

Greater Philadelphia Metropolitan Livability Index

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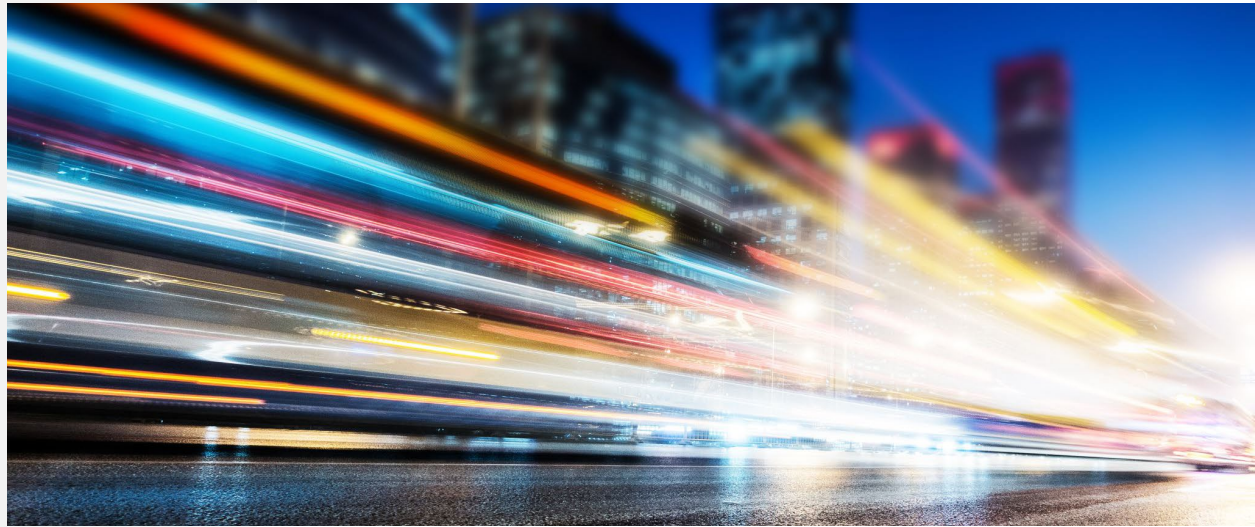


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1. Introduction

1.1. Why a Livability Index?

For decades, economists have argued that Americans increasingly choose where to live based on factors of ‘livability’ rather than more traditional factors such as job availability.¹ Though livability can be difficult to define, it is generally understood to include numerous factors that lead to greater quality of life and allow newcomers and longtime residents alike to flourish. Livability factors contrast across metropolitan areas, but also across counties, municipalities, neighborhoods, and even blocks within a particular metropolitan area.

Livability factors are especially important following the upheavals of the COVID-19 pandemic. The increasing trend towards work-from-home or hybrid work policies in white-collar offices has created a paradigm shift, allowing an ever-growing number of workers to forgo or de-prioritize proximity to work when considering where to live, focusing solely, or primarily, on the livability of their communities. At the same time, quality of life in metropolitan areas also affects the numerous Americans who cannot work from home — including those in health care, consumer services, life sciences, and other industries and occupations that were deemed “essential” during the pandemic.

The increased focus on livability comes at a crucial juncture for city and metropolitan growth. While the City of Philadelphia celebrated five percent population growth between 2010-2020, the largest increase in more than a half-century, the city lost an estimated one and a half percent of its population in a single year between 2020-21. At the same time, many suburban counties that had grown between 2010-2020, including Chester and Montgomery counties, continued to grow in 2020-21.^{2 3} In other words, after a decade’s worth of population growth shared relatively evenly across both city and suburbs, the first year of the pandemic showed a return to the population trends of the ‘urban flight’ era decades earlier — population losses in the central city, with gains in outlying suburban areas.

Data from the years following 2021 will be necessary to see whether this is a one-time occurrence or a lasting trend. In a post-pandemic era, it remains to be seen whether the rise of remote work has had a particular impact on population growth and trends in Greater Philadelphia; as many as one out of four jobs in Philadelphia will be remote or hybrid in the future, according to Pew.⁴

Considering these trends, the Greater Philadelphia region — like many other metropolitan areas in the U.S. — is at a crossroads in an era of rapid change and migration. We know that, in order to best chart our future, we need to understand our current assets and how those stack up in comparison to our most important competitors. The goal of this index is to provide a baseline that will allow the Chamber of Commerce for Greater Philadelphia (the Chamber), its members, and the community to best target initiatives to solidify regional strengths and improve upon regional weaknesses.

¹ Florida, Richard. “Competing in the Age of Talent: Environment, Amenities, and the New Economy.” 2000.

² [2020 Census results show Philadelphia's population has grown to more than 1.6 million \(inquirer.com\)](#)

³ [Philadelphia census data shows population drop from 2020 to 2021 \(inquirer.com\)](#)

⁴ [As some transit agencies rebound from the pandemic, SEPTA's ridership continues to decline \(Philadelphia Business Journal\)](#)

1.2. Using the Livability Index

Whether it is firms or government funders considering where to invest their scarce dollars, or residents considering moving to a new region, location decisions are vitally important to the future health of the Greater Philadelphia region. Both institutions and individuals will weigh an investment in Greater Philadelphia against one in other metropolitan regions offering similar amenities.

The Metropolitan Livability Index can help demonstrate how Greater Philadelphia fares, with a specific focus on livability factors, can be influenced. It compares Greater Philadelphia to a sizable and competitive group of seven peer regions, including three key Northeastern neighbors, Boston, Pittsburgh, and Washington, D.C., and four characteristically similar competitors, Atlanta, Chicago, Dallas, and Denver.

The index examines how Greater Philadelphia competes on ten key measures crucial to the success of a region. Section 3 of this report will discuss the measures themselves, their importance, and the absolute values for each region on each variable, while Section 4 will show the final results of the livability index. The Greater Philadelphia community can use the information provided in this index to sharpen their approach and create an environment for equitable growth and improved livability across the entire region.

