric in this category is the median cost-to-income ratio, which illustrates the amount a typical household in the region spends on housing. For example, if this ratio is 21 percent (approximately the average for MSAs included in the Index), it means that half of all households in the region spend more than 21 percent of income on housing, and half spend less.

Category 2: Homeownership Attainability

The purpose of the homeownership attainability category is to illustrate the extent to which the ownership-oriented housing stock serves the middle segment of the market. The Index includes the share of recently sold homes in the MSA that are affordable at the 40th percentile income, median income, and 60th percentile income, respectively. Though this is an imperfect proxy for whether a household at that income level can find a home it can afford (for example, a household at the 60th percentile may "outcompete" a 40th percentile household for a lower-cost unit), a larger number of lower-cost homes will generally provide more options to the region's workforce. The supplemental metrics for this category are homeownership rate and the share of cost-burdened owner households.

Category 3: Rental Attainability

Similar to the prior category, the purpose of the rental attainability category is to illustrate the extent to which the rental market serves the middle segment of the market. The Index includes the National Low Income Housing Coalition's tabulations of the number of "affordable and available" rental units (i.e., at a given price point and not occupied by a higher-income household) per 100 households at 50 percent, 80 percent, and 100 percent of area median income (AMI), respectively. Unlike the homeownership category, this metric considers the full rental stock, rather than the units that are "on the market" at a given point in time. Supplemental metrics include the percentage of renter-occupant households (i.e., the inverse of the homeownership rate) and the percentage of cost-burdened renter households in the MSA.
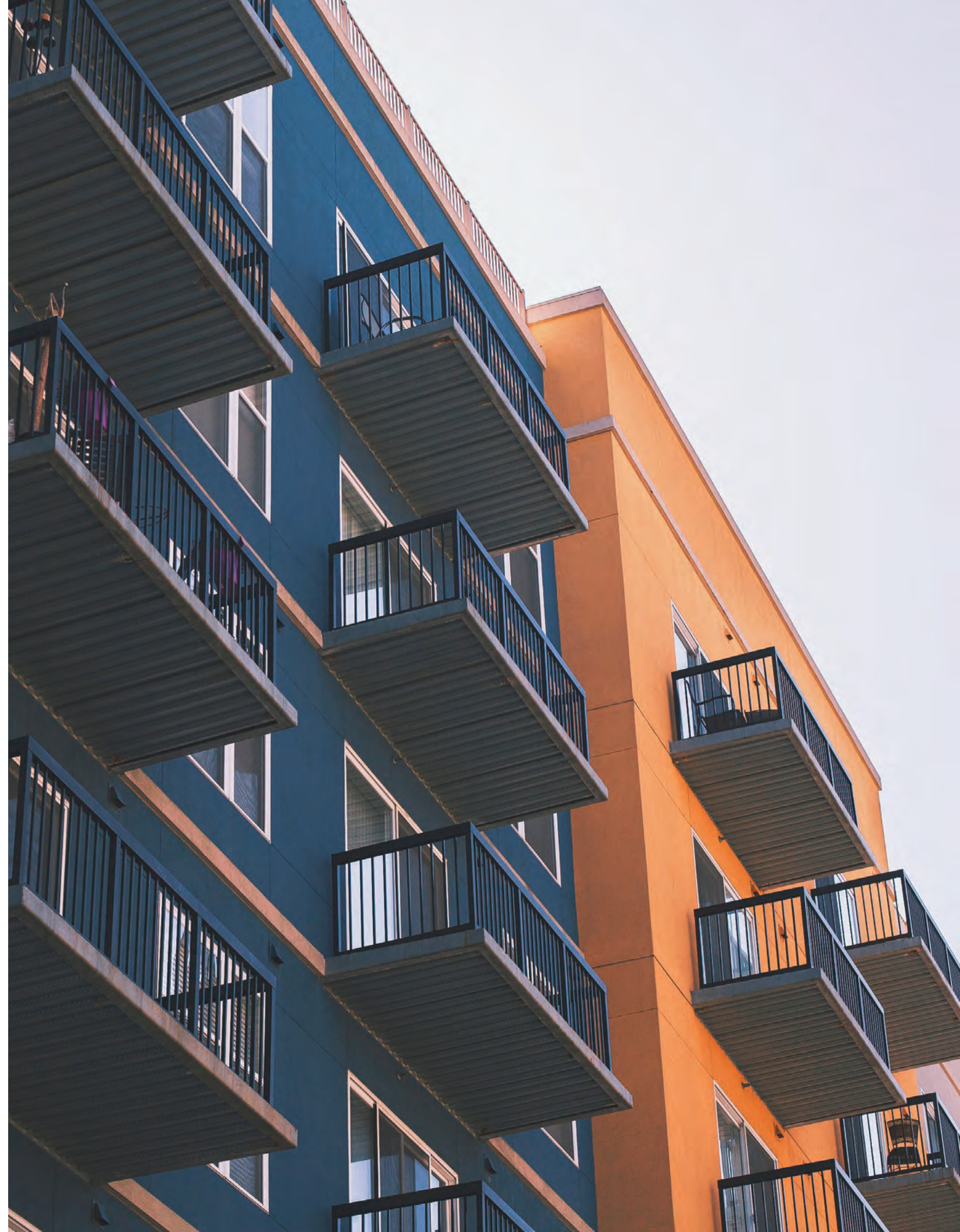
Category 4: Neighborhood Opportunity and Access

Region-wide data can mask geographic discrepancies and barriers to home attainability within a metropolitan region. Though job markets and local economic factors cross municipal/county boundaries, the sheer size of many MSAs (which include urban cores, inner-ring suburbs, and exurbs) also means that households face limits to where they can locate within a region beyond income and home attainability. It is outside the scope of this Index to comprehensively analyze geographic disparities in regional housing markets and other critical issues such as segregation and exclusionary zoning. However, the Index does include metrics related to neighborhood opportunity and access to provide some limited data on the extent to which the region's neighborhoods are "within reach" of middle-income households.

To provide this context, the Index includes two primary metrics—one measuring income segregation ("opportunity") and another measuring transit service ("access"). The income segregation metric used is the proportion of families living in poor or affluent neighborhoods, as defined by Brown University's Diversity and Disparities project. High levels of income segregation are often driven by multiple, complex factors, but one is that a lack of attainable homes across the income spectrum can result in households being "locked out" of certain neighborhoods. Income segregation data can also be an important supplement to cost-burden data, because a household living in low-cost but low-quality housing may not be overly burdened but may have few alternatives to improve its living situation.

