ANN ARBOR SPARK

Benchmarking the Ann Arbor Region

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The goal of this report is to continue to take the pulse of the Ann Arbor region in comparison to a specific competitive set of technology-driven communities and their economies on a regular basis. The objective is not to make policy recommendations, but to provide clear, unbiased data with regional analysis on a series of metrics that are often applied without context.

Ann Arbor SPARK worked with various groups of stakeholders to produce the initial list of regions and metrics in 2017. This **2023 update** has the same goal: develop a comprehensive, accurate picture of the region in comparison to competitor regions. New this year is the addition of West Lafayette, IN (Purdue University) to the competitive set (replacing Bloomington, IN/Indiana University).

It is important to note that the data used in this report does not yet include the full economic impact of the COVID-19 pandemic. The data and analysis for each metric will answer some questions, and hopefully spur additional thought, questions, and action.

University R&D Expenditure — 1st
- No change in ranking among competitive set.
- This ranking was expected; the University of Michigan is a world-class institution with a well-funded, nationally recognized research complex.

Population Movement — 3rd
- Washtenaw County moved down from second to third but continues to perform well in terms of population movement when compared to peer communities.
- Washtenaw County is still the most popular destination for movers within Michigan and continues to attract residents from outside Michigan.

Share of Remote Jobs — 3rd
- The high ranking implies that a lot of existing jobs within Washtenaw County are tech-based and easily done from home, which is in line with the increasing number of tech-based jobs in Washtenaw County's economy. However, the negative impact on the people-facing businesses (restaurants, transportation, retail) that had grown significantly since the last recession are substantial and severe due to the COVID-19 pandemic and related restrictions placed upon businesses.
- This ranking indicates a "readiness" to shift to remote work — the communities ranked highest on this metric include those regarded as "tech hubs" like Austin, Boulder, and San Francisco.
- The implications of this metric are still being played out by the pandemic – some companies in costly cities (like San Francisco) are allowing all employees to work remotely indefinitely and recruiting people from all over the world. For a market like Ann Arbor, the final consequences remain to be seen.
- Due to the high ranking, the worst effects of COVID-19 on the Washtenaw County economy may be muted for many workers in the region. However, the share of work that can be performed remotely is not equally distributed by industry, race, or socioeconomic status.

Venture Capital Activity — 3rd
- No change in ranking among competitive set.
- Boulder and Berkeley's levels of VC activity remains high; in this analysis they are almost outliers, requiring a much larger range and rendering the differences between the rest of the pack nearly indistinguishable.
- As a result of controlling for population, Ann Arbor continues to rise above the rest with Austin, TX right on our heels.

Executive Summary continued

Housing Affordability — 5th
- There is a perception of Washtenaw County as an expensive housing market. This is borne out in the data when comparing to Midwestern and rust belt cities. However, when comparing to Austin, Berkeley, Boulder, and Portland, Ann Arbor is relatively affordable.
- The overall trend is toward a more expensive housing market, and this is not unique to Washtenaw County. Still, Washtenaw County is decidedly less affordable within Michigan.

Percentage of People Experiencing Poverty — 9th
- The latest poverty rate in Washtenaw County is 13 percent, while the three-year average percentage of ALICE respondents was 27 percent (up from 19 percent in 2019). This means that 40 percent of respondents were either very low income or struggle to make ends meet for themselves and their families.
- This is a new way of measuring equality and access to opportunity. Paired with other metrics like housing affordability and unemployment, this paints a significantly different picture of the competitive set. Including it in the report is necessary to understand that while many of these regions are listed on "best places" lists and touted as high growth technology economies, not everyone experiences the economic benefits. There is a tendency to overlook large segments of the population whose financial position prevents them from accessing basic opportunities and building wealth.
- The range of values is much starker than the discussion of inequality in the previous study, where the difference between the top and bottom was very small. Here, the top ranked community has approximately 32 percent of the population as either ALICE or in poverty — and the two lowest ranked communities are at 47 percent. This may indicate many things, including the extent of historical geographic segregation by socioeconomic status and race.
- In the context of post pandemic recovery, these disparities have grown. Specifically, the ALICE population has grown in nearly all communities in the competitive set which is not surprising considering inflation and the cost-of-living increases across the nation. The future success of these communities is directly tied to the financial stability of fragile households.

Driving Industry Employment — 10th
- Washtenaw County moves from 9th to 10th place in this category.
- For all years of data, it's important to note that Hennepin County (Minneapolis) is home to many Fortune 500 headquarters with lots of employees. It may be worth examining which industries make up the bulk of this employment, and whether the driving industry is a key component of that or not.

The Labor Market — 8th for Labor Force Participation, 9th for Unemployment
- Washtenaw County moved from 9th to 8th in labor force participation rate and from 6th to 9th in unemployment rate. The average unemployment rate in 2022 of the five highest ranked communities is 2.8 percent while Ann Arbor's unemployment rate was 3.6 percent.
- Before the pandemic, the unemployment rate in Washtenaw County was low and falling, but remained steady in the unemployment rankings because labor was tighter in other places (unemployment fell further in other places than in Washtenaw).
- Talent remains the top concern of most employers throughout the nation. Low unemployment rates partnered with lower-than-average labor force participation rates contribute to an already tight market when trying to recruit qualified candidates to fill open positions.

Key Findings Dashboard
Updated 2023

Metric	Current Rank	Trend from 2020 Report Rank	2022 Report Rank	Level/ Previous Level	MI Level	U.S. Level	Top Community
University R&D Expenditure	1st	↔	1st	$1.64 B $1.68 B	$2.7B	$83.6B	Ann Arbor, MI (University of Michigan)
Population Movement	3rd	↓	2nd	+11,047 +11,469 Net Migration	-23,670 Net Migration	N/A	Raleigh/ Wake County, NC
Share of Remote Jobs	3rd	N/A (new data not available)	3rd	44.9%	N/A	37%	Boulder/ Boulder County, CO
Remote Work	6th	↔	6th	0.7 / 0.6 Work From Home Score (NAR) 14.2% / 4.8% Remote Workers (ACS)	N/A 8.3%	N/A 9.7%	Raleigh/ Wake County, NC Boulder/ Boulder County, CO
Venture Capital Activity	3rd	↔	3rd	13.65 9.0	.56	1.0	Boulder/ Boulder County, CO
Housing Affordability*	5th	↑	7th	4.7 4.1	3.6	4.9	Pittsburgh/ Allegheny County, PA
% in Poverty and ALICE	9th	↓	4th	40% 31%	39%	41%	Madison/ Dane County, WI
Driving Industry Employment	10th	↓	9th	11.8% 11.8%	14.7%	11.5%	Boulder/ Boulder County, CO
Multi-Family Rent	6th	↑	7th	$1,498 $1,307	N/A	N/A	West Lafayette, IN
Office $/SF Rent	6th	↔	6th	$27 $25	N/A	N/A	West Lafayette, IN
Unemployment Rate	9th	↓	6th	3.6% 4.4%	4.2% (2022)	3.7% (2022)	Madison/ Dane County, WI
Labor Force Participation Rate	8th	↑	9th	63.7% 65.0%	59.8% (2022)	62.4% (2022)	Austin/ Travis County, TX

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*Ranking for 2020 report modified to reflect new calculation methodology.
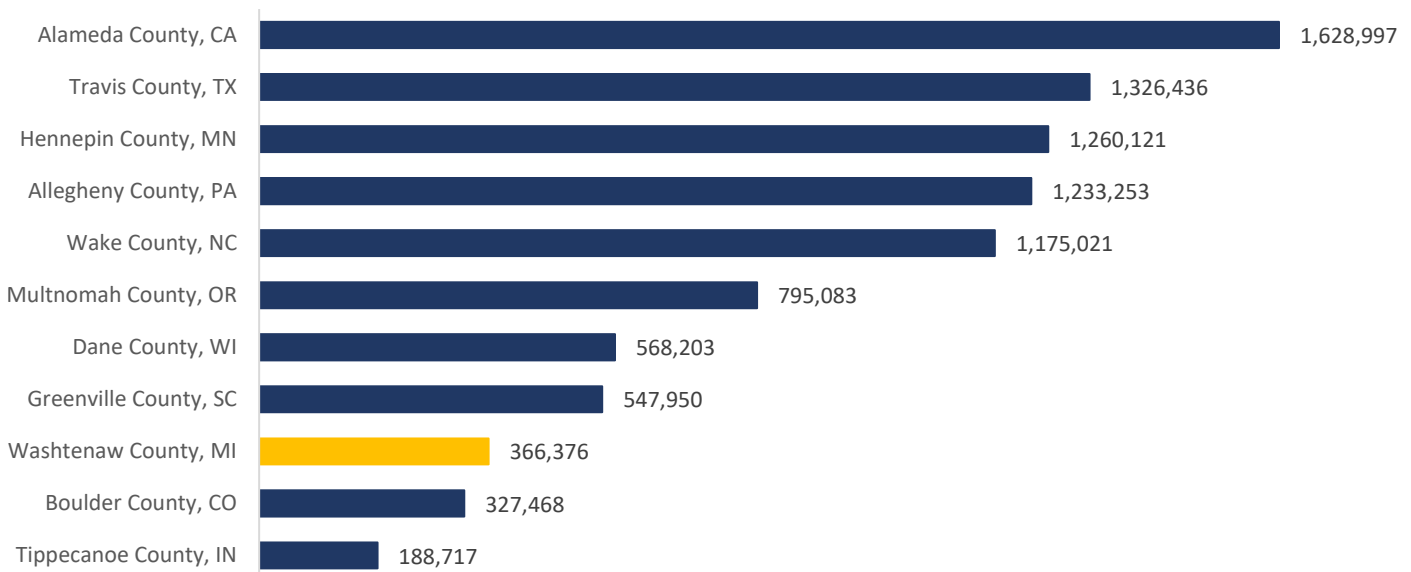
Population and Context

Setting the Stage

Population and Context
County and City

Many of the selected regions were chosen due to their inclusion in anecdotal comparisons to the Ann Arbor region. Austin, TX, is a perfect example. There are many similarities to Ann Arbor, but when comparing available services and city policy, it is helpful to remember that Austin is eight times larger than Ann Arbor. Where possible, the data have been normalized for population. This is not always feasible, and the following graphs can be used as contextual reference points.