The Metropolitan Livability Index serves as a starting point for discussion about the future of the region. The Chamber and Econsult Solutions, Inc. (ESI), as civic and professional institutions based in the Greater Philadelphia region, see the strengths and potential of the Greater Philadelphia region daily in their work and partnerships. **Greater Philadelphia has enormous potential to be a national and global leader in livability – ESI and the Chamber look forward to working with both new and established partners as we continue to evolve and support a livable ecosystem in Greater Philadelphia.**

1.3. About the Chamber of Commerce for Greater Philadelphia

The Chamber brings area businesses and civic leaders together to promote growth and create opportunity in our region. Members represent eleven counties, three states, and roughly 600,000 employees from thousands of member companies and organizations. By bringing all kinds of businesses and leaders to the table — the new, the established, the big, the small, the growing, the thriving, the perennial, the innovative, and the experimental — the Chamber builds community and finds commonalities among us all.

The Chamber advocates for regional development, business-friendly public policies, and economic prosperity. The Chamber supports its members with practical, inspiring programs, resources, and events. The Chamber's work serves one clear, bold goal: to make Greater Philadelphia a great place for good business.

1.4. About Econsult Solutions, Inc.

This report was produced by Econsult Solutions, Inc. ("ESI"). ESI is a Philadelphia-based economic consulting firm that provides businesses and public policymakers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development, planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have

outstanding professional and academic credentials, including active positions at the university level, wide experience at the highest levels of the public policy process and extensive consulting experience.

2. Overall Design of the Metropolitan Livability Index

2.1. Process for Designing the Livability Index

The Metropolitan Livability Index (MLI) was designed based on extensive research into existing livability indexes and numerous discussions with Chamber members and partners.

Existing livability and related indexes consulted in considering the design and formatting of the Metropolitan Livability Index include the following:

Organization	Index Name
*AARP	AARP Livability Index
Area Vibes	Best Places to Live
*Chamber of Commerce for Greater Philadelphia	Inclusive Growth Dashboard
Deutsche Bank	Mapping the World's Prices
Global Finance	World's Best Cities to Live In
Livability.com	Best Places to Live
Mercer	Quality of Living city ranking
Money	Best Places to Live
Niche	Places to Live; Healthiest Places
Numbeo	Quality of Life
Sperling BestPlaces	Best Places to Live
Tampa Bay Partnership Foundation	Regional Competitiveness Summary Report
The Economist	The Global Livability Index
U.S. News and World Report	Healthiest Communities
University of Wisconsin Population Health Institute	County Health Rankings * Roadmaps
*WalletHub	Healthiest Cities

The analysis team considered the categories, variables, and overall structure of these indexes when designing and shaping the MLI. In particular, the tools provided by those organizations marked by an asterisk were particularly influential in the design of this index.

ESI and the Chamber conducted two focus groups in May 2022 aimed at soliciting feedback from Chamber members on index design and weighting; this feedback influenced the eventual design of the index.

In addition, the Metropolitan Livability Index was discussed at two meetings of the Chamber's Southeastern Pennsylvania Business and County Partnership (in April and June 2022). This group brings together business executives and elected leaders representing Philadelphia metropolitan counties to advance economic development strategies. Participants provided additional feedback used to inform the creation of the index.

2.2. Geographic Scope of the Metropolitan Livability Index

After significant deliberation over the potential geographic scope of this work, it was determined that the MLI would analyze regional livability data at the metropolitan level, using the Metropolitan Statistical Area (MSA) definitions provided by the U.S. Census Bureau.⁵ This geographic scope allows for concise regional measurements that can be directly compared across regions.

Note that the definition of the Philadelphia Metropolitan Statistical Area (“Greater Philadelphia”) provided by the U.S. Census Bureau is slightly different than the Chamber’s definition of the Greater Philadelphia region. The Census Bureau definition includes a total of eleven counties: five in Pennsylvania (Philadelphia, Bucks, Chester, Delaware, and Montgomery); four in New Jersey (Burlington, Camden, Gloucester, and Salem); and one each in Delaware and Maryland (New Castle, DE and Cecil, MD). The Chamber’s regional definition also includes eleven counties, but its definition differs from the MSA in that it includes Mercer County, NJ and does not include Cecil County, MD.⁶ For consistency in data gathering and comparison this index uses the Census Bureau’s definition of Greater Philadelphia for this analysis.

2.3. Overview and Explanation of Index Structure

The list of measures included in the MLI was based on other existing livability indexes. A particular focus was placed on including measures that could be most directly shaped by collaborations among business, civic, and government stakeholders; for this reason, livability factors such as climate, crime, and education, were not included in this index. Crime and education also exemplified variables that are not well suited for regional analysis as profound variations in these variables can be found at the municipal, neighborhood, and even sub-neighborhood levels.

Another goal of the index was to create a concise list of variables that would address major regional livability considerations while still being timely, relevant, and digestible to a general audience.

The development of the MLI considered broad categories of livability. Though the final index was ultimately not organized by category, this initial investigation into categories allowed the team to consider the broad structure of the index, resulting in a final list of measures that addressed Health, Arts and Culture, Childcare, Transportation, Housing, and Recreation.

After consideration the following list of ten livability measures were finalized:

- Access to Health Care
- Access to Parks
- Air Quality
- Arts Vibrancy
- Childcare Availability
- Commute Time
- Commuters Who Do Not Drive Alone
- Housing Cost Burden
- Housing Availability

⁵ Note that the definition of the Greater Philadelphia region provided by the U.S. Census Bureau, which will be used in this report, is slightly different than that of the Chamber of Commerce for Greater Philadelphia.