The Index also includes the Center for Neighborhood Technology's AllTransit Performance Score, which assesses the quality and reach of the region's transit system. Regions with higher AllTransit scores provide households with better transportation alternatives beyond the automobile and put more employment opportunities within reach. The supplemental metric in this category is the percentage of households burdened by the combined cost of housing and transportation, as defined by CNT's Housing + Transportation Affordability Index. This metric will provide information on the extent to which people struggle with the "combined cost of place," facing high transportation costs in exchange for lower housing costs, or vice versa.

Category 5: Housing Production

The purpose of the housing production category is to identify the extent to which the region's housing stock is keeping up with growth. The Index includes a measure of the 10-year household growth/housing permit ratio. Housing production by itself does not guarantee an adequate supply of homes attainable across the income spectrum. However, in the context of growing regions and economies, new production in line with that growth is a necessary, if insufficient, component of a comprehensive approach to support broader attainability.

Data Limitations and Considerations for Further Analysis

No measure or index can perfectly capture the complexity of housing markets and the housing challenges of a region's population and workforce. The Index and Dashboards are intended to provide an informed starting point for deeper analysis. Critical considerations when using this data include, but are not limited to, the following:

- *What other data points are relevant to a region's context?* For example, higher cost-burden levels require different interventions in high-wealth, high-growth regions than in areas with shrinking populations or economies. Other relevant data points for exploration can include, but are not limited to, household formation, economic/job growth, poverty rates, unemployment rates, and workforce participation rates.

- *How significant are housing quality challenges?* A relatively "attainable" stock of homes means little to quality of life if a significant proportion is in poor condition or creates significant health hazards. In many regions, a core housing challenge may be that housing values are too low to cover the cost of maintenance or improvements, which can fuel a cycle of disinvestment and deterioration. Other relevant data points include vacancy rates, underlying housing values (and their trajectory) relative to construction costs, and information related to code enforcement, lead hazards, and other metrics of substandard housing.

- *What level of geography is being considered?* Though using MSA-level data allows the Terwilliger Center to use more current data, most housing policies are determined at the local level. Index data should be supplemented by looking at similar data points at the local or county government levels to account for variation within regions.

- *What are the barriers to neighborhood mobility and access?* The Index's measure of income segregation is just one data point that illustrates the extent to which home attainability is a broad opportunity or concentrated in specific neighborhoods. Racial and ethnic disparities are relevant at both the local and regional levels, driven by inequality in wealth and income and the legacy of historical redlining and discriminatory practices. The level of sprawl or compactness of a region and the quality of transportation infrastructure can reduce or magnify the impact of spatial disparities. Other relevant data points for exploration include measures of racial and ethnic segregation, job concentration, and commuting times, to name just a few.

- *What is the magnitude and severity of special needs, and are there other needs specific to the region?* Though this project focuses on a broad income spectrum, research consistently suggests that significant housing needs and challenges are concentrated at the lowest ends of the income spectrum and among those with special needs, such as persons with disabilities. Regions may also have housing needs that are specific to their population or economy or both, such as a larger proportion of older adults or housing market imbalances driven by tourism (vacation home demand driving up prices alongside a significant number of lower-paid service workers). A comprehensive effort to address housing challenges will pay specific attention to these needs and consider data related to demand and resources available for deeply affordable homes, homelessness rates, demographic data and projections, and industry-specific information.

Summary of Index Data

Figure 1 shows the Index values for each MSA in the data set. Cells highlighted in green indicate a value that is generally considered to be "better" (rather than higher/lower) than the ULI service area average. Correspondingly, cells highlighted in red indicate a value that is considered "worse." For example, for the share of homes affordable at the 40th percentile, a higher-than-average number would indicate greater attainability and thus be highlighted in green, whereas a lower-than-average number would be highlighted in red. For rates of cost burden, the inverse would be true.

Note that references and comparisons to average values are to the unweighted average value for all MSAs in the Index data set. Given that the MSAs selected for inclusion are not statistically representative of either the United States as a whole or all metropolitan regions, these averages should not be conflated with a "national average." Nor should a better-than-average value necessarily signify "success," given the preponderance of housing challenges in regions across the United States.

Appendix B provides a chart with the ULI service area average values for all Index and supplemental metrics as well as for occupational gaps/surplus. Additional data that add nuance to this information can be explored through the appendixes, full Index dataset, and individual District Council Dashboards at knowledge.uli.org/TCindex.

The following sections provide a selection of high-level findings from the Home Attainability Index. MSAs for which data for more than one category were unavailable are excluded from this analysis and summary.