County Population

County	Population
Alameda County, CA	1,628,997
Travis County, TX	1,326,436
Hennepin County, MN	1,260,121
Allegheny County, PA	1,233,253
Wake County, NC	1,175,021
Multnomah County, OR	795,083
Dane County, WI	568,203
Greenville County, SC	547,950
Washtenaw County, MI	366,376
Boulder County, CO	327,468
Tippecanoe County, IN	188,717

City Population

City	Population
Austin, TX	974,447
Portland, OR	635,067
Raleigh, NC	476,587
Minneapolis, MN	425,096
Pittsburgh, PA	302,898
Madison, WI	272,903
Ann Arbor, MI	119,875
Berkeley, CA	118,950
Boulder, CO	105,485
Greenville, SC	72,310
West Lafayette, IN	45,060

Population and Context continued

County Population

City Population

Metrics and Rankings

The Main Event

University R&D Expenditures
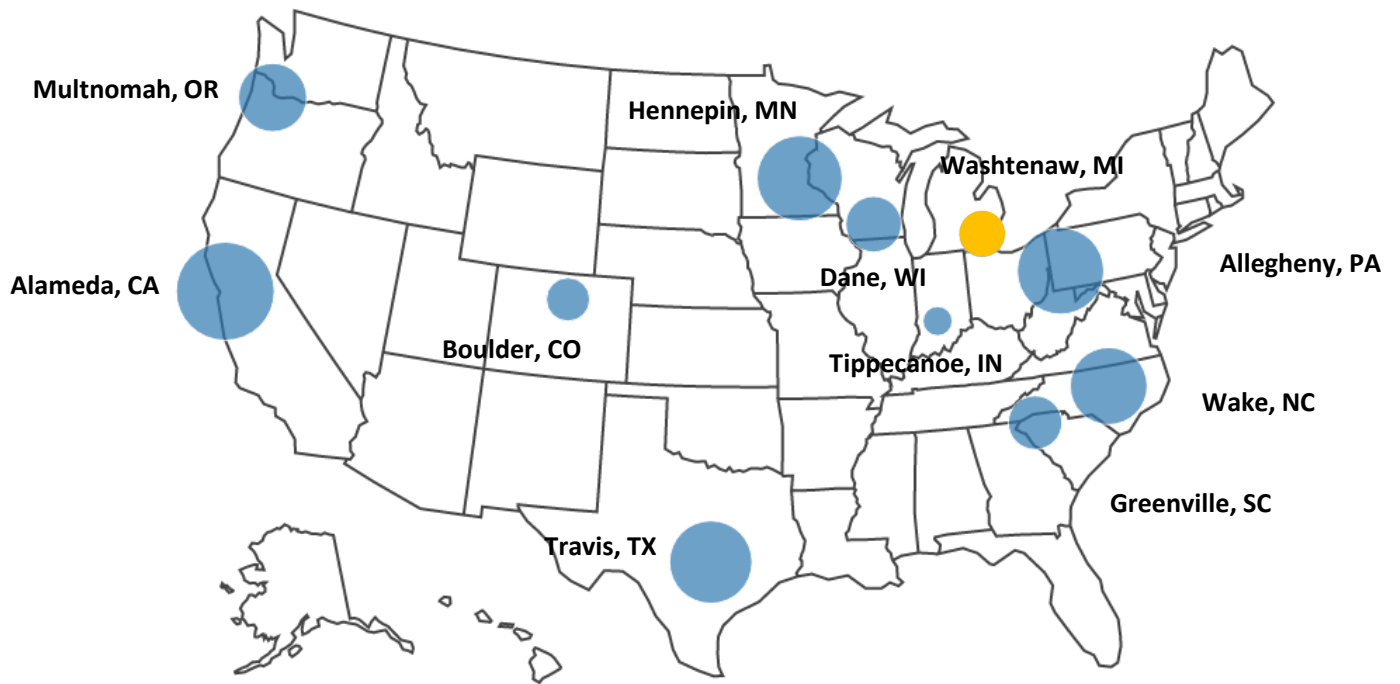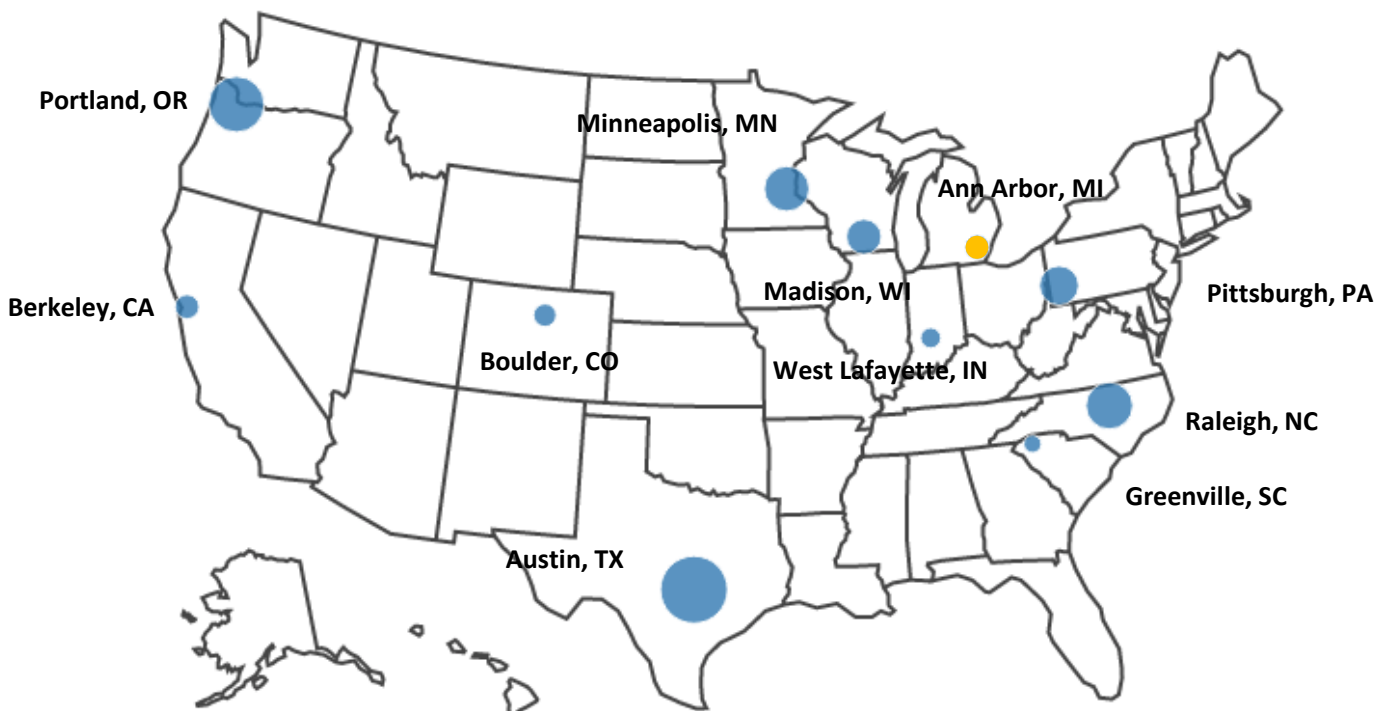
Rank: 1st Highest of 14

level: $1.64 billion

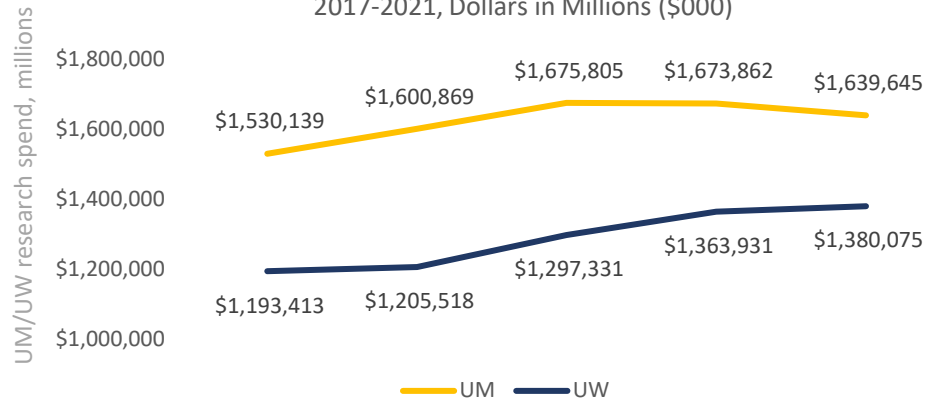trend: ⬌

top 5 average: $1.32 billion

What it is:

The amount each university spends on research and development. Much of this funding comes directly from the federal government and other grant sources, as well as university sources.

Why it matters:

University R&D expenditures are important because they provide opportunities for risk taking, proving ideas, and add to the innovation pipeline. R&D funding helps to build a conduit of research for future innovations. Nationally, levels of university R&D spending have been growing in the last ten years at a greater pace than U-M.

The University of Michigan is ranked #1 against the competitive set in this metric with R&D expenditures of more than $1.6 billion.