⁶ [Region Map | Select Greater Philadelphia \(selectgreaterphl.com\)](#)

- Leisure Opportunities

Further explanation of these measures will be provided in the following section. This will include an explanation of each metric, detailed information about data sources, reasons why each measure is important to livability, analysis of measure results, and opportunities for Greater Philadelphia to continue improving in each area.

3. The Measures

The final list of ten measures reflects a diverse array of factors including healthcare, recreation, transportation, housing, arts and culture, and childcare. These ten measures are described below.

3.1. Access to Health Care

Metric

The Access to Health Care measure is a composite score comprised of four measures from the County Health Rankings and Roadmaps: Uninsured Adults, Primary Care Physicians, Dentists, and Mental Health Providers. County rankings within each state are provided for each of the four measures.

The County Health Rankings and Roadmaps, published by the University of Wisconsin Population Health Institute, “provides data, evidence, guidance, and examples to build awareness of the multiple factors that influence health and support leaders in growing community power to improve health equity”.⁷ Each county in the U.S. is scored on its performance on numerous metrics of health and well-being.

The Uninsured Adults measure reflects 2019 data from the U.S. Census Bureau’s Small Area Health Insurance Estimates on the percentage of the county population under age 65 without health insurance; the Primary Care Physicians measure reflects 2019 data from the Area Health Resource File and the American Medical Association on the ratio of population to primary care physicians; the Dentists measure reflects 2020 data from the Area Health Resource File and the National Provider Identification file on the ratio of population to dentists; and the Mental Health Provider measure reflects 2021 data from CMS and the National Provider Identification Registry on the ratio of population to mental health providers.

ESI calculated a composite Access to Care score using the following methodology: (1) Data was collected from the County Health Rankings for each county in each of the eight relevant MSAs; (2) The county data was aggregated for each of the four measures to calculate overall MSA score by weighting each county in the MSA with respect to county populations; (3) The data for each MSA was normalized using the min-max normalization method, which assigns each region a score relative to other regions based on the formula $(x - \min) / (\max - \min)$, with the top-performing region earning a score of 1 and the worst-performing region earning a score of 0; (4) A total Access to Care composite score was calculated by taking the mean of each region’s maximin scores on each of the four component variables, giving equal weight to each of the four measures. Boston earned an overall score of 1 because it was the top-performing region on all four components of Access to Care.

Why It Matters

Health is one of the most important measures of a livable community, and healthcare access is vitally important to ensure community members can maintain good health to live active and fulfilled lives. Poor health has profound impacts on the social, cultural, and economic lives of communities; economic impacts include reduced productivity from absenteeism and presenteeism (working while suffering physical or mental illness) as well as higher healthcare costs.⁸

The presence of an increased number of specialized medical professionals nearby ensures that community members can meet their healthcare needs without being burdened by long commutes to healthcare facilities. Health insurance access is critical not only to ensure residents are able to finance emergency expenditures but also to allow them to seek proactive healthcare that will make good health

⁷ [About Us | County Health Rankings & Roadmaps](#)

⁸ [Community Health and Economic Prosperity: The Problem, the Causes, the Opportunities, and the Solutions—At a Glance \(hhs.gov\)](#)

outcomes more likely in the long term. Studies have shown that uninsured adults can have health consequences due to delayed access to healthcare, and financial burden due to extra medical expenses.

Analysis

Greater Boston ranks highest in access to care, but Greater Philadelphia comes in a close second. Both the Boston and Philadelphia regions are well-known for their depth of healthcare infrastructure and commitment to employer-provided insurance. This was one of Greater Philadelphia's strongest performances in the index.

Figure 3.1: Access to Care Composite Score Rankings

	Measure	Rank
Boston	1.00	1
Philadelphia	0.82	2
Pittsburgh	0.80	3
Denver	0.76	4
Chicago	0.74	5
Washington, DC	0.53	6
Dallas	0.32	7
Atlanta	0.18	8

Sources: ESI (2022), County Health Rankings (2019)

Opportunities

Already, Greater Philadelphia is among the top performers on the Access to Care Index. Greater Philadelphia's strength in academic-medical institutions, with seven medical schools located in the region, is a core component in its healthcare success. These institutions provide access to healthcare in both urban and suburban communities through primary and satellite hospital and medical office locations; in addition, they attract and train generations of physicians, nurses, dentists, and other specialists, many of whom will choose to remain in Greater Philadelphia after graduation. Greater Philadelphia's high rate of insured persons — both through employer-based insurance and through the Commonwealth of Pennsylvania's Medicaid expansion — is another reason for this strength.

An important opportunity for Greater Philadelphia is increasing health equity regionally. While suburban areas — particularly Chester and Montgomery Counties — perform well on measures of health equity, Philadelphia County is Pennsylvania's lowest-performing county in the annual County Health Rankings. An example of an effort to increase regional health equity can be found in the 2022 launch of the [Accelerate Health Equity initiative](#), a collaborative initiative from numerous major stakeholders aimed at alleviating healthcare disparities across the Greater Philadelphia region.⁹

⁹ [Accelerate Health Equity Seeks to Address Inequities in Philadelphia \(upenn.edu\)](#)

3.2. Access to Parks, Trails, and Other Green Space

Metric

Data for the Percentage of Residents Within a 10-Minute Walk of a Park comes from the Trust for Public Land's [ParkServe application](#), which uses 2021 ESRI demographic data as well as geospatial data on park, trail, and green space locations.¹⁰

The Trust for Public Land (TPL) "maintains a comprehensive database of local parks, trails, and other green spaces in nearly 14,000 cities, towns, and communities." This includes a *10-minute walk* metric, based on ESRI's nationwide walkable road network dataset that defines walkable service areas within 10 minutes of each park in the country. TPL provides scores on the number of residents in each metropolitan statistical area who are within a 10-minute walk of a park, trail, or other green space. The data was normalized to give a higher score to cities with a higher percentage of residents within a 10-minute walk of a green space.