Figure 1: Housing Attainability Index Values

Metropolitan Statistical Area (MSA)	Percentage of severely cost-burdened households earning: $30-44,999/year	$45-75,000/year	Share of recently sold homes affordable to a household with: 40th-Percentile income	Median income	60th-Percentile income	Affordable and available rental units per 100 households at: 50% of AMI	80% of AMI	Median income	All Transit Performance Score	Proportion of families living in poor or affluent neighborhoods	Permits per 100 household added (2007-2017)
Albuquerque	8.46%	1.79%	50.70%	72.90%	82.60%				3.60	32.40%	
Asheville			28.50%	53.60%	74.00%				1.10	9.20%	
Atlanta-Sandy Springs-Roswell	11.39%	2.67%	61.30%	71.30%	79.60%	53.00	99.00	106.00	2.50	35.70%	110.20
Austin-Round Rock	19.15%	4.32%	47.70%	65.90%	76.40%	49.00	103.00	109.00	2.80	36.10%	113.20
Baltimore-Columbia-Towson	21.92%	3.99%	58.40%	75.50%	85.10%	62.00	99.00	106.00	4.20	31.60%	128.50
Baton Rouge	8.70%	0.71%	59.70%	72.00%	88.20%				1.80	26.00%	
Birmingham-Hoover	6.10%	1.29%	60.90%	74.80%	88.40%				0.10	36.10%	474.10
Boise City	3.38%	1.00%	49.90%	67.40%	78.10%				1.80	18.10%	
Boston-Cambridge-Newton	31.38%	10.00%	29.60%	49.10%	64.00%	59.00	90.00	98.00	5.00	35.80%	81.90
Buffalo-Cheektowaga-Niagara Falls	3.56%	1.65%	75.00%	85.40%	90.20%	79.00	100.00	102.00	3.90	28.90%	228.80
Cape Coral-Fort Myers	10.59%	3.10%	46.80%	60.00%	71.00%				2.30	23.20%	
Cedar Rapids			86.20%	91.50%	96.00%				2.00	12.90%	
Charleston-North Charleston	12.29%	2.62%	39.40%	55.30%	72.40%				1.50	30.30%	
Charlotte-Concord-Gastonia	8.01%	1.36%	54.50%	72.20%	79.10%	62.00	103.00	107.00	2.20	39.30%	134.50
Chicago-Naperville-Elgin	18.06%	4.99%	60.20%	73.30%	83.30%	56.00	97.00	103.00	5.10	36.70%	221.00
Cincinnati	5.98%	0.98%	70.80%	82.60%	88.30%	88.00	104.00	104.00	2.50	26.90%	105.80
Cleveland-Elyria	5.30%	0.90%	68.00%	82.10%	90.50%	77.00	103.00	105.00	4.70	34.20%	110.30
Coeur d'Alene			55.40%	61.40%	79.20%				1.10	2.60%	
Columbia	5.13%	0.95%	76.20%	84.50%	86.60%				1.70	29.60%	
Columbus	6.41%	1.07%	64.00%	78.20%	87.60%	76.00	104.00	106.00	2.90	35.40%	88.80
Dallas-Fort Worth-Arlington	12.89%	2.77%	56.90%	68.40%	79.70%	49.00	100.00	107.00	2.80	47.70%	106.80
Deltona-Daytona Beach-Ormond Beach	8.93%	0.93%	43.90%	61.00%	73.80%				2.40	12.70%	
Denver-Aurora-Lakewood	22.18%	4.88%	27.10%	49.30%	66.30%	42.00	92.00	103.00	5.30	35.70%	97.30
Des Moines-West Des Moines	10.00%	0.48%	79.00%	85.50%	91.30%				2.60	24.40%	
Detroit-Warren-Dearborn	7.87%	1.91%	68.90%	80.80%	87.50%	69.00	99.00	103.00	2.80	51.10%	197.70
Durham-Chapel Hill	8.68%	1.60%	37.10%	54.20%	69.00%				3.20	38.00%	
Fayetteville			73.10%	82.80%	90.00%				1.40	13.10%	
Flagstaff									2.10	25.10%	
Gainesville			37.00%	52.80%	68.20%				4.00	38.40%	
Greenville-Anderson-Mauldin	3.60%	1.60%	53.00%	62.00%	80.10%				0.90	32.30%	
Houston-the Woodlands-Sugar Land	12.15%	3.25%	58.70%	71.30%	81.80%	47.00	103.00	110.00	2.80	46.10%	113.20
Indianapolis-Carmel-Anderson	3.24%	1.11%	71.00%	79.10%	86.80%	73.00	105.00	107.00	2.40	37.20%	124.80
Jacksonville	9.79%	2.97%	55.30%	67.50%	77.90%	56.00	99.00	109.00	2.60	25.00%	170.60
Kansas City	5.44%	1.18%	67.50%	80.00%	89.60%	73.00	104.00	105.00	2.30	29.20%	111.60
Lakeland-Winter Haven	6.28%	1.87%	60.50%	75.50%	85.50%				1.60	15.70%	
Las Vegas-Henderson-Paradise	12.66%	2.63%	42.80%	63.10%	79.20%	31.00	92.00	105.00	4.80	28.30%	118.50
Little Rock	1.73%	1.18%	69.50%	77.60%	88.40%				1.30	23.80%	
Los Angeles-Long Beach-Anaheim	36.33%	13.62%	6.80%	12.70%	24.90%	23.00	56.00	77.00	6.20	47.30%	126.60
Louisville-Jefferson County	4.28%	1.52%	64.50%	80.40%	90.60%	78.00	106.00	106.00	2.90	29.70%	151.60
Memphis	6.58%	0.75%	62.50%	77.20%	86.20%	53.00	104.00	109.00	2.30	48.00%	350.60
Miami-Fort Lauderdale-West Palm Beach	23.48%	6.77%	32.50%	46.10%	62.50%	25.00	52.00	81.00	5.20	40.20%	146.20
Minneapolis-St. Paul-Bloomington	13.03%	2.89%	65.80%	80.30%	88.00%	73.00	100.00	102.00	3.70	20.00%	106.10
Naples			25.40%	37.80%	47.00%				1.90	23.20%	
Nashville-Davidson-Murfreesboro-Franklin	7.35%	2.17%	56.60%	66.00%	77.10%	63.00	99.00	103.00	1.70	31.70%	135.80
New Orleans-Metairie	9.06%	2.56%	37.90%	55.60%	68.00%	41.00	96.00	107.00	3.40	38.90%	33.70
New York-Newark-Jersey City	33.98%	13.57%	25.30%	40.10%	53.40%	45.00	80.00	95.00	6.90	51.10%	182.20
North Port-Sarasota-Bradenton	14.60%	3.60%	42.40%	56.60%	67.80%				3.00	19.30%	
Ocala			79.70%	81.60%	94.30%				0.70	6.30%	
Ogden-Clearfield	4.68%	1.14%	64.90%	77.10%	87.50%				4.70	16.20%	
Oklahoma City	8.05%	0.77%	62.70%	72.20%	85.10%	75.00	107.00	109.00	1.70	31.60%	129.90
Omaha-Council Bluffs, NE-IA	7.19%	0.80%	78.60%	86.80%	89.20%				2.70	25.60%	
Orlando-Kissimmee-Sanford	16.04%	2.08%	42.70%	63.40%	77.40%	20.00	74.00	100.00	3.30	27.00%	127.20
Philadelphia-Camden-Wilmington	16.14%	4.84%	55.80%	70.10%	83.10%	67.00	99.00	103.00	5.30	44.80%	127.70
Phoenix-Mesa-Scottsdale	10.55%	2.88%	52.00%	64.70%	79.00%	45.00	98.00	104.00	4.10	37.50%	99.10
Pittsburgh	5.35%	1.52%	70.20%	77.80%	85.80%	83.00	101.00	105.00	3.30	23.70%	270.60
Portland-Vancouver-Hillsboro	20.02%	4.38%	23.00%	45.60%	65.50%	41.00	90.00	98.00	6.10	23.00%	109.80
Provo-Orem	12.34%	1.54%	56.50%	67.00%	81.10%				3.60	19.60%	
Punta Gorda			58.40%	70.40%	72.90%				0.00	5.50%	
Raleigh	6.09%	2.54%	58.20%	74.20%	83.50%	70.00	108.00	109.00	2.30	32.60%	120.70
Reno			23.30%	39.50%	58.00%				3.20	30.20%	
Richmond	10.61%	2.38%	59.60%	76.20%	87.40%	66.00	103.00	107.00	2.40	30.00%	173.40
Riverside-San Bernardino-Ontario	24.99%	7.37%	29.60%	46.40%	59.50%	31.00	69.00	87.00	3.80	36.20%	104.30
Rochester	6.98%	2.17%	78.80%	89.50%	94.60%	63.00	101.00	103.00	2.50	27.50%	
Sacramento-Roseville-Arden-Arcade	23.02%	7.03%	23.80%	45.00%	61.70%	37.00	83.00	97.00	4.00	34.80%	88.30
Salt Lake City	10.66%	2.64%	41.50%	61.90%	71.20%				6.60	26.50%	117.80
San Antonio-New Braunfels	6.36%	2.69%	62.00%	70.80%	80.00%	41.00	99.00	108.00	4.50	41.30%	80.10
San Diego-Carlsbad	38.33%	13.09%	14.50%	22.90%	40.20%	25.00	65.00	86.00	5.30	38.50%	94.30
San Francisco-Oakland-Hayward	43.42%	19.92%	9.50%	17.00%	30.20%	47.00	76.00	90.00	6.80	35.10%	79.40
San Jose-Sunnyvale-Santa Clara	46.10%	26.85%	14.00%	21.80%	35.00%	43.00	79.00	96.00	6.40	33.20%	116.80
Seattle-Tacoma-Bellevue	28.60%	6.82%	28.40%	40.50%	56.40%	48.00	88.00	98.00	5.10	26.50%	114.40
Spokane-Spokane Valley (WA)	6.79%	1.15%	43.10%	70.60%	79.60%				3.80	28.50%	
St. Louis	5.22%	1.74%	69.60%	79.70%	90.60%	73.00	106.00	106.00	3.80	27.80%	216.70
Tallahassee			50.10%	64.50%	82.40%				2.60	39.40%	
Tampa-St. Petersburg-Clearwater	10.89%	2.47%	53.90%	67.40%	77.20%	33.00	86.00	101.00	3.30	28.20%	129.50
The Villages			47.00%	68.20%	73.90%				0.00		
Tucson	6.08%	1.86%	54.10%	70.90%	78.70%	51.00	99.00	106.00	3.70	39.10%	
Tulsa	4.08%	0.81%	66.30%	82.80%	91.90%				1.70	28.50%	
Urban Honolulu	40.98%	21.46%	16.50%	27.50%	34.30%				6.40	16.00%	
Virginia Beach-Norfolk-Newport News	13.13%	3.72%	64.90%	77.20%	87.30%	60.00	103.00	109.00	3.20	28.80%	399.60
Washington-Arlington-Alexandria	36.10%	9.22%	46.60%	62.70%	73.50%	49.00	98.00	104.00	5.50	36.10%	101.90
Winston-Salem	3.40%	0.89%	66.30%	78.20%	84.20%				1.30	27.70%	