5-Year Trend: Top 2 Institutions
University of Michigan and University of Wisconsin
2017-2021, Dollars in Millions ($000)

UM: $1,530,139 → $1,600,869 → $1,675,805 → $1,673,862 → $1,639,645

UW: $1,193,413 → $1,205,518 → $1,297,331 → $1,363,931 → $1,380,075

Legend: — UM — UW

University R&D Spend, 2021
Total R&D Expenditures in Millions ($000)

University	Expenditure
University of Michigan	$1,639,645
University of Wisconsin, Madison	$1,380,075
Duke University	$1,237,686
University of North Carolina	$1,205,883
University of Pittsburgh	$1,135,416
University of Minnesota, Twin Cities	$1,072,961
University of California, Berkeley	$846,872
University of Texas, Austin	$779,348
Purdue University	$679,482
University of Colorado Boulder	$547,724
North Carolina State	$547,118
Carnegie Mellon	$402,376
Clemson University	$237,485
Portland State	$41,311

University R&D Expenditures
Industry Specific Expenditures

Life Sciences Spend, 2021
(Dollars in thousands)

University	Amount
Duke University	$1,040,786
University of Pittsburgh	$983,251
University of Michigan	$931,174
University of North Carolina	$925,380
University of Wisconsin,...	$861,558
University of Minnesota,...	$760,975
University of California,...	$264,394
North Carolina State	$237,289
Purdue University	$237,182
University of Texas, Austin	$148,471
Clemson University	$66,524
University of Colorado...	$53,211
Carnegie Mellon	$14,273
Portland State	$13,784

Health Sciences Spend, 2021
(Dollars in thousands)

University	Amount
University of North Carolina	$733,607
Duke University	$721,730
University of Pittsburgh	$678,383
University of Michigan	$604,587
University of Minnesota,...	$514,691
University of Wisconsin,...	$467,332
Purdue University	$88,853
University of Texas, Austin	$69,548
University of California,...	$58,481
Clemson University	$7,534
University of Colorado...	$4,708
Portland State	$1,184
Carnegie Mellon	$895
North Carolina State	$-

Biomedical Sciences Spend, 2021
(Dollars in thousands)

University	Amount
Duke University	$291,851
University of Wisconsin,...	$273,356
University of Michigan	$262,263
University of North Carolina	$191,773
University of California,...	$129,502
University of Minnesota,...	$121,637
North Carolina State	$119,614
University of Texas, Austin	$72,413
University of Pittsburgh	$56,681
University of Colorado Boulder	$42,368
Purdue University	$25,488
Clemson University	$24,231
Carnegie Mellon	$12,858
Portland State	$9,159

Engineering Spend, 2021
(Dollars in thousands)

University	Amount
University of Pittsburgh	$304,345
Purdue University	$285,469
University of Texas, Austin	$279,730
University of Michigan	$279,682
University of California,...	$199,711
University of Colorado...	$177,604
North Carolina State	$172,900
University of Wisconsin,...	$131,709
University of Minnesota,...	$118,493
Carnegie Mellon	$112,597
Duke University	$94,483
Clemson University	$90,038
University of North Carolina	$30,935
Portland State	$6,668

U-M Industry Specific Spending

Among all U.S. universities, industry specific research spending at the University of Michigan is ranked as follows:

- *#3 Overall (behind Johns Hopkins and UC, San Francisco)*
- *#3 in Life Sciences*
- *#3 in Biomedical Sciences*
- *#4 in Health Sciences*
- *#4 in Engineering*

U-M's investment in these fast-growing fields exceeds that of many elite universities such as UC Berkeley and Carnegie Mellon. Labeled the #1 public university in the U.S. by the Wall Street Journal, U-M maintains robust research volume and significant federal funding. 2019 set a record high in annual R&D expenditures for the university.

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Population Movement

Rank: 3rd Highest of 11

level: +11,047 (3.03% of pop.)

trend: ⬇

top 5 average: +14,040

What it is:

These are period estimates that measure where people lived when surveyed (current residence) and where they lived one year prior (residence one year ago). The data are collected continuously over a five-year period (in this case 2016-2020). The flow estimates resemble the annual number of movers between counties for a five-year period.
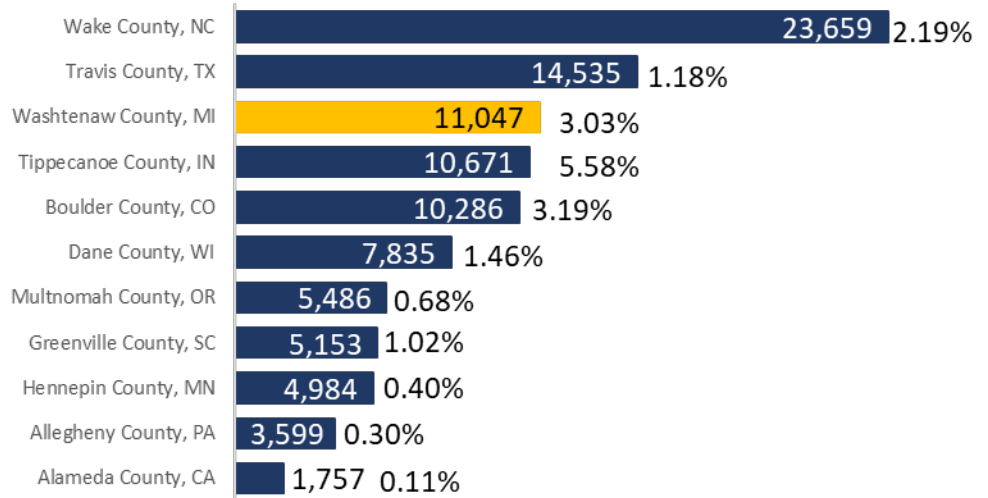
Why it matters:

To be considered an innovation hub, the Ann Arbor region must be attractive to outside talent. Net population movement, both inter and intrastate, can potentially indicate the attractiveness of a region to outside talent, especially when viewed as proportional to population. As the most available data is 2020, we cannot assess the potential temporary or permanent impact COVID-19 has had on migration, and it will be important to continue to track the trend.

Washtenaw County benefits from significant intrastate movement (movers to a different county, same state), and is now attracting more people from out of state. In terms of net migration, Washtenaw County sees a higher net inflow proportional to its population than most competitor regions.
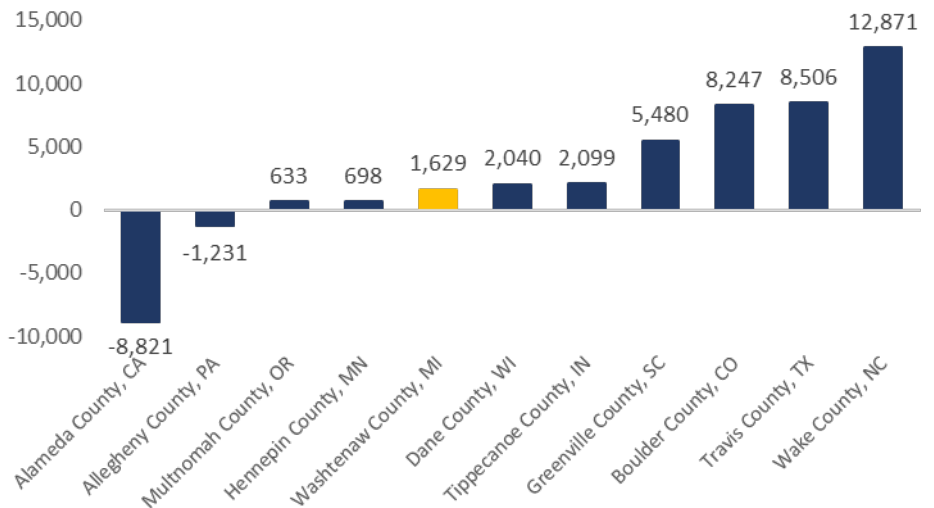
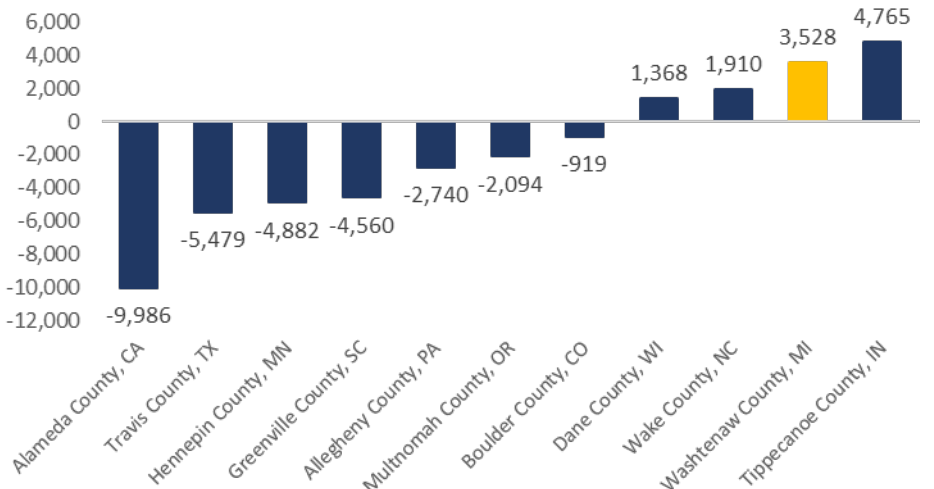### Net Migration
2016-2020 US Census Flows Mapper

County	Value	%
Wake County, NC	23,659	2.19%
Travis County, TX	14,535	1.18%
Washtenaw County, MI	11,047	3.03%
Tippecanoe County, IN	10,671	5.58%
Boulder County, CO	10,286	3.19%
Dane County, WI	7,835	1.46%
Multnomah County, OR	5,486	0.68%
Greenville County, SC	5,153	1.02%
Hennepin County, MN	4,984	0.40%
Allegheny County, PA	3,599	0.30%
Alameda County, CA	1,757	0.11%

Movers Between States
2016-2020 US Census Flows Mapper

County	Value
Alameda County, CA	-8,821
Allegheny County, PA	-1,231
Multnomah County, OR	633
Hennepin County, MN	698
Washtenaw County, MI	1,629
Dane County, WI	2,040
Tippecanoe County, IN	2,099
Greenville County, SC	5,480
Boulder County, CO	8,247
Travis County, TX	8,506
Wake County, NC	12,871

Movers Between Counties (Same State)
2016-2020 US Census Flows Mapper

County	Value
Alameda County, CA	-9,986
Travis County, TX	-5,479
Hennepin County, MN	-4,882
Greenville County, SC	-4,560
Allegheny County, PA	-2,740
Multnomah County, OR	-2,094
Boulder County, CO	-919
Dane County, WI	1,368
Wake County, NC	1,910
Washtenaw County, MI	3,528
Tippecanoe County, IN	4,765

Share of Remote Jobs (Potential)