Why It Matters

Open space and parkland have numerous livability benefits; according to the TPL, benefits include improvements in health, water and air quality, community cohesion, tourism, and property values. The economic, health, and recreational benefits of parks and open spaces can lead to millions of dollars in public cost savings and benefits to residents. Those with easy walking access to parks have the most opportunities to enjoy these benefits.

Analysis

In terms of park accessibility, Chicago ranks highest with over 85 percent of its population within a 10-minute walk of a park, followed closely by Denver. For this metric, Greater Philadelphia ranked 5th with 64 percent of residents within a 10-minute walk of a park. Poor walkability in the suburbs is a potential contributor to this performance, as most of TPL's highest priority areas for new parks in Greater Philadelphia are in suburban and exurban areas. The top-performing region, Chicago, is known for its extensive park system, including miles of recreation space along its waterfront near many dense neighborhoods.

¹⁰ [Park Serve Mapping Tool \(Trust for Public Land\)](#)

Figure 3.2: Percentage within 10-Minute Walk of Park Rankings

	Measure	Rank
Chicago	85.4%	1
Denver	84.2%	2
Boston	76.8%	3
Washington, DC	70.7%	4
Philadelphia	64.7%	5
Dallas	62.3%	6
Pittsburgh	53.7%	7
Atlanta	25.5%	8

Source: ESI (2022), Trust for Public Land (2022)

Opportunities

One of Greater Philadelphia’s strongest parkland assets is the [Circuit Trails](#) — a network of hundreds of miles of long-distance urban and suburban trails including the Schuylkill River Trail connecting Philadelphia to Phoenixville, the Fairmount Park trail system in Philadelphia, the Cooper River Trail in New Jersey, and the Delaware Canal Towpath in Bucks and Northampton Counties.¹¹ Linear parks like the Circuit Trails, especially when constructed in dense urban areas, can maximize the number of residents who benefit from easy park access. Proposed expansions to the Circuit Trails — including a [Spring Garden Street Connector](#) that would connect the Schuylkill River and Delaware River trails through North Philadelphia and a [proposed trail between Camden County and the Jersey Shore](#) — will serve to enhance this regional asset. The expanded availability of federal and state funding in the wake of pandemic-era economic stimulus packages provides an ideal opportunity for local and state governments to fund construction or improvements on parkland and trails.

3.3. Air Quality

Metric

The Median Air Quality Index data reflects each MSA’s median Air Quality Index level for 2021, using data sourced from the EPA’s Air Quality Index report.¹² The Air Quality Index is assessed daily based on the levels of five air pollutants: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide.¹³ Air Quality Index scores are associated with a particular level of health concern, [Air Quality Index](#) of 50 or below is considered of low concern, while 51 to 100 is considered to pose a moderate level of concern, and air quality scores of 101 or higher pose health risks to at least some individuals.

Why It Matters

Air quality is an important environmental factor in health outcomes, which in turn impacts livability. High air pollution is associated with increased rates of respiratory and cardiovascular disease. These impacts fall disproportionately on low-income communities, which are most likely to be located near pollution sources.¹⁴

¹¹ [The Circuit Trails | Greater Philadelphia Trail Network](#)

¹² [Air Quality Index Report \(Environmental Protection Agency\)](#)

¹³ [Air Quality Index \(National Weather Service\)](#)

¹⁴ [EPA Research: Environmental Justice and Air Pollution | US EPA](#)

Analysis

Boston is the top-performing region in terms of air quality. The four cities with median Air Quality Index scores exceeding the threshold of 50 for a moderate health concern level include the post-industrial regions of Philadelphia, Pittsburgh, and Chicago (all of which retain some heavy industry activity), and the Denver region, which faces climate-related impacts from wildfires and relatively low rainfall.

Figure 3.3: Median Air Quality Index Rankings

	Measure	Rank
Boston	40	1
Washington, DC	46	2
Atlanta	47	3
Dallas	49	4
Philadelphia	51	5
Pittsburgh	52	6
Chicago	58	7
Denver	61	8

Source: ESI (2022), EPA Air Quality Index (2021)

Opportunities

As heat waves and severe weather events have made the impacts of climate change evident in recent years, local, state, and federal government agencies have issued climate action plans and goals, headlined by the U.S. Department of Energy's recent major commitments to decarbonization.¹⁵ The [City of Philadelphia](#), [Montgomery County](#), [Delaware County](#), and [Chester County](#) are among many regional institutions that have committed to major emission reductions in the coming decades. As the region incorporates carbon-reduction technologies like electric vehicles and solar energy, reductions in air pollution and the health issues that come with it will be just one of many benefits.

3.4. Arts Vibrancy

Metric

This metric uses the Arts Vibrancy Score produced by Southern Methodist University's DataArts initiative (scores provided are from the 2020 version of the report, which uses 2019 data.)¹⁶

The Arts Vibrancy Index is produced annually by Southern Methodist University's DataArts initiative. The Index assesses the strength of the arts and culture scene in each county in the United States.¹⁷ The overall Arts Vibrancy Score is based on three sub-scores: Arts Providers (which assesses a community's concentration of artists, arts employees, and arts organizations), Arts Dollars (which assesses the revenue, expenses, and compensation of local arts organizations), and Government Support (which assesses the level of state and federal financial support for the arts in a particular community). Each community is scored out of 100 in each of these three categories, then the three variables are weighted (45% for Arts Providers, 45% for Arts Dollars, and 10% for Government Support) to produce an overall index score out of 100. Arts industries used for this analysis include museums, arts education, theater, dance, orchestra, opera, performing arts, and music, among others. Data for each MSA was calculated by aggregating county-level scores.