Overall Performance

As previously mentioned, the Index and Dashboards are intended to provide a snapshot of conditions in a given region, rather than explain the causes of specific attainability-related challenges. With this caveat, the Center's research observed the following:

- Overall, severe middle-income cost burdens are concentrated in a relatively small number of very high-cost metropolitan regions. In terms of severe cost burdens (overall affordability category), the highest-cost regions had highly elevated rates that "pulled" the ULI service area higher. For example, the average levels of severe cost burden among households earning $45,000 to $75,000 annually for the ULI service area was 4 percent, while the median was 2.38 percent. Seventeen high-cost regions (out of 69 total MSAs) had higher-than-average levels of severe cost burden for that income cohort, with seven regions with levels at or above 10 percent.

- Although workers in high-cost regions are generally paid more, this income premium is often overwhelmed by dramatically higher housing costs. According to the occupational analysis, wages for a child-care worker and cardiac technician were both around 10 percent higher in Los Angeles than Detroit. However, the median home value in Los Angeles was more than five times more

expensive and a modest two-bedroom rental nearly 77 percent higher. The same pattern holds, though somewhat less dramatically, in regions with somewhat less significant housing cost differences. Using the same occupations as reference points, workers in Denver earn around 6.6 percent more than in Oklahoma City, while the median-priced home was 2.7 times more expensive and a modest two-bedroom rental nearly two-thirds more expensive.

- Among the income groups included in the Index data (which notably does not include the lowest-income households), lower-income renters face the most significant cost challenges. None of the regions included in the analysis had had a sufficient number of rental units affordable and available at 50 percent of area median income to accommodate needs, with the smallest gap in Cincinnati (12 units per 100 households) and the largest gap in Orlando (80 units per 100 households). The average shortage was about 55 units.

- While middle-income attainability challenges are more concentrated in a small number of regions, income segregation is a much more widespread problem. The average and median proportion of families living in poor or affluent neighborhoods are nearly identical (around 29 percent); a wide range of market strength and geographic distribution prevails among the most and least segregated regions (see figure 2).

Figure 3. MSA Abbreviations

Metropolitan Statistical Area (MSA)	MSA Code	Metropolitan Statistical Area (MSA)	MSA Code
Atlanta-Sandy Springs-Roswell	AT	Nashville-Davidson-Murfreesboro-Franklin	NA
Austin-Round Rock	AU	New Orleans-Metairie	NO
Baltimore-Columbia-Towson	BA	New York-Newark-Jersey City	NY
Boston-Cambridge-Newton	BO	Oklahoma City	OK
Buffalo-Cheektowaga-Niagara Falls	BU	Orlando-Kissimmee-Sanford	OR
Charlotte-Concord-Gastonia	CHA	Philadelphia-Camden-Wilmington	PHI
Chicago-Naperville-Elgin	CHI	Phoenix-Mesa-Scottsdale	PHO
Cincinnati	CI	Pittsburgh	PG
Cleveland-Elyria	CL	Portland-Vancouver-Hillsboro	PO
Columbus	COH	Raleigh	RA
Dallas-Fort Worth-Arlington	DA	Richmond	RI
Denver-Aurora-Lakewood	DEN	Riverside-San Bernardino-Ontario	RSB
Detroit-Warren-Dearborn	DET	Rochester	RO
Houston-The Woodlands-Sugar Land	HN	Sacramento-Roseville-Arden-Arcade	SR
Indianapolis-Carmel-Anderson	KC	San Antonio-New Braunfels	SA
Jacksonville	JA	San Diego-Carlsbad	SD
Kansas City	KC	San Francisco-Oakland-Hayward	SF
Las Vegas-Henderson-Paradise	LV	San Jose-Sunnyvale-Santa Clara	SJ
Los Angeles-Long Beach-Anaheim	LA	Seattle-Tacoma-Bellevue	SE
Louisville-Jefferson County	LU	St. Louis	SL
Memphis	ME	Tampa-St. Petersburg-Clearwater	TA
Miami-Fort Lauderdale-West Palm Beach	MIA	Tucson	TC
Minneapolis-St. Paul-Bloomington	MIN	Virginia Beach-Norfolk-Newport News	VB
		Washington-Arlington-Alexandria	DC

On a region-by-region level, no single MSA could be identified as a "top performer" (ranked among the 10 best in every category) relative to others in the data set. However, several MSAs had Index values that were average or better across all categories or metrics in the Index:

- Buffalo-Cheektowaga-Niagara Falls
- Ogden-Clearfield[4]
- Pittsburgh
- Provo-Orem[5]
- Virginia Beach-Norfolk-Newport News

Minneapolis-St. Paul-Bloomington also has relatively strong attainability based on Index metrics, performing better than average across all categories other than housing production.