Rank: 3rd Highest of 11

level: 44.9%

trend: N/A (new data not available)
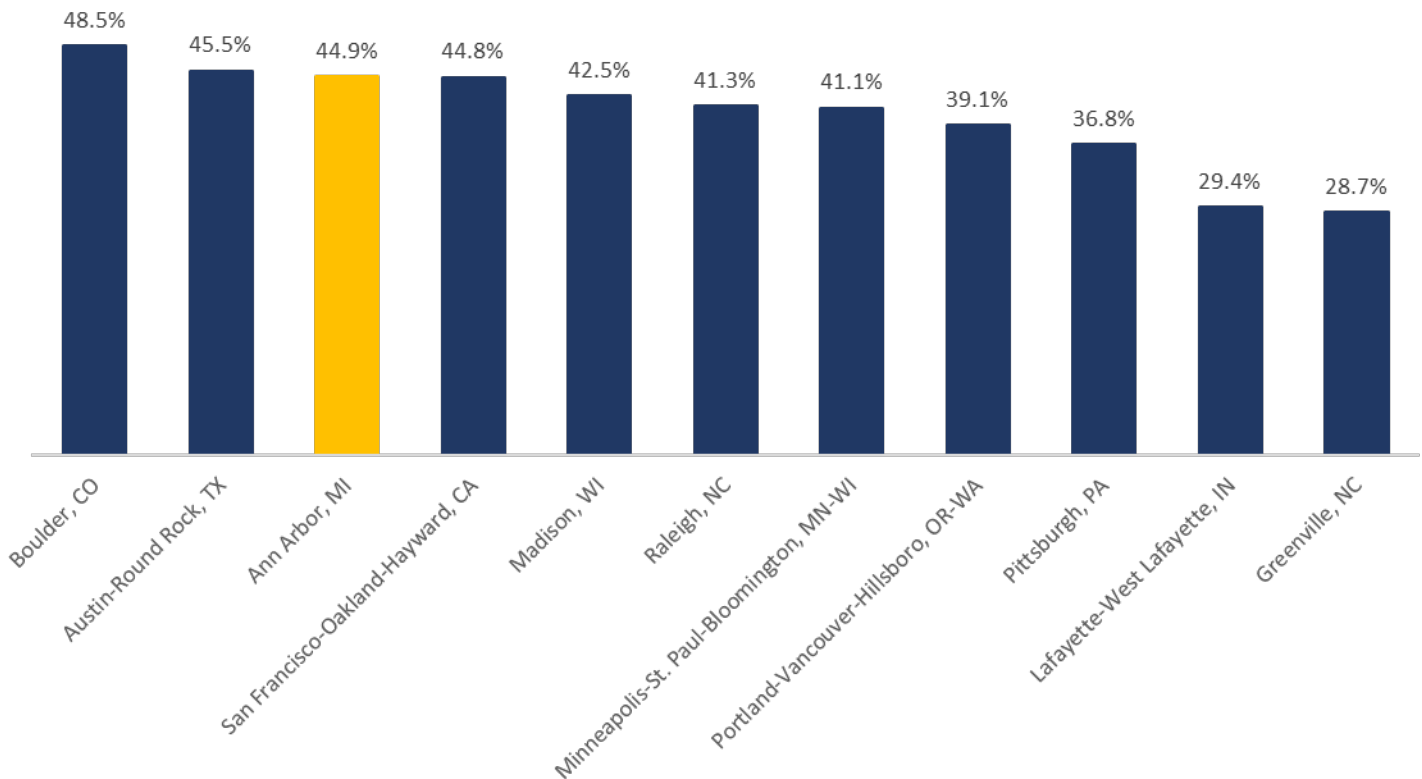
top 5 average: 45.2%

What it is:

The percentage of the jobs in a metropolitan statistical area that can be performed at home, based on research from the University of Chicago Booth School of Business (see methodology). According to this research, 37% of U.S. jobs can plausibly be performed at home (accounting for 46% of all wages).

Why it matters:

This ranking indicates a "readiness" to shift to remote work, which in the context of a pandemic recession may indicate resilience. The communities ranked highest on this metric are regarded as tech hubs (Boulder, Austin, and San Francisco). Note that the geography for this metric is different than all other metrics. The metropolitan statistical area that encompasses Ann Arbor is known as the Ann Arbor MSA and has identical boundaries to Washtenaw County. However, the boundaries of the other MSAs are sometimes much bigger, including multiple counties and cities.

Ann Arbor's presence in the top 5 indicates a high concentration of these jobs in a relatively small population, which may shield the county from the worst effects of the pandemic recession. However, this share of jobs is not equally distributed in the population.

Share of Jobs that Can be Performed Remotely
University of Chicago Booth School of Business

Location	Share
Boulder, CO	48.5%
Austin-Round Rock, TX	45.5%
Ann Arbor, MI	44.9%
San Francisco-Oakland-Hayward, CA	44.8%
Madison, WI	42.5%
Raleigh, NC	41.3%
Minneapolis-St. Paul-Bloomington, MN-WI	41.1%
Portland-Vancouver-Hillsboro, OR-WA	39.1%
Pittsburgh, PA	36.8%
Lafayette-West Lafayette, IN	29.4%
Greenville, NC	28.7%

Remote Work Index

Rank: 6th Highest of 11

level: 0.7 WFH, 14.2% RWs

Trend: ⬇

top 5 average: 1.1

Why it matters:

This ranking indicates a "present ability" to perform remote work, which in the context of a pandemic recession may indicate long term resilience. The communities ranked highest on this metric are regarded as burgeoning or re-burgeoning cities in tech and industry (Austin, Raleigh, and Boulder).
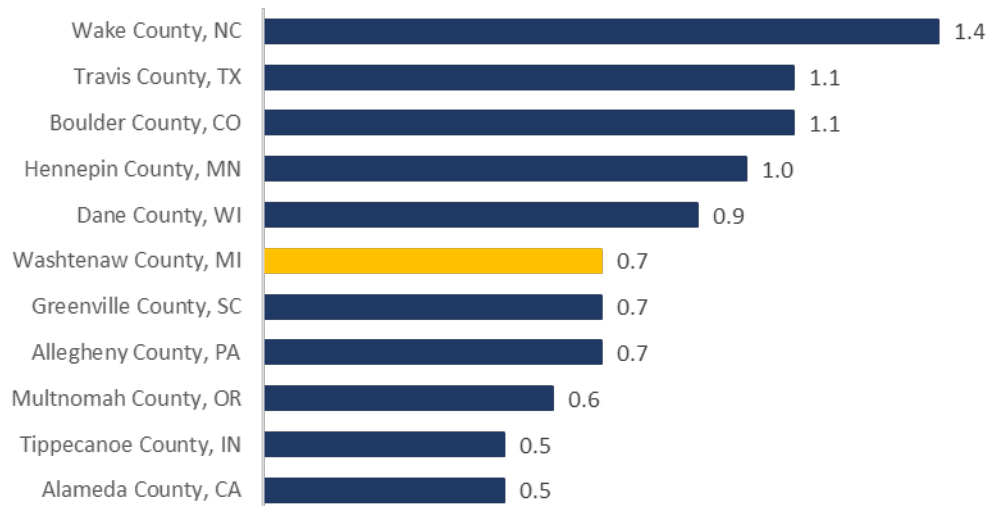
Ann Arbor's score represents that the area is an above average county on remote work compatibility, which should be important moving forward as the option to work from home or remotely is likely to become part of workforce culture.

What it is:

The Work From Home Score is relative to the national average (national avg. = 0) that encapsulates factors that reflect the current fraction of workers already working from home and factors that are expected to support the trend to work from home or work remotely in the future. The methodology for the measure was developed by the National Association of Realtors and includes 9 community characteristics such as broadband access, computer access, etc. (See 'Sources' Section). A positive score indicates better than average, and a negative score indicates below average performance. Washtenaw County is above average nationally on this work-from-home compatibility index and it ranks 6th highest amongst competing counties. Remote Workers (RWs) is the percent indicating 'work from home' in the American Community Survey when asked about commute information. Washtenaw ranks 7th.
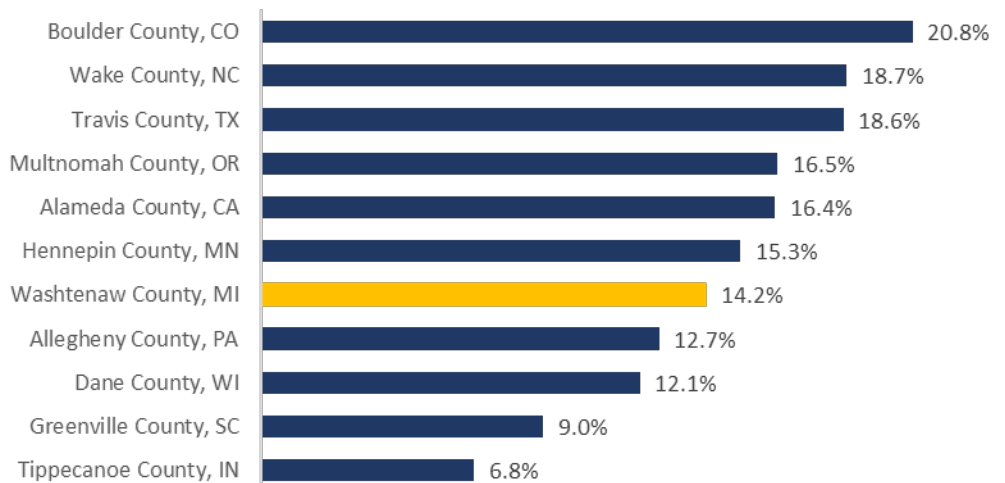
Work From Home Score
National Association of Realtors, 2020

County	Score
Wake County, NC	1.4
Travis County, TX	1.1
Boulder County, CO	1.1
Hennepin County, MN	1.0
Dane County, WI	0.9
Washtenaw County, MI	0.7
Greenville County, SC	0.7
Allegheny County, PA	0.7
Multnomah County, OR	0.6
Tippecanoe County, IN	0.5
Alameda County, CA	0.5

Remote Workers
American Community Survey

County	Percent
Boulder County, CO	20.8%
Wake County, NC	18.7%
Travis County, TX	18.6%
Multnomah County, OR	16.5%
Alameda County, CA	16.4%
Hennepin County, MN	15.3%
Washtenaw County, MI	14.2%
Allegheny County, PA	12.7%
Dane County, WI	12.1%
Greenville County, SC	9.0%
Tippecanoe County, IN	6.8%