¹⁵ [Biden-Harris Administration Releases Bold Agenda to Reduce Emissions Across America's Industrial Sector | Department of Energy](#)

¹⁶ [The Top 40 Most Arts-Vibrant Communities in the U.S. Executive Summary \(SMU DataArts\)](#)

¹⁷ [The Top 40 Most Arts-Vibrant Communities in the U.S. \(SMU DataArts\)](#)

Why It Matters

The arts opportunities available in regions with vibrant art scenes can greatly enhance quality of life for all residents, whether they enjoy the arts as spectators or as participants. Regions with flourishing creative communities are attractive to artists and to creative-minded individuals who work outside the arts – with important impacts on economic growth. Regions with vibrant art scenes can build a national and even global reputation as areas of cultural significance, attracting new residents, tourists, and their associated economic activity, strengthening the entire regional economy.

Analysis

Greater Boston finishes with the highest Arts Vibrancy score, but Greater Philadelphia comes in a close second. The Boston and Philadelphia regions, as two of the oldest urban areas in the nation, feature the presence of numerous historic institutions with large endowments and robust fundraising capacity. Meanwhile, Dallas and Atlanta finish well behind the rest of the group.

Figure 3.4: Arts Vibrancy Score Rankings

	Measure	Rank
Boston	94.68	1
Philadelphia	93.26	2
Denver	91.73	3
Washington, DC	91.28	4
Pittsburgh	90.86	5
Chicago	87.70	6
Dallas	80.58	7
Atlanta	77.30	8

Source: ESI (2022), SMU DataArts (2019)

Opportunities

The arts and culture industries have been hit hard by social distancing measures associated with the pandemic; even as associated restrictions have eased, ripple effects from this period continue, and will potentially last for years to come.¹⁸ For example, Broadway shows across the board are seeing significant reductions in receipts in 2022 compared to 2019,¹⁹ and a 2022 survey of arts and culture venues in Seattle found that arts attendance was still at three-quarters or less of 2019 levels.²⁰ Across the country, and perhaps the globe, arts and culture organizations in the 2020s will need to rebuild attendance and participation in the wake of the pandemic. One potential approach to rebuilding arts attendance may involve shifting to outdoor events; music festivals like Philadelphia's Made in America Festival and other outdoor performances have remained popular as pandemic restrictions have been lighter on outdoor activities. Other potential opportunities include encouraging programs that expose youth and students to the arts, potentially building new audiences for arts institutions. [Campus Philly's](#) efforts to encourage college students to engage with Greater Philadelphia's arts community are one such example. Another such example of driving new audiences to the arts in new and enlightening ways can be found in the Chamber's [Arts & Business Council](#), which conducts leadership development programming in support of capacity-building services to the arts and culture sector.

¹⁸ [Culture shock: COVID-19 and the cultural and creative sectors \(OECD.org\)](#)

¹⁹ [Live performance is back. But audiences have been slow to return. \(NY Times\)](#)

²⁰ [Seattle arts events are back, but audiences are hesitant. \(crosscut.com\)](#)

3.5. Childcare Availability

Metric

This metric measures the number of childcare facilities per 1,000 children under 5 years old. Data was pulled from two sources: data on the number of childcare facilities in each region was pulled from the County Health Rankings (the original source is 2021 data from the Homeland Infrastructure Foundation-Level Data), while data on the number of children under 5 years old in each county was pulled from the U.S. Census Bureau's American Community Survey 2020 5-year Estimates. ESI calculated the number of childcare facilities per 1,000 children under age 5 for each county, then aggregated this data up to the MSA level.

Why It Matters

About half of Americans live in childcare deserts, and these impacts fall disproportionately on urban and low-income communities.²¹ Childcare deficits have a profound impact on livability; inadequate childcare availability can force parents to reduce their work hours or even drop out of the workforce altogether, with women disproportionately impacted. This leads to short-term economic losses and potentially long-term career impacts. The cumulative effects of childcare shortages reverberate throughout a regional economy; these include reductions in overall earnings, business revenue, workforce size, and tax base. Overall, childcare deficits are estimated to cost the U.S. economy \$57 billion per year.²² The pandemic exemplified the importance of childcare for workforce participation, as large numbers of parents (particularly women) dropped out of the workforce — an ESI study of childcare shortages in New Hampshire found that about six percent of all pandemic unemployment in that state was attributable to childcare shortages.²³ These trends have had lasting impacts — employment among women was still down by nearly 2 million jobs from pre-pandemic figures as of January 2022, while employment among men had recovered from pandemic losses.²⁴ Individual businesses often offer childcare benefits as a powerful talent attraction tool.²⁵ Particularly in an era of a nationwide childcare crisis, metropolitan regions can take a similar approach, attracting and retaining talent by taking action to increase availability of high-quality childcare.

Analysis

Atlanta finishes with the most childcare facilities per child, while Greater Philadelphia finishes in the middle of the group, though relatively close to the leaders in absolute terms. Chicago comes in last, with fewer than half the per-capita childcare facilities of Atlanta. [Childcare deserts](#) in Greater Philadelphia are found in both urban and suburban locations.

Figure 3.5: Childcare Availability Rankings

	Measure	Rank
Atlanta	9.30	1
Boston	8.35	2
Denver	8.20	3
Philadelphia	8.02	4
Washington, DC	7.70	5
Pittsburgh	5.98	6
Dallas	4.56	7

²¹ [Do you live in a childcare desert? \(childcaredeserts.org\)](https://childcaredeserts.org/)

²² [03-Child-Care-Workforce-Constraints.pdf \(econsultsolutions.com\)](#)

²³ [03-Child-Care-Workforce-Constraints.pdf \(econsultsolutions.com\)](#)

²⁴ [Nearly 2 Million Fewer Women in Labor Force \(shrm.org\)](https://shrm.org/nearly-2-million-fewer-women-in-labor-force)

²⁵ [Why providing childcare becoming critical in hiring and retaining talent \(worklife.news\)](https://worklife.news/why-providing-childcare-becoming-critical-in-hiring-and-retaining-talent)

Opportunities

Childcare facilities in Greater Philadelphia and nationwide are in a difficult position. Difficulties in attracting workers to an industry that pays only about \$25,000 per year on average have increased as the pandemic has made many wary of in-person work and other service jobs have increased pay. In the City of Philadelphia, there are roughly 80 fewer childcare facilities than before the pandemic.²⁶ Many parents cannot afford to take on rising childcare costs. The City's [PHLpreK](#) program (established in 2017) provides free pre-K to more than 4,000 students, funded by the city's beverage tax²⁷, while suburban counties have their own programs, such as Montgomery County's [Montco Cares](#) grant program, which will use \$12 million in federal pandemic stimulus funds to assist both childcare facilities and parents searching for funds to use towards childcare.²⁸ Structural challenges remain that must be addressed to meet childcare needs for all children below school age; this is an opportunity for Greater Philadelphia counties to act collectively to solve problems impacting the entire region.