No region had lower-than-average performance across all Index categories, though several regions had Index values that would have that distinction if not for strong AllTransit scores:

- Denver-Aurora-Lakeland;
- Los Angeles-Long Beach-Anaheim;
- Miami-Fort Lauderdale-West Palm Beach;
- Riverside-San Bernardino-Ontario;
- Sacramento;
- San Diego-Carlsbad;
- San Francisco-Oakland-Hayward; and
- San Jose-Sunnyvale-Santa Clara

New York-Newark-Jersey City had worse-than-average values across all metrics with the exception of transit (where it was top ranked among Index MSAs) and housing production (ranked ninth).

To see charts illustrating the 10 best/worst-performing MSAs across each individual category, see Appendix C found at knowledge.uli.org/TCindex.

## Where Might Strong Attainability Be Offset by Neighborhood Opportunity and Access Challenges?

Several MSAs had better-than-average attainability across categories with a direct housing cost nexus (overall affordability, homeownership attainability, and rental attainability), but had worse-than-average performance in terms of transit access and income segregation. Though Index data alone are insufficient to determine the extent to which there are direct tradeoffs among these factors, it does indicate a need for additional research on the issue of neighborhood disparities in these regions:

- Birmingham-Hoover;[6]
- Charlotte-Concord-Gastonia;
- Columbus;
- Detroit-Warren-Dearborn;
- Indianapolis-Carmel-Anderson;
- Kansas City;
- Louisville-Jefferson County;
- Nashville-Davidson-Murfreesboro;
- Oklahoma City;
- Raleigh; and
- Richmond

Conversely, several regions that had worse-than-average attainability across all relevant Index metrics had comparatively stronger levels of transit access and lower levels of income segregation:

- Portland-Vancouver-Hillsboro;
- Seattle-Tacoma-Bellevue; and
- Urban Honolulu.[7]

Figures 4 and 5 show how each Index MSA with all relevant data performs on overall affordability in relation to income segregation. Top-performing MSAs (strong affordability, less income segregation) are in the bottom-left quadrants. MSA abbreviations for this analysis are found in figure 3.
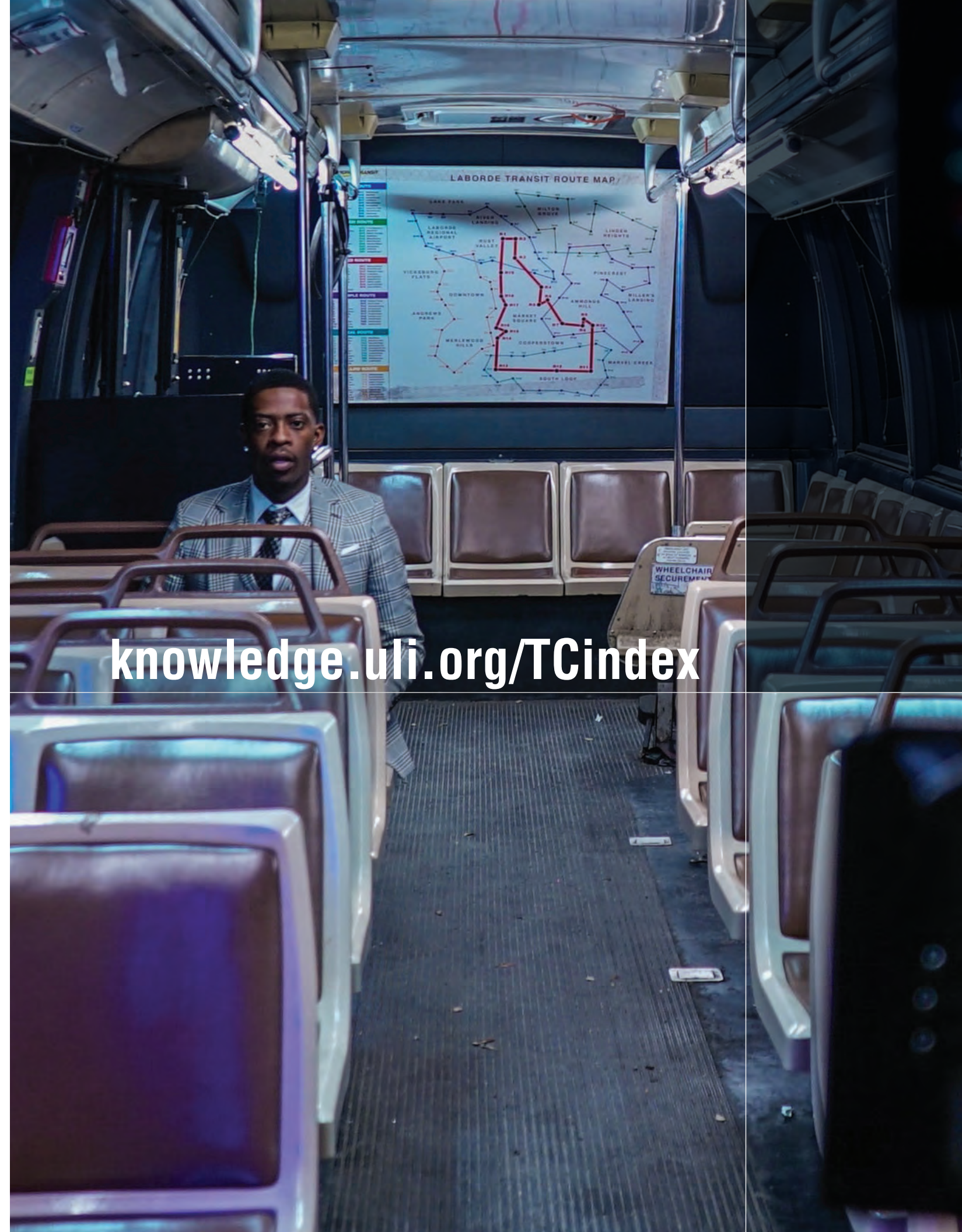
knowledge.uli.org/TCindex