Venture Capital Activity

Rank: 3rd Highest of 11

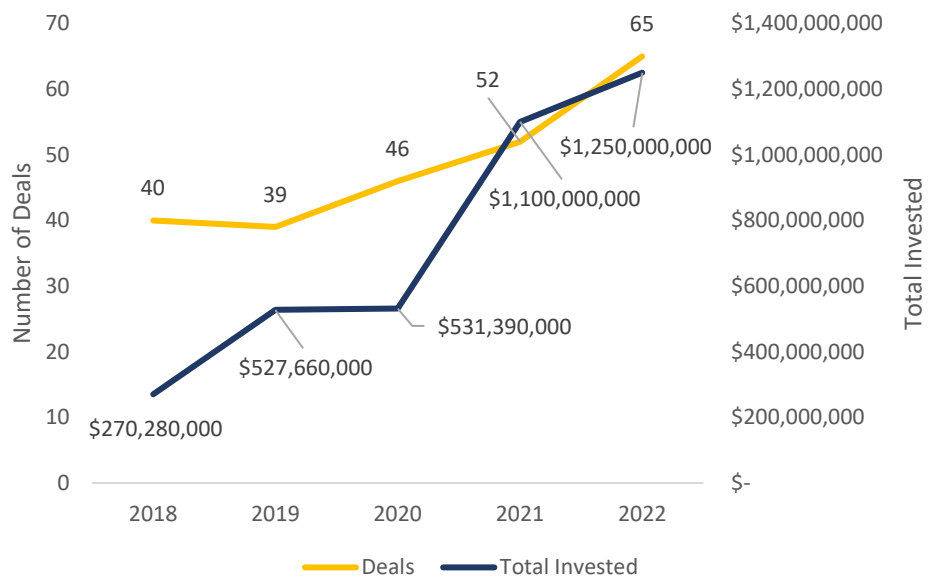level: 13.65

trend: ⬌

top 5 average: 17.5

What it is:

Regional concentration of venture capital deals, normalized for population. The location quotient measures a region's performance relative to the nation. 1.0 means the region and the nation are equally concentrated, anything above 1.0 indicates the region has a higher concentration than the nation. This metric measures venture capital deal count concentration (as opposed to value).
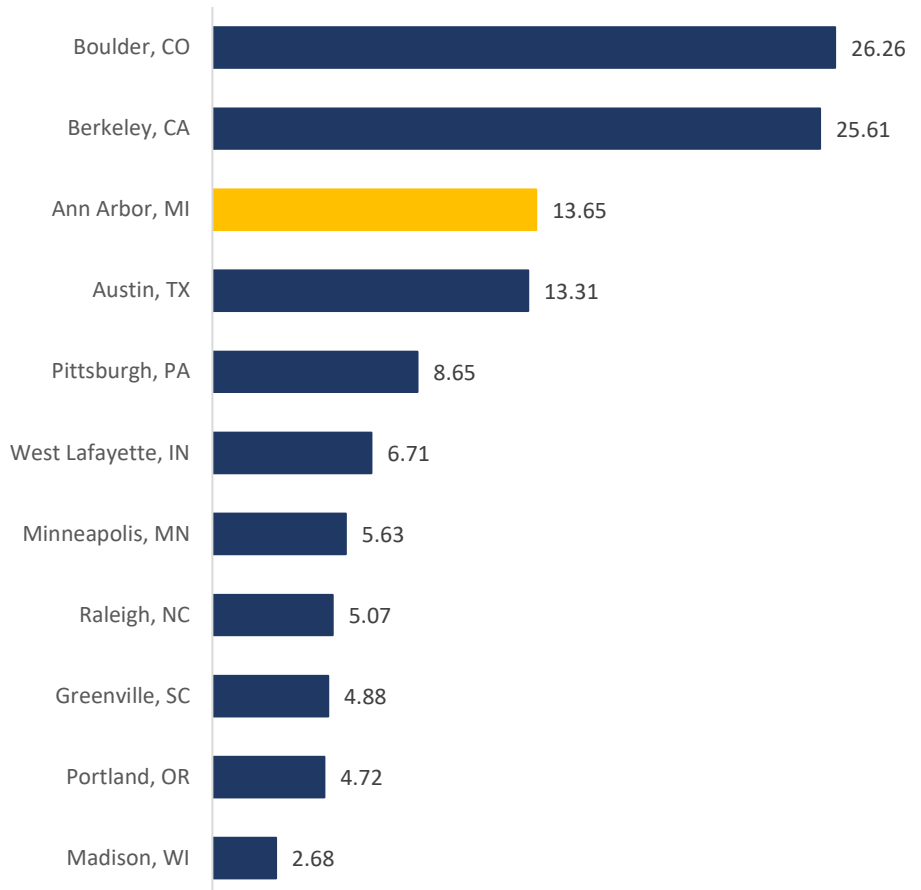
Why it matters:

High levels of venture capital activity indicate areas of innovation. Venture capital is important for the growth of startups as venture investors tolerate more risk than conventional investors and lending institutions. Regions like Silicon Valley, New York City, and Boston often get more national attention for large venture capital activity, but smaller regions often have higher than average levels of activity when normalized for population.

The City of Ann Arbor ranks third in this metric, with VC activity at nearly 14 times the national average level.

5-Year Trend: Ann Arbor VC Deals
2018-2022

Deals values: 40 (2018), 39 (2019), 46 (2020), 52 (2021), 65 (2022)

Total Invested values: $270,280,000 (2018), $527,660,000 (2019), $531,390,000 (2020), $1,100,000,000 (2021), $1,250,000,000 (2022)

Legend: Deals, Total Invested

Deal Concentration
Normalized by Population, 2022

Region	Value
Boulder, CO	26.26
Berkeley, CA	25.61
Ann Arbor, MI	13.65
Austin, TX	13.31
Pittsburgh, PA	8.65
West Lafayette, IN	6.71
Minneapolis, MN	5.63
Raleigh, NC	5.07
Greenville, SC	4.88
Portland, OR	4.72
Madison, WI	2.68

Housing Affordability

Rank: 5th Lowest of 11
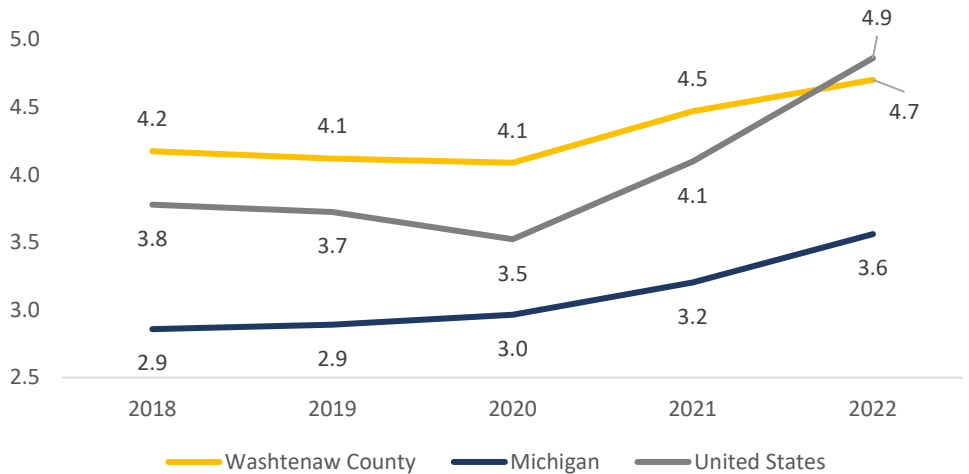
level: 4.7
trend*: ⬆
top 5 average: 4.3

What it is:

This ratio measures affordability by dividing the Home Value Index by the median income of the county. A ratio of 4.7 means that median home values are 4.7 times the median income.
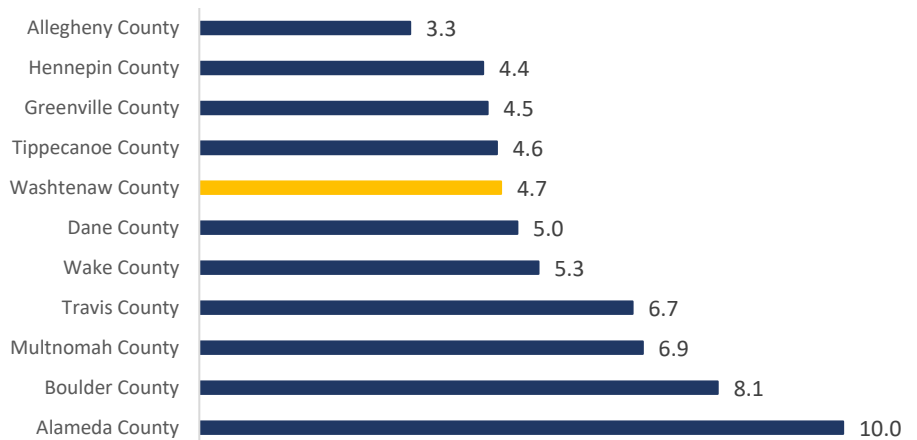
Why it matters:

Housing cost is a key factor influencing quality of life, which affects a region's ability to attract and retain talent. Housing affordability is also a measure of inequality and access to opportunity; if the ratio is high, it can indicate a highly segregated real estate market, and a high level of income inequality. Conversely, it is also an indicator of attractiveness of a housing market.

Washtenaw County's home prices have risen at a comparable rate to Michigan and the United States overall. However, within Michigan, Washtenaw County is the least affordable housing market of those analyzed.

*Due to the unavailability of sale price data, for the new wave, a modified methodology was used compared to past reports. All waves and all comparisons have been recalculated with the new methodology, a formula that uses home value index rather than home sale price. Past ranking are slightly changed due to this revisions.

Trend: Housing Affordability
2018-2022

Year	Washtenaw County	Michigan	United States
2018	4.2	2.9	3.8
2019	4.1	2.9	3.7
2020	4.1	3.0	3.5
2021	4.5	3.2	4.1
2022	4.7	3.6	4.9

Housing Affordability Ratio
2022

County	Ratio
Allegheny County	3.3
Hennepin County	4.4
Greenville County	4.5
Tippecanoe County	4.6
Washtenaw County	4.7
Dane County	5.0
Wake County	5.3
Travis County	6.7
Multnomah County	6.9
Boulder County	8.1
Alameda County	10.0

Michigan Housing Affordability Ratio
2022

County	Ratio
Wayne County	3.0
Macomb County	3.5
Oakland County	3.8
Livingston County	4.0
Kent County	4.3
Washtenaw County	4.7

Rental Affordability
Multi-Family and Office Space

Rank: 6th <small>Lowest of 11 – Multi-Family</small>

level: $1,498/month
trend: 🟢⬆
top 5 average: $1,344/month

Rank: 6th <small>Lowest of 11 – Office Space</small>

level: $27/SF
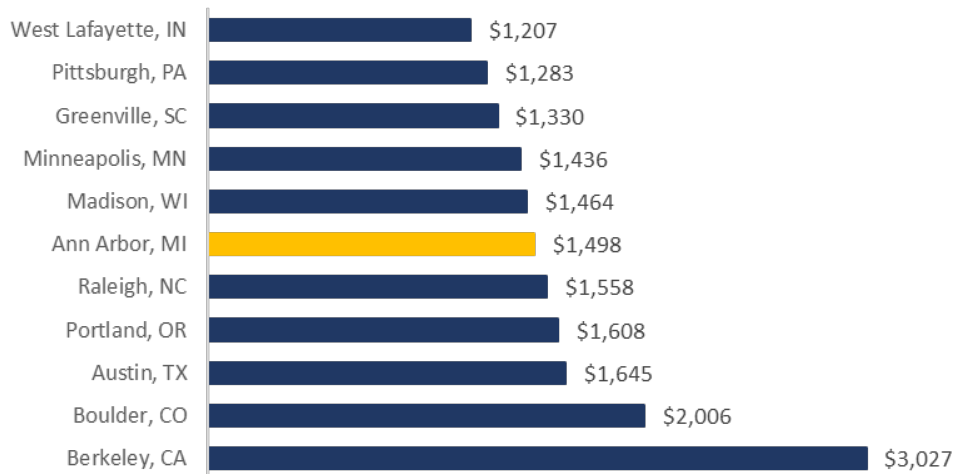trend: 🟡↔
top 5 average: $23/SF

Why it matters:

Housing cost is a key factor influencing quality of life, which affects a region's ability to attract and retain talent. Rental rates are important to younger employees and home ownership rates are declining, especially among millennials. Office space cost and availability business overhead and profitability.