3.6. Commute Time

Metric

Mean travel time to work data was sourced from the U.S. Census Bureau's American Community Survey 2020 5-year estimates.

The United States Census Bureau releases annual data on commuting characteristics for all geographies (including Metropolitan Statistical Areas) as part of its American Community Survey. Data for mean travel time to work was extracted for metropolitan statistical areas. The data was transformed and normalized to give a higher score to MSAs with a lower mean travel time to work.

Why It Matters

Research has shown that workers with longer commutes experience negative quality of life impacts, including reduced well-being and life satisfaction.²⁹ Commute times reached record highs in 2019, just before the pandemic made remote work a new possibility for many workers.³⁰ Workers have continued to prefer remote work even as the pandemic has eased, impacting the comeback of downtown districts like Center City Philadelphia; long commute times are among the most important factors in this continued preference.³¹

Analysis

The relatively compact, lower-population Pittsburgh region finishes with the shortest mean commute times, while the Washington, DC region finishes with the longest times. Greater Philadelphia ranks in the middle of the group. Still, all regions finish with relatively similar mean commute types – typically around 30 minutes.

²⁶ [Labor shortage and inflation pinch Philadelphia childcare providers \(Axios\)](#)

²⁷ [After COVID shutdown, Philly's free preschool program plans modest expansion \(Chalkbeat Philadelphia\)](#)

²⁸ [Montco Cares Program Provides Financial Assistance to Childcare Centers and Families](#)

²⁹ [Long Commutes Destroy Happiness, Research Shows. Here's What to Do About Them | Inc.com](#)

³⁰ [Census Bureau estimates show average one-way travel time to work rises to all-time high \(U.S. Census\)](#)

³¹ [Remote Work Persisting and Trending Permanent \(gallup.com\)](#)

As an increasing number of commuters work on a hybrid schedule and only commute a few times per week, commute time may be seen differently as a livability indicator. For example, hybrid workers may be more willing to endure long commutes if they are less frequent. The recent changes in commuting patterns are not yet reflected in the U.S. Census Bureau survey data used for this analysis.³²

Figure 3.6: Mean Travel Time to Work Rankings

	Measure	Rank
Pittsburgh	27.0	1
Denver	27.8	2
Dallas	28.4	3
Philadelphia	30.1	4
Boston	31.5	5
Chicago	31.8	6
Atlanta	32.1	7
Washington, DC	34.8	8

Source: ESI (2022), U.S. Census Bureau (2020)

Opportunities

Mixed-use development in both urban and suburban areas can contribute to reducing commute times in two ways. For one thing, it can create “live-work communities” where home, work, and shopping are all within walking distance; for another, it can enable more residents to live near public transit stations which offer convenient access to cities’ downtown cores.

In recent years, comprehensive plans completed in urban communities (such as the [City of Philadelphia](#)) and suburban communities (such as [Montgomery](#) and [Chester](#) County) alike have encouraged and promoted such live-work communities in Greater Philadelphia.

3.7. Commuters Who Do Not Drive Alone

Metric

Mode of commuting data was sourced from the U.S. Census Bureau’s American Community Survey 2020 5-year estimates. The United States Census Bureau releases yearly data on commuting characteristics (S0801) for all geographies (including Metropolitan Statistical Areas) as part of its American Community Survey.

Data was pulled from the Census Bureau for the estimated number of commuters driving alone in each MSA. The number was divided by the total number of commuters to get percentage of commuters who commuted by driving alone.

Why It Matters

Commuting by modes other than driving alone (including bicycling, walking, public transportation, and carpooling) has numerous health and quality of life impacts. Decreased auto traffic, whether from increased use of non-automotive transportation or increased carpooling, can alleviate traffic congestion and roadway pollution, with important health and livability impacts. Active and public transportation modes are also associated with physical and mental health impacts including increased exercise and decreased stress.³³

³² [The American Community Survey 2020 Questionnaire \(census.gov\)](#)

³³ [Why it’s so hard to change people’s commuting behavior \(Harvard Business Review\)](#)

Analysis

The top four finishers – Washington, Boston, Chicago, and Philadelphia – are regions known for their strong public transportation systems, while the more auto-centric Atlanta and Dallas regions finish lowest. Still, in all regions, well over half of all workers commute by driving alone.

Figure 3.7: Percentage of Residents Who Commute Using Carpool, Public, or Active Transportation Rankings

	Measure	Rank
Washington, DC	37%	1
Boston	36%	2
Chicago	32%	3
Philadelphia	30%	4
Denver	27%	5
Pittsburgh	25%	6
Atlanta	25%	7
Dallas	22%	8

Source: ESI (2022), U.S. Census Bureau (2020)

Opportunities

The COVID-19 pandemic instituted a major decline in public transit ridership nationwide. Particularly considering the rise of remote work, declined ridership has persisted even after COVID vaccines ushered in a partial return to pre-pandemic public life in 2021. This declined ridership cuts off an important revenue source for already-struggling public transit authorities, potentially imperiling a public service that is vital to the health of dense urban regions such as Greater Philadelphia.³⁴ At the same time, rising transportation costs (particularly gasoline prices) in 2022 have created a potential opportunity to encourage increased public transportation ridership.