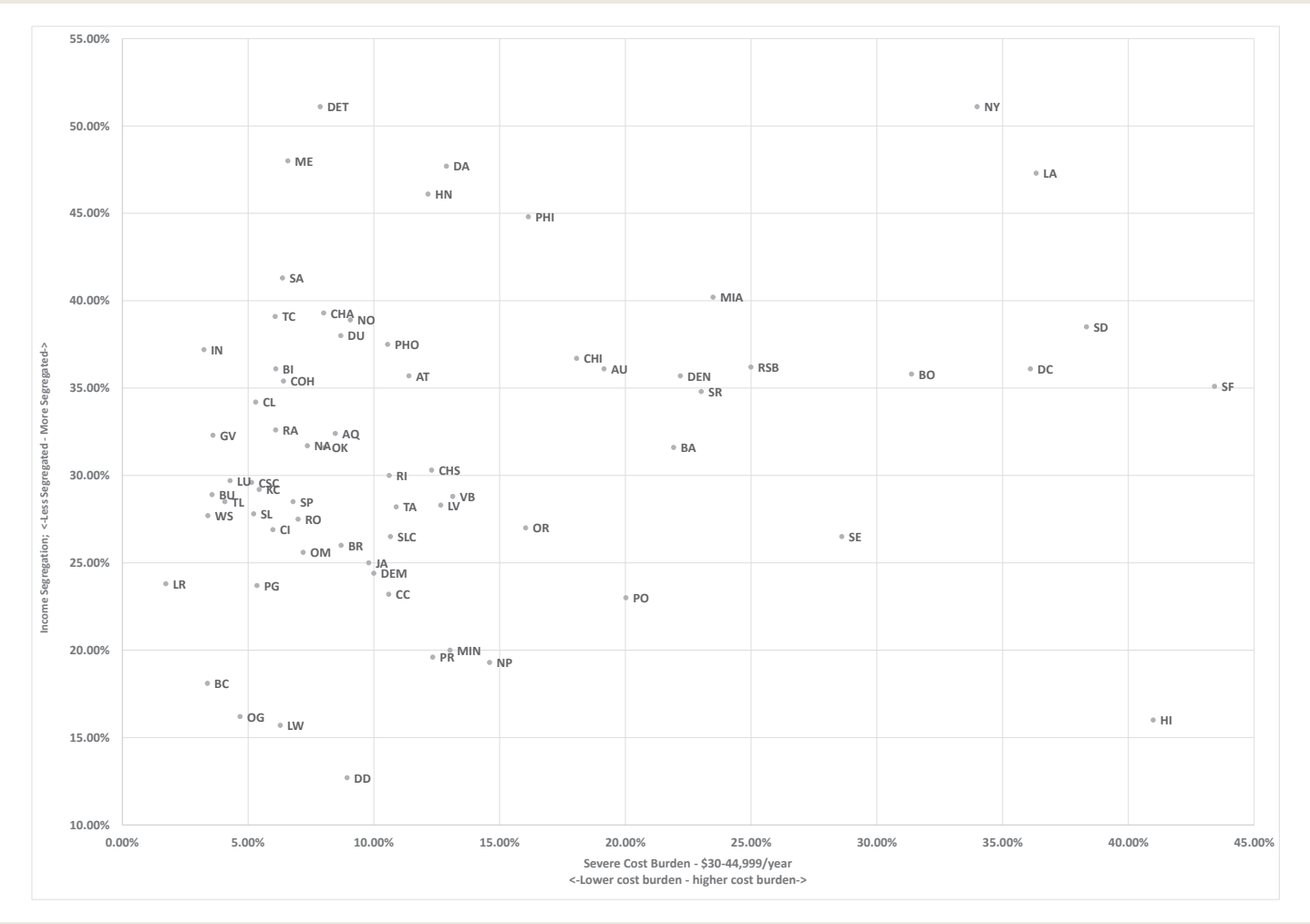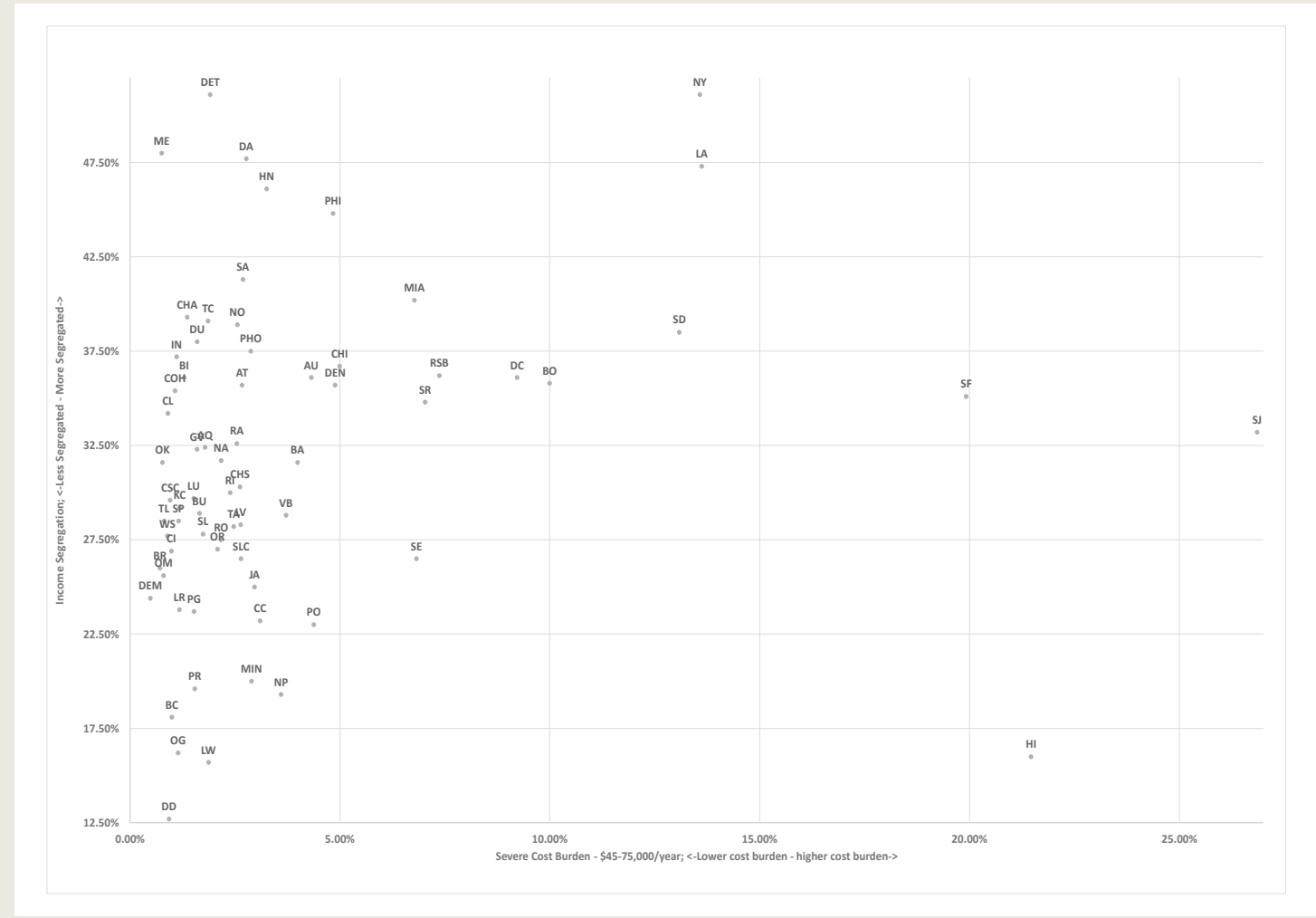## Figure 4. Percentage of Severely Cost-Burdened Households ($30,000 to $44,999/Year)/Income Segregation