The Ann Arbor area falls in the middle of the pack on both office space and residential rental affordability.

What it is:

The effective rental rate is defined as the rental rate averaged out over the term of the lease, including consideration of rent-free periods and incentives/concessions. This measure looks at residential rental in multi-family units. The price per square foot of office space is the asking price. Both measures are calculated by the National Association of Realtors for the second quarter of 2023.

Multi-Family Residential Effective Rent Per Unit
Q2 2023

City	Rent
West Lafayette, IN	$1,207
Pittsburgh, PA	$1,283
Greenville, SC	$1,330
Minneapolis, MN	$1,436
Madison, WI	$1,464
Ann Arbor, MI	$1,498
Raleigh, NC	$1,558
Portland, OR	$1,608
Austin, TX	$1,645
Boulder, CO	$2,006
Berkeley, CA	$3,027

Office Space Market Rent/SF
Q2 2023

City	Rent
West Lafayette, IN	$21
Pittsburgh, PA	$22
Greenville, SC	$22
Madison, WI	$23
Minneapolis, MN	$26
Ann Arbor, MI	$27
Raleigh, NC	$29
Portland, OR	$29
Boulder, CO	$34
Austin, TX	$44
Berkeley, CA	$58
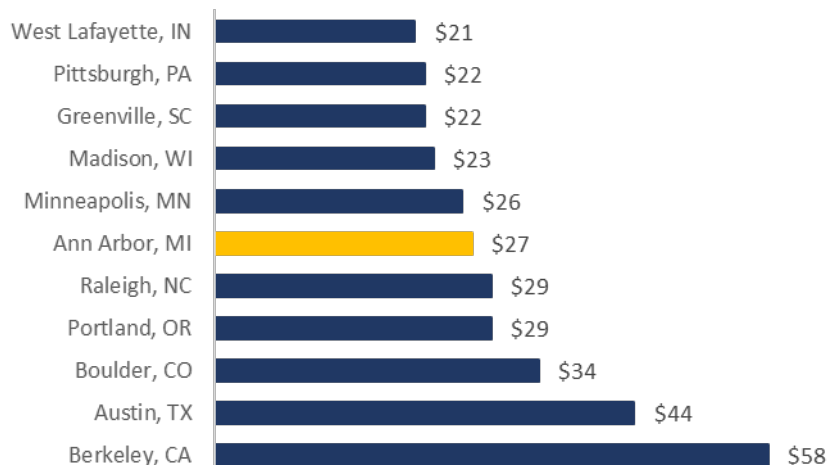
People Experiencing Poverty
Percentage of the Population in Poverty and ALICE

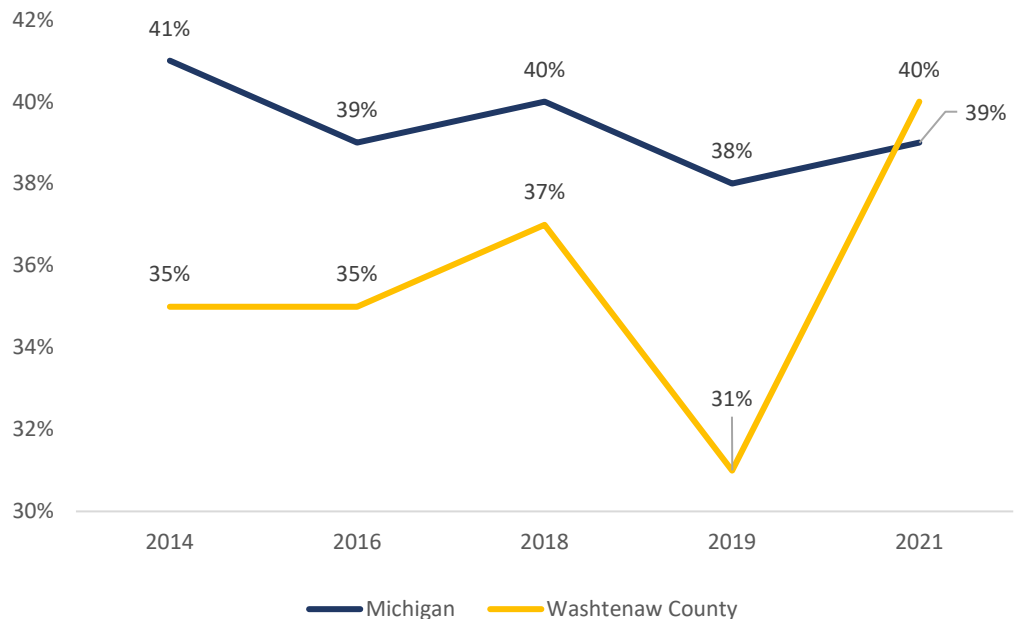Rank: 9th Lowest of 11

level: 40%

trend: ⬇

top 5 average: 34.4%

Why it matters:

A growing body of research shows strong links among inequality, poverty, and opportunity. For example, of the factors most cited as driving poverty in America —education, family structure, race, and more — the number-one factor by far is the growth in inequality. There is a significant negative relationship between living in an area with greater income inequality and a child's expected upward mobility. Therefore, it can be an illuminating metric to track the accessibility of economic opportunity. Many of the regions most associated with the tech boom are also the most unequal. Including ALICE percentages along with poverty highlights segments of the population that are often overlooked when it comes to policy solutions.
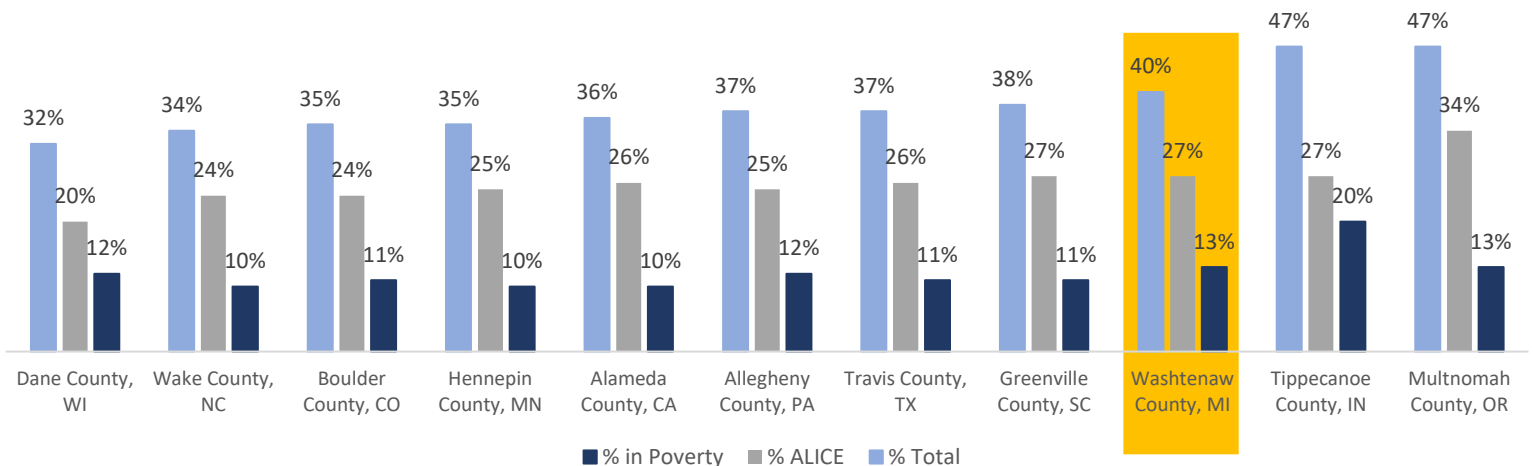
What it is:

ALICE is an acronym for Asset Limited, Income Constrained, Employed, and represents the growing number of families who are unable to afford the basics of housing, child care, food, transportation, health care, and technology. These workers often struggle to keep their own households from financial ruin, while keeping our local communities running. For the purpose of this analysis, individuals experiencing poverty and the ALICE population are combined to show the total population struggling to make ends meet.