In 2022, Greater Philadelphia's public transportation authority, SEPTA, launched [the SEPTA Key Advantage](#) program in an effort to reverse the decline in ridership and provide transportation cost relief to workers at major Greater Philadelphia companies. The SEPTA Key Advantage program, inspired by similar, successful programs in cities including Chicago and Pittsburgh, allows Greater Philadelphia employers to purchase all-access public transportation passes for their employees. Initial partners in the program's pilot phase included three major regional employers: the Children's Hospital of Philadelphia, Drexel University, and Wawa. SEPTA plans to expand the program to new institutional partners after the pilot phase.

Other SEPTA initiatives in the works that can increase transit ridership include the [King of Prussia Rail project](#), which will make it more convenient for commuters to ride public transit to and from Greater Philadelphia's most popular suburban employment hub, and [Trolley Modernization](#), which would improve the capacity and functionality of the trolleys that serve dense urban neighborhoods in West Philadelphia.

3.8. Housing Cost Burden

Metric

The Housing Cost Burden data is sourced from the U.S. Census Bureau's American Community Survey 2020 5-year estimates.

³⁴ [Without commuters, U.S. transit agencies are running out of options \(Bloomberg\)](#)

The United States Census Bureau releases annual data on housing costs compared to income for both renter-occupied and owner-occupied housing for all geographies (including Metropolitan Statistical Areas) as part of its American Community Survey. Housing cost-burdened households were defined as those spending 30 percent or more of their income on housing costs. The Census Bureau’s data on housing costs compared to income is separated into three groups: renters, owners with mortgages, and owners without mortgages. ESI calculated overall cost burden by summing the number of cost-burdened households in all three categories and dividing this by the sum of the total number of households in all three categories.

Why It Matters

Housing costs are the largest expense for most households, and rising costs across the U.S. have made headlines amidst post-pandemic inflation.³⁵ When housing is affordable, it impacts quality of life by leaving households with more disposable income that they may spend on other priorities. This spending also circulates in the local economy, driving new businesses and economic growth that can further improve quality of life. In addition, regions with lower housing costs are most attractive to those looking to move, bringing population growth and the cultural and economic benefits that come with it.

Analysis

The relatively affordable Pittsburgh region is the least housing-cost-burdened of the regions considered. Greater Philadelphia comes in sixth, while Boston finishes last. The data for housing cost burden considers housing costs in comparison to income for each household, meaning that high-cost regions (such as the Washington, DC region) can still perform well if housing costs are well-matched to incomes. (In Washington’s case, a rent stabilization policy applying to most apartments within District of Columbia limits may be a factor.)³⁶ In addition, there is still potential variability within the “cost-burdened group” — this data does not consider the distribution of residents who barely exceed the threshold compared to those who are severely burdened and spend more than half their income on rent.

Figure 3.8: Housing Cost Burden Rankings

	Measure	Rank
Pittsburgh	24.6%	1
Atlanta	30.7%	2
Washington, DC	31.2%	3
Dallas	31.2%	4
Denver	32.0%	5
Philadelphia	32.6%	6
Chicago	32.9%	7
Boston	34.8%	8

Source: ESI (2022), U.S. Census Bureau (2020)

Opportunities

Montgomery County and Chester County are among many Greater Philadelphia communities that are commonly considered to be highly livable. For instance, they rank [fourth](#) and [first](#), respectively, in the state of Pennsylvania on the 2022 County Health Rankings. However, the desirability of these highly livable counties can lead to high housing costs.

³⁵ [Home prices in the U.S. climb to record \\$416,000 \(CBS News\)](#)

³⁶ [A Database On Rent-Controlled Housing Is Years Behind Schedule | DCist](#)

In response to this persistent concern for areas that fare well on many other livability measures, each county has taken action to promote affordable housing. Several departments of Montgomery County’s government, including its housing and economic development offices, have partnered on the [Homes for All initiative](#), which aims to preserve and create affordable housing opportunities within Montgomery County. The initiative began with a report that aimed to catalog the extent and geography of housing affordability issues in the county and presented potential solutions to encourage affordability. Chester County has taken similar action in its *Landscapes3* comprehensive plan, including the [“A+ Homes” initiative](#), which stands for “Attractive, Affordably-priced, Adaptable, Aging-friendly, and Accessible” housing. The City of Philadelphia has created its own program, [the Neighborhood Preservation Initiative](#), that will provide up to \$400 million in bond funding for affordable housing.

3.9. Housing Availability

Metric

Housing Units to Population Ratio data was sourced from the U.S. Census Bureau’s 2020 Decennial Census. The Census Bureau releases data on housing occupancy status for all geographical areas (including metropolitan statistical areas). The ratio of total housing units to its population was calculated for each metropolitan statistical area.

Why It Matters

Communities with more housing units per person are likely to have the friendliest housing markets for renters and buyers, making it easier for newcomers to find a new home, and for existing residents to upgrade to a more comfortable living situation. These regions are best equipped to handle an influx of new residents without catastrophic rises in housing costs.

Analysis

Pittsburgh continues its strong performance on housing metrics as it finishes with the most housing units per person – nearly one housing unit for every two residents of the region. Greater Philadelphia comes in third, while Dallas comes in last.

Figure 3.9: Housing Units to Population Ratio Rankings

	Measure	Rank
Pittsburgh	0.474	1
Denver	0.419	2
Philadelphia	0.414	3
Boston	0.411	4
Chicago	0.406	5
Atlanta	0.396	6
Washington, DC	0.392	7
Dallas	0.386	8

Source: ESI (2022), U.S. Census Bureau (2020)

Opportunities

Adaptive reuse projects, which convert existing buildings into residential development, provide robust opportunities to create new housing conveniently located in amenity-rich areas, providing increased

access to live-work communities where residents can walk to workplaces, amenities such as grocery stores, and recreation and leisure opportunities.