Y-axis: Income Segregation; <-Less Segregated - More Segregated->

X-axis: Severe Cost Burden - $30-44,999/year
<-Lower cost burden - higher cost burden->

Figure 5: Percentage of Severely Cost-Burdened Households ($45,000 to $75,000/Year)/Income Segregation

Y-axis: Income Segregation; <-Less Segregated - More Segregated->

X-axis: Severe Cost Burden - $45-75,000/year; <-Lower cost burden - higher cost burden->

Examining the specific factors driving the interplay between attainability and income segregation in individual metropolitan areas was outside the scope of this initial research. Region-specific research is necessary to investigate these factors and develop associated policy recommendations. It is important to examine attainability and segregation trends over time and within the region. Relevant questions include the following:

- Is the trend lessening or worsening?

- Is it driven by concentration of poverty, wealth, or both?

- How do trends manifest by geography (central city, suburban, exurban)?

The answers to these (and other) questions can help inform policy action at the state, regional, and local government levels. For example:

- Increasing central city income segregation resulting from rapid price increases in gentrifying neighborhoods may call for robust preservation tools (such as quick-strike acquisition funds, rights of first refusal), advancing community ownership opportunities (community land trusts), and/or inclusionary housing policies that ensure a share of new development is attainable.

- Longstanding patterns of income segregation in low-density neighborhoods can be addressed through "missing middle" approaches that enable a range of more naturally attainable housing typologies.

Increasing central city income segregation resulting from rapid price increases in gentrifying neighborhoods may call for robust preservation tools.

To What Extent Does Tenure Choice Exist within Regions?

The Index is "tenure-neutral" in terms of whether renting or ownership is preferable. To begin answering the question of where middle-income households have the option of choosing either housing tenure within their means, Index metrics for homeowner and renter attainability were compared. Top-performing MSAs (i.e., those that exhibit the highest numbers of units in each tenure attainable at a given income level) can be found in the upper-right quadrant of figure 6. Again, MSA abbreviations for this analysis are found in figure 3.

As with the previous analysis, deeper investigation into a specific region's market and context is necessary to draw conclusions about barriers and policy solutions. In addition

to tenure-specific subsidies (such as local vouchers for rent-burdened households), region-specific policy approaches often include land use liberalization, which can focus on the following:

- Opening up more areas for denser, multifamily housing (particularly near transportation assets) where rental housing is in short supply; and

- Increasing lower-cost homeownership opportunities by expanding the area where more naturally attainable housing typologies (such as rowhomes, stacked flats, attached single-family homes, and cottage-style detached units) can be built.

Occupational Analysis

Finally, relative affordability and attainability should be considered within the context of the wages that are earned by members of the region's workforce. To facilitate this analysis, the Terwilliger Center selected an unscientific sample of occupations for comparison. In assembling this sample, the Center strove to include a variety of industries that fill critical needs across all regions, regardless of local economic differences. The Center also included a range of income levels from within the Paycheck to Paycheck data set, selecting at least one occupation from each income quintile (based on national wage levels for each occupation).[8] Paycheck to Paycheck data were analyzed for the following occupations:

- Single-income households:
  - Housekeeper;
  - Child-care worker;
  - Cardiac technician;
  - Auto mechanic; and
  - Geriatric nurse;

- Dual-income households:
  - Retail salesperson and janitor;
  - Health aide and truck driver; and
  - Child-care worker and teacher.

Figure 6: MSA Share of Recent Sales Affordable at Median Income/Affordable and Available Rental Units per 100 Households at 100 percent AMI

Paycheck to Paycheck
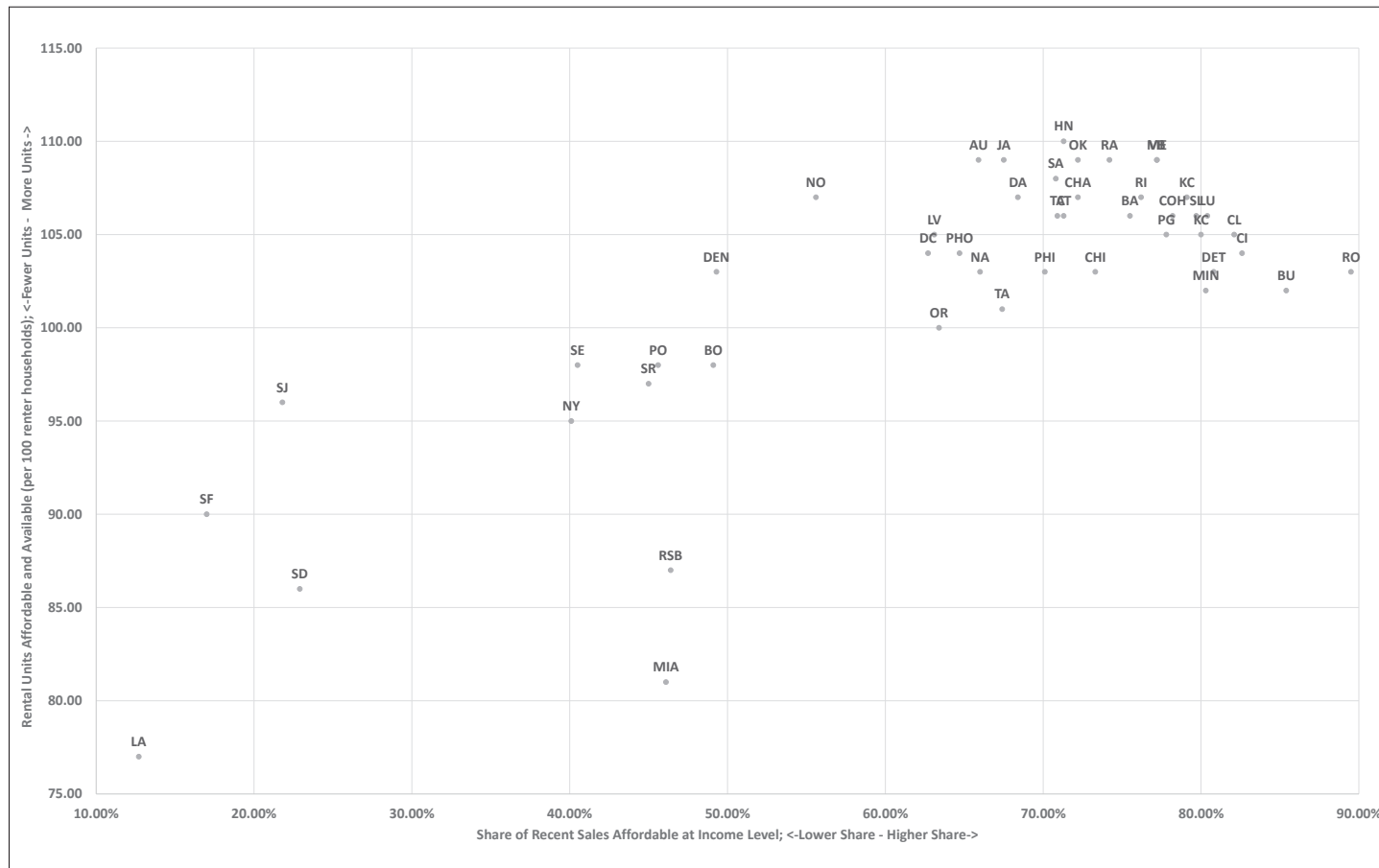
In addition to the full data on attainability gaps/surpluses explored at knowledge.uli.org/TCindex and in individual District Council Dashboards, Appendix D provides a table showing the metropolitan areas with the most- and least-attainable housing stock by occupation and housing type.[9] Furthermore, data on additional occupations and MSAs can be found through the NHC Paycheck to Paycheck database at www.nhc.org/paycheck-to-paycheck/.