Trend: Percent of Population Living in Poverty + ALICE Population
United Way, 2014-2021

Percent of Population Living in Poverty + ALICE Population
United Way, 2021

Driving Industry Employment

Rank: 10th Lowest of 11

level: 11.8%

trend: ⬇

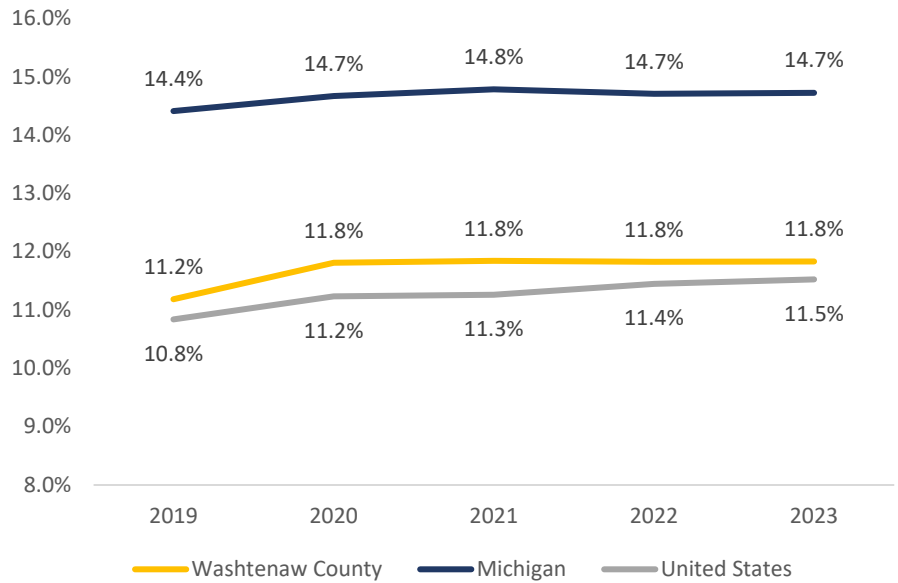top 5 average: 19.2%

What it is:

The percentage of the total employed population of a region employed in driving industries *(see page 23 for NAICS codes defining driving industries).*
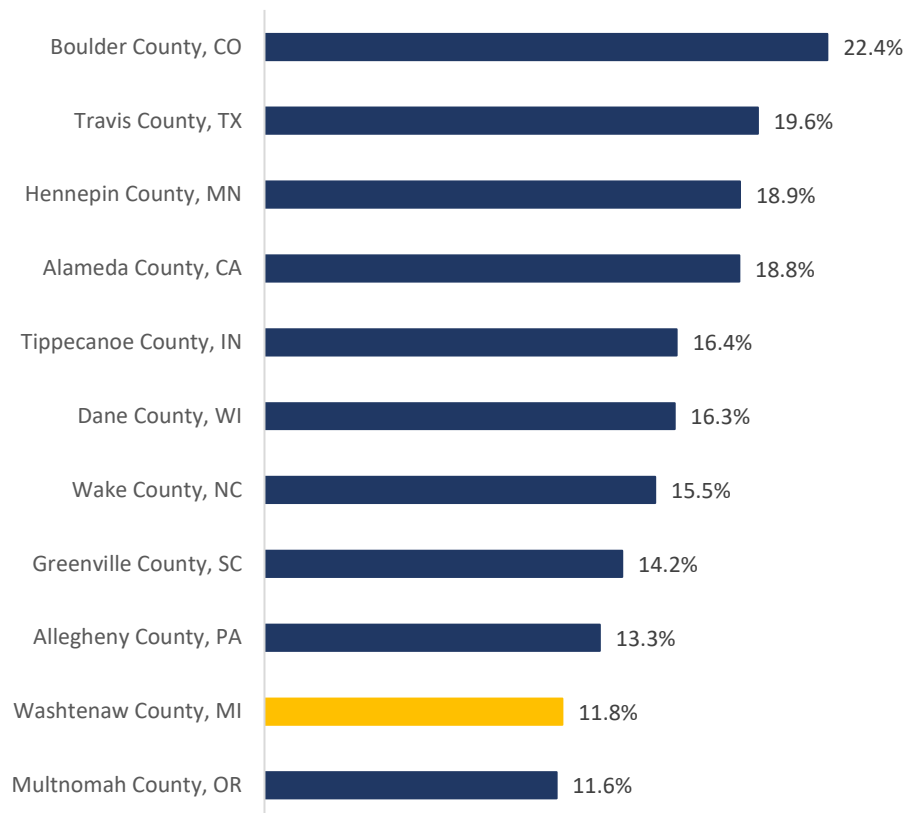
Why it matters:

Economies grow and prosper by their ability to make products and deliver services to people and businesses outside their geographic regions, i.e., by exporting. Driving industry jobs create and support jobs in other local industries and propel economic growth. Within this competitive set, driving industry employment is much higher than the national average, indicating a potential area for policy focus.

Washtenaw County performs lower than many of its competitor regions in driving industry employment, though higher than the national average.

Trend: Driving Industry Employment
2019-2023

Michigan: 14.4% (2019), 14.7% (2020), 14.8% (2021), 14.7% (2022), 14.7% (2023)
Washtenaw County: 11.2% (2019), 11.8% (2020), 11.8% (2021), 11.8% (2022), 11.8% (2023)
United States: 10.8% (2019), 11.2% (2020), 11.3% (2021), 11.4% (2022), 11.5% (2023)

Legend: Washtenaw County, Michigan, United States

Percent of Driving Industry Employment
2023

County	Percent
Boulder County, CO	22.4%
Travis County, TX	19.6%
Hennepin County, MN	18.9%
Alameda County, CA	18.8%
Tippecanoe County, IN	16.4%
Dane County, WI	16.3%
Wake County, NC	15.5%
Greenville County, SC	14.2%
Allegheny County, PA	13.3%
Washtenaw County, MI	11.8%
Multnomah County, OR	11.6%

Measuring the Labor Market
Unemployment and Labor Force Participation Rates

Rank: 8th Lowest of 11 – LFPR

level: 63.7%

trend: ⬆

top 5 average: 71.8%
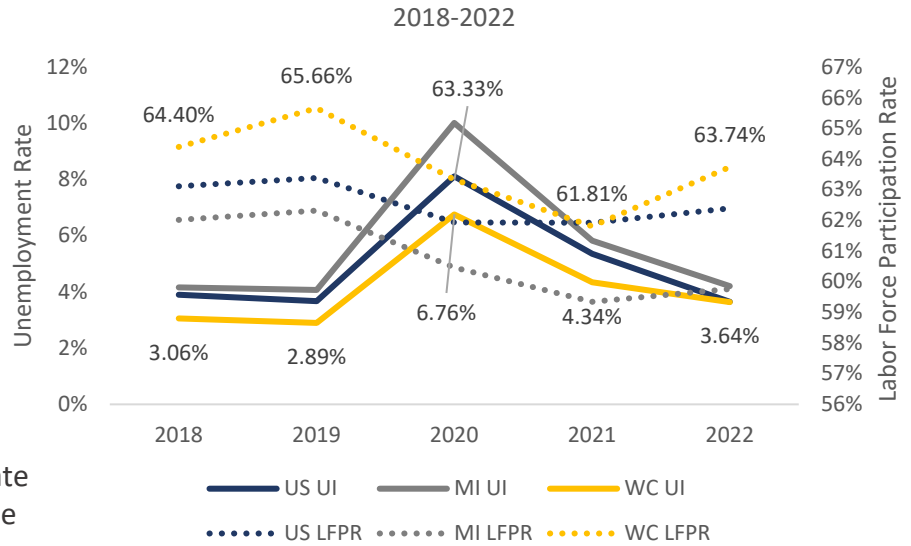
Rank: 9th Lowest of 11 – UI Rate

level: 3.6%

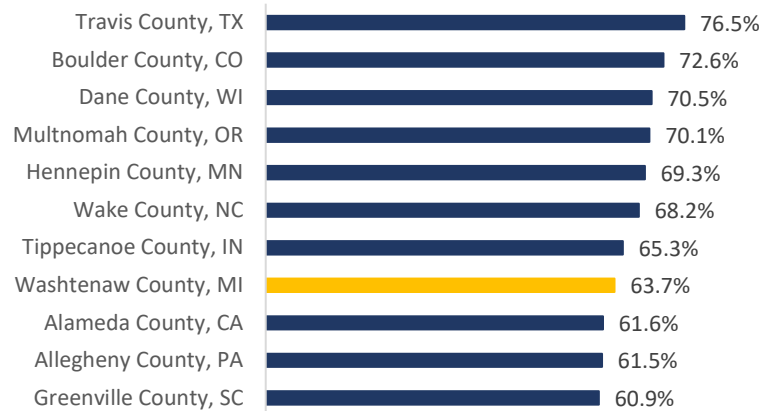trend: ⬅➡

top 5 average: 2.8%

What it is: The national unemployment rate reflects the number of unemployed people as a percentage of the labor force. The labor force participation rate measures the number of people in the labor force as a percentage of the civilian non-institutionalized population 16-years-old and over. In other words, it is the percentage of the population either working or actively seeking work. The picture of the labor market is incomplete without both metrics.

Why it matters: The COVID-19 pandemic has had a strong impact on the unemployment rate, as many people lost jobs to the economic recession, the temporary closure of businesses, or left work due to the threat of illness. From 2020 to 2021, employment rates across the United States improved again as the economy re-opened and economic recovery began. Unemployment rates continue to be higher than they were pre-COVID-19.
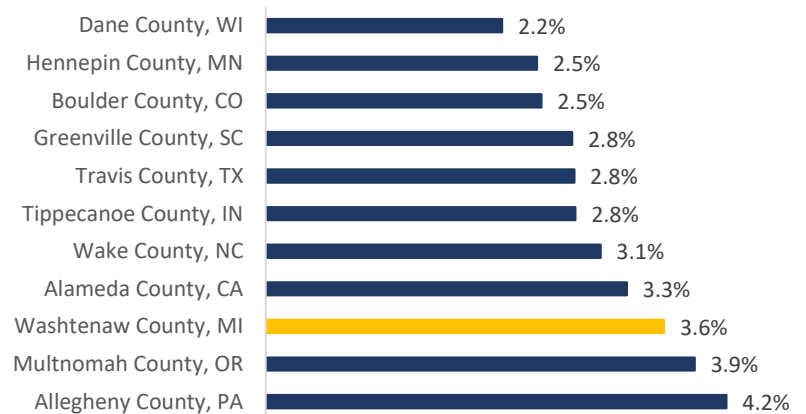
Labor Force Participation and Unemployment Rates
2018-2022

Legend:
- US UI
- MI UI
- WC UI
- US LFPR
- MI LFPR
- WC LFPR

Annotations on chart: 64.40%, 65.66%, 63.33%, 63.74%, 61.81%, 6.76%, 4.34%, 3.64%, 3.06%, 2.89%

Labor Force Participation Rate
2022

County	Rate
Travis County, TX	76.5%
Boulder County, CO	72.6%
Dane County, WI	70.5%
Multnomah County, OR	70.1%
Hennepin County, MN	69.3%
Wake County, NC	68.2%
Tippecanoe County, IN	65.3%
Washtenaw County, MI	63.7%
Alameda County, CA	61.6%
Allegheny County, PA	61.5%
Greenville County, SC	60.9%

Unemployment Rate
2022

County	Rate
Dane County, WI	2.2%
Hennepin County, MN	2.5%
Boulder County, CO	2.5%
Greenville County, SC	2.8%
Travis County, TX	2.8%
Tippecanoe County, IN	2.8%
Wake County, NC	3.1%
Alameda County, CA	3.3%
Washtenaw County, MI	3.6%
Multnomah County, OR	3.9%
Allegheny County, PA	4.2%

Benchmarking the Gaps

Untangling the Aggregate

Benchmarking the Gaps
Do the Economic Benefits of the Region Apply to All?

"The concept and practice of equity matters more than ever for economic development work."[1]

Aggregate statistics are sometimes useful, but they tend to hide disparities in opportunity. Many of our competitor regions were chosen because they appear in the same "best-of" lists as Ann Arbor. Minneapolis, for example, often shows up as one of the best, most affordable cities to live in America. However, it is evident given the events of the summer of 2020 (and long before), that these benefits do not apply to all. In this section, we attempt to tease out some of the racial differences in the metrics presented and let the data speak for itself. Not every metric is feasibly split, so we focus specifically on poverty rate, housing affordability, and unemployment.

This subject is delicate. To highlight the gaps present, we focused specifically on the differences between Black or African American residents and White residents of the chosen regions (using the terminology of the Census).
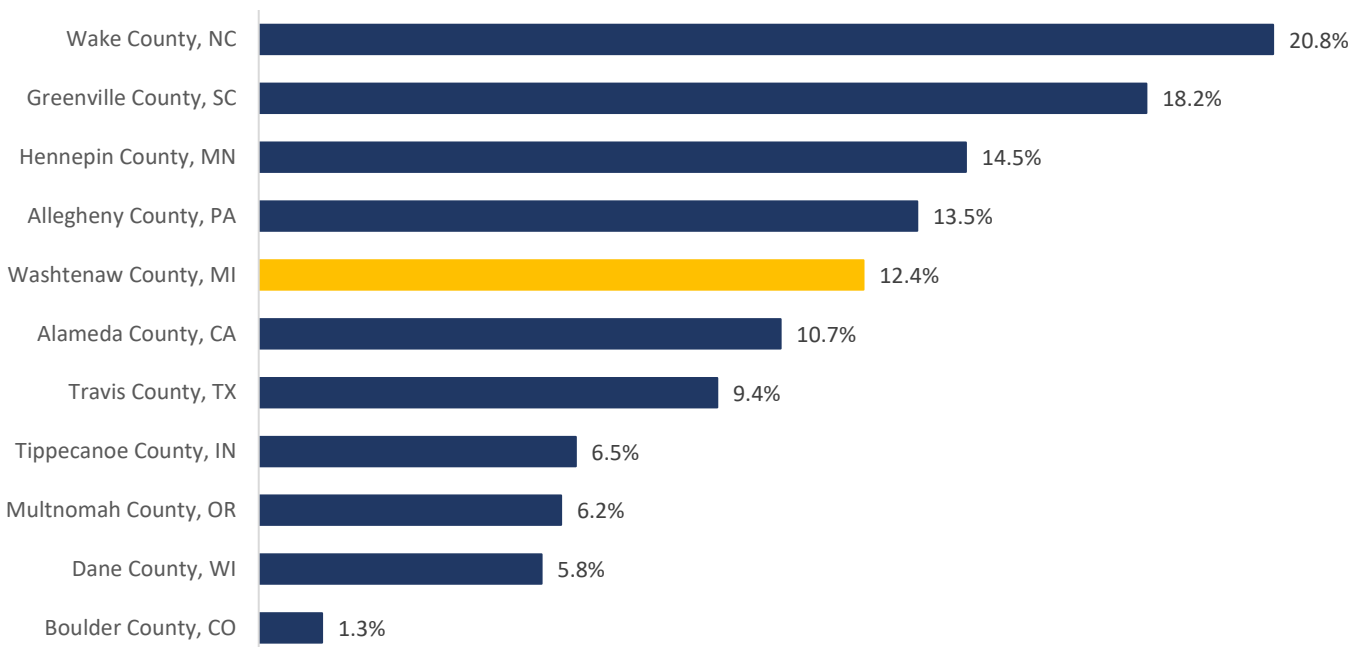
Instead of benchmarking the raw levels of each metric, we benchmark the gaps between those two groups. The wider the gap, the lower the ranking.

"You can't manage what you don't measure."[1]

First things first — setting the context in terms of population. In 2022, 58.9 percent of the population in the United States identified as White alone (not Hispanic or Latino) while only 13.6 percent identified as Black or African American alone. Looking at the competitive set, some regions are more diverse, on average, than others.

Total Population: Percent Black or African American
2022

County	Percent
Wake County, NC	20.8%
Greenville County, SC	18.2%
Hennepin County, MN	14.5%
Allegheny County, PA	13.5%
Washtenaw County, MI	12.4%
Alameda County, CA	10.7%
Travis County, TX	9.4%
Tippecanoe County, IN	6.5%
Multnomah County, OR	6.2%
Dane County, WI	5.8%
Boulder County, CO	1.3%

[1]Karp, R., & Sutherland-Brown, A. (2020). Data, People and Place. *Economic Development Journal, 19*(3), 5-11.

Gap: People Experiencing Poverty

Rank: 5th Lowest of 10
level: 11.5%
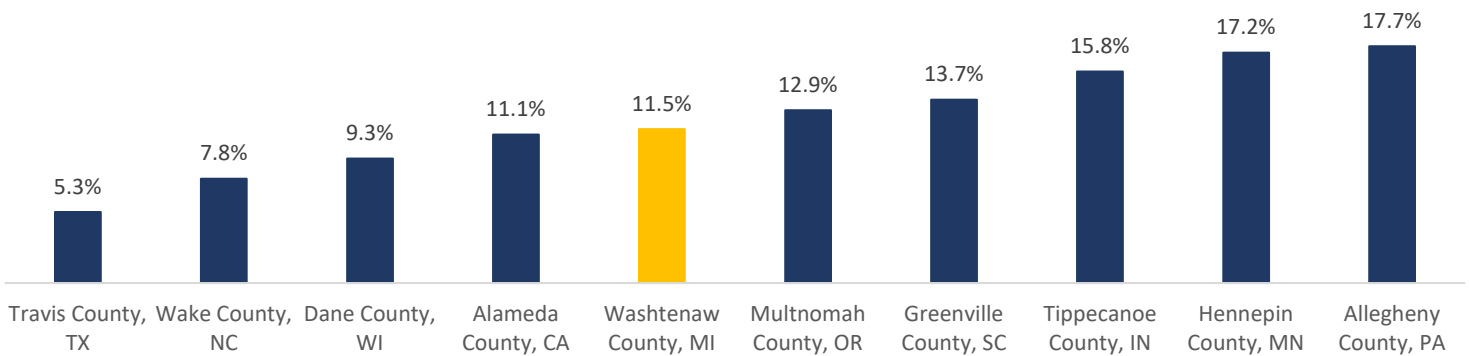top 5 average: 9.0%

Why it matters:

In each region, a larger percentage of the Black or African American population experiences poverty than the White population. Any policy aimed at reducing poverty should consider the systemic drivers of this gap. Notably, Boulder County, CO is absent from this analysis due to lack of data (only 1.3 percent of the total population in Boulder County identifies as Black or African American).

What it is:

The difference between the percentage of the Black or African American population and the percentage of the White population in each county that lives at or below the poverty line. In every single county chosen, that difference is positive.

The percentage of Black or African American households in Washtenaw County experiencing poverty is 11.5 percent higher than White (Not Hispanic or Latino) households. This is a slight improvement from a gap of 11.6 percent in the previous period. Washtenaw County now ranks 5th instead of 4th in this metric due to similar improvements in other regions included in this analysis.

In none of the competitive set is the result of the equation (Poverty Rate[Black] - Poverty Rate[White]) negative. The effects of poverty are clearly borne more by one group than another.
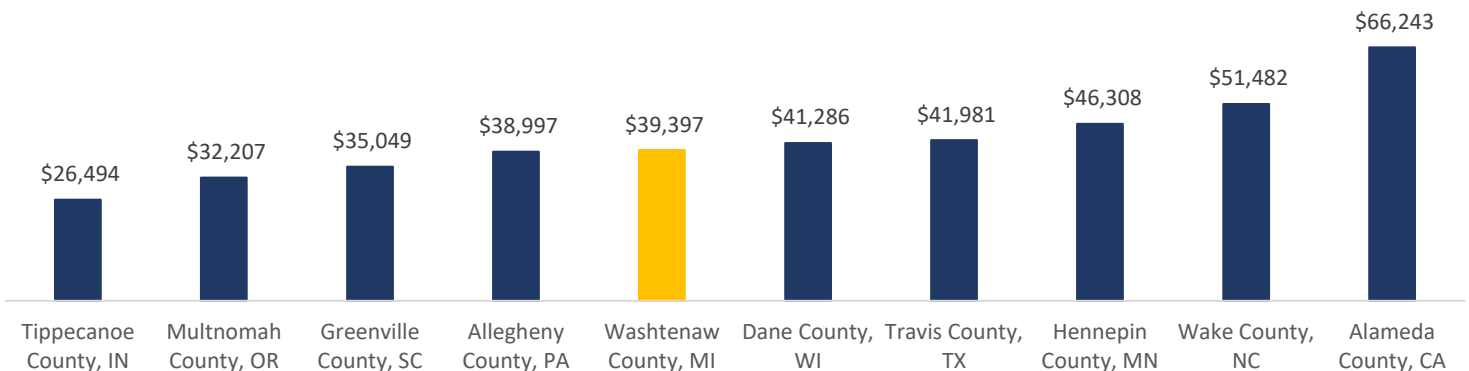
Gap in Poverty Level Between White (Not Hispanic and Latino) and Black or African American Households
2021

County	Value
Travis County, TX	5.3%
Wake County, NC	7.8%
Dane County, WI	9.3%
Alameda County, CA	11.1%
Washtenaw County, MI	11.5%
Multnomah County, OR	12.9%
Greenville County, SC	13.7%
Tippecanoe County, IN	15.8%
Hennepin County, MN	17.2%
Allegheny County, PA	17.7%

Gap in Median Income Between White (Not Hispanic and Latino) and Black or African American Householders
2021

County	Value
Tippecanoe County, IN	$26,494
Multnomah County, OR	$32,207
Greenville County, SC	$35,049
Allegheny County, PA	$38,997
Washtenaw County, MI	$39,397
Dane County, WI	$41,286
Travis County, TX	$41,981
Hennepin County, MN