In urban Philadelphia, Center City has boomed as a live-work community over the past several decades; it ranks fifth in population growth among urban downtowns between 1980-2018.³⁷ Office-to-residential conversions, which have become more popular since the increase in remote and hybrid employment in the wake of the COVID-19 pandemic decreased demand for downtown office space, can expand housing supply in Center City, helping more residents enjoy the benefits of live-work communities in Center City. As of late 2021, Philadelphia was ranked first among U.S. cities for such office-to-residential conversions.³⁸ In the suburban counties of Greater Philadelphia, conversions of shopping malls to mixed-use, live-work communities can bring similar benefits. PREIT, owners of Plymouth Meeting Mall in Montgomery County, are among those publicly considering such conversions.³⁹

3.10. Leisure Opportunities

Metric

Leisure Opportunities scores come from the “Other Leisure” category included in SMU DataArts’ Arts Vibrancy report. Alongside its Arts Vibrancy Index, SMU’s DataArts initiative also provides scores for each county in an “Other Leisure” category. This score is not included in the overall Arts Vibrancy Index, but it provides a score out of 100 assessing each county’s performance in areas of entertainment outside the arts, including counts of the following businesses on a per capita basis: hotels, restaurants, bars, zoos & botanical gardens, cinemas, and professional sports teams.

Why It Matters

Both arts and non-arts entertainment are key factors in quality of life, with critical impacts on attracting and retaining residents and spurring economic growth. For example, a single Philadelphia Eagles playoff football game has been estimated to generate \$10 million in regional economic impacts.⁴⁰ On average, Americans spend about five percent of their monthly budget on entertainment expenses, indicating its importance.⁴¹

Analysis

The Denver region, famous for its concentration of outdoor recreation activities and craft breweries, leads in this measure of the concentration of recreational activities, with Pittsburgh coming in second. Meanwhile, Greater Philadelphia finishes seventh. Supporting the growth of small and large businesses alike in recreational industries will be a critical focus for Greater Philadelphia in the post-pandemic era. It is important to note that this measure only tracks the per-capita number of firms in these recreation industries; this may advantage smaller regions, particularly with respect to variables like zoos & botanical gardens and professional sports teams, where the number of firms is likely to be similar for both large and small regions.

³⁷ [Big city downtowns are booming, but can their momentum outlast the coronavirus? \(brookings.edu\)](https://www.brookings.edu/blog/big-city-downtowns-are-booming-but-can-their-momentum-outlast-the-coronavirus/2020/05/14/)

³⁸ [Philadelphia leads all U.S. cities in apartment conversions since the start of 2020 \(Philadelphia Business Journal\)](https://www.phillybusinessjournal.com/news/philadelphia-leads-all-u-s-cities-in-apartment-conversions-since-the-start-of-2020)

³⁹ [PREIT to Build Apartments On Its Mall Properties to Pay Off Debts \(montco.today\)](https://www.montco.today/news/preit-to-build-apartments-on-its-mall-properties-to-pay-off-debts)

⁴⁰ [Eagles home playoff game to score \\$10M for region's economy \(Philadelphia Business Journal\)](https://www.phillybusinessjournal.com/news/eagles-home-playoff-game-to-score-10m-for-region-s-economy)

⁴¹ [American households spend \\$2,900 per year on entertainment. Five ways to have fun without breaking the bank. \(the ascent\)](https://www.theascent.com/entertainment/american-households-spend-2900-per-year-on-entertainment-five-ways-to-have-fun-without-breaking-the-bank)

Figure 3.10: Leisure Opportunities Rankings

	Measure	Rank
Denver	94.85	1
Pittsburgh	90.91	2
Dallas	87.94	3
Boston	86.14	4
Chicago	85.71	5
Washington, DC	84.84	6
Philadelphia	81.93	7
Atlanta	81.88	8

Source: ESI (2022), SMU DataArts (2019)

Opportunities

Much like the arts, other entertainment industries must also focus on rebuilding their customer base in the wake of the pandemic's upheaval. Attendance at Major League Baseball games, for example, has mostly recovered from pandemic losses but is still below 2019 levels.⁴² In response to the need for revitalization of Philadelphia's nightlife scene, the City of Philadelphia recently appointed its first-ever "night mayor." Raheem Manning, who will officially be the City Department of Commerce's Nighttime Economy Director, is a former co-chair of the city Arts and Culture Task Force who will be responsible for spurring the recovery of the City's nightlife scene in the wake of the pandemic.⁴³

⁴² [MLB struggling to get attendance back to pre-pandemic levels \(usatoday.com\)](#)

⁴³ [Philly has a new night mayor and he wants to party in your neighborhood. \(Billy Penn\)](#)

4. The Index

ESI ranked the metropolitan areas for each of the 10 metrics, then took the mean of these 10 rankings for each metropolitan area to reach an overall score for each area.⁴⁴ The final index ranking of the eight metropolitan areas was based on this overall score. Below is the final index ranking of the eight metropolitan areas:

	Rank
Boston	1
Denver	2
Pittsburgh	3
Philadelphia	4
Washington, DC	5
Chicago	6
Dallas	7
Atlanta	8

ESI (2022)

The ranking presented above represents Greater Philadelphia's current standing among a competitive group of eight major metropolitan regions, based on the 10 measures of livability selected for this index. As described in this report, stakeholders in the public, nonprofit, and private sectors alike are already taking action to make Greater Philadelphia more livable. Further, targeted action based on the results of this index can make the region more livable for current residents and more attractive to new residents and businesses by building on regional strengths (such as in health care access and arts vibrancy) and addressing weaknesses, ultimately helping to build a better Greater Philadelphia region in the years and decades to come.

5. Acknowledgements

ESI and the Chamber of Commerce for Greater Philadelphia would like to thank our underwriters for this project:

Independence 



⁴⁴ To ensure that all variables were considered on equivalent scales, values for each measure were normalized and transformed before rankings were compiled.



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