Select findings from this analysis follow:

- The San Francisco and San Jose MSAs were the least attainable MSAs across all selected occupations and housing types.

- Only seven MSAs ranked as the first- or second-most attainable in at least one occupation or housing type: Buffalo, Cedar Rapids, Cleveland, Detroit, Portland, Spokane, and Winston-Salem. Portland's inclusion in this list is somewhat of an outlier, because it is more costly than many other MSAs in other categories but has high median pay for the cardiac technician occupation.

- Homeownership cannot be afforded without cost burden in any MSA for one-income households with the following occupations: housekeeper, child-care worker, home health aide, janitor, and retail salesperson.

- The only MSAs in which a housekeeper (the lowest-wage occupation in the Index sample) in a one-income household can afford any type of housing are Cedar Rapids and Winston-Salem. Even in those regions, the median housekeeper wage can cover only a one-bedroom rental without exceeding 30 percent of income.

- A geriatric nurse (the highest-wage occupation in the Index sample) in a one-income household can afford a one-bedroom rental in all MSAs other than San Francisco, and a two-bedroom rental in all but Honolulu, San Francisco, San Jose, and Seattle. To compare, such a household can afford homeownership with a 3 percent downpayment in 39 of 79 MSAs selected, with Houston being the most expensive MSA in which homeownership is attainable by this metric.

- A dual-income household including a retail salesperson and janitor cannot afford a one-bedroom rental in Honolulu, San Francisco, or San Jose. Such a household can afford to purchase a home with a 3 percent downpayment in 23 of 79 MSAs, with the most expensive being Memphis.

- A dual-income household including a home health aide and a truck driver can afford a one-bedroom rental in every MSA other than San Francisco and a two-bedroom in all but Honolulu, San Francisco, or San Jose. In comparison, this household could afford to purchase a home with a 3 percent downpayment in 42 of 79 metros, with the most expensive being Baton Rouge.

- A dual-income household including a child-care worker and teacher can afford a one-bedroom rental in every MSA. This household could afford to purchase a home with a 3 percent downpayment in 58 of 79 metros, with the most expensive being Miami.

Conclusion: Using the Index to Inform Action and Guide Further Inquiry

As previously discussed, no measure or index can perfectly capture the complexity of housing markets and the housing challenges of a region's population and workforce. However, this pilot version of the Index and Dashboards provides an informed starting point for deeper analysis, particularly on differences within regions and across submarkets.

This initial analysis has provided a glimpse into the magnitude and severity of several crucial housing challenges, most notably the following:

- The region-wide lack of attainable homes for critical members of the workforce in some of the United States' most vibrant metropolitan economies;

- The national struggle of lower-income households to find attainable rental units; and

- The breadth of income segregation across market type and geography.

The analysis also found that individuals or households with the same occupation can face wildly different circumstances, depending on where they live. These workers are critical to prosperous economies and meeting basic needs of the population, and a long-term failure to provide attainable housing options is likely to have negative repercussions at the local and regional levels.

Moving forward, the Terwilliger Center will work to update and improve the Index and Dashboards on an annual basis. The Center hopes that this resource will be a useful tool to practitioners as they engage in efforts to inform policy, programs, and development that address the aforementioned critical challenges. To ensure that this effort provides value to its users, the Center welcomes feedback on potential improvements and opportunities to incorporate information relevant to practitioners in the field in future iterations. To provide input and access the full suite of resources, visit: knowledge.uli.org/TCindex.

All appendixes available for download at knowledge.uli.org/TCindex.

NOTES

[1] Regions were selected in consultation with ULI District Council staff, using U.S. Census Bureau Metropolitan Statistical Area (MSA) boundaries.

[2] The service area average for each metric in the Index is calculated as the unweighted average of the value for each MSA included in the research.

[3] Extremely low-income households are defined as those earning up to 30 percent of the area median income.

[4] Though "affordable and available" rental data were not available for this MSA, the region did have a rate of rental cost burden lower than the ULI service area average.

[5] Though "affordable and available" rental data were not available for this MSA, the region did have a rate of rental cost burden lower than the ULI service area average.

[6] Though "affordable and available" rental data was not available for this MSA, the region did have a rate of rental cost burden higher than the ULI service area average.

[7] Though "affordable and available" rental data was not available for this MSA, the region did have a rate of rental cost burden higher than the ULI service area average.

[8] Income quintiles were based on occupations in the Paycheck to Paycheck data set, which may not align with income quintiles for the overall U.S. population.

[9] Housing types include homeownership with 10 percent downpayment; homeownership with 3 percent downpayment; and one-, two-, and three-bedroom rentals at fair-market rents.

ULI Terwilliger Center Home Attainability Index

Urban Land Institute

Terwilliger Center for Housing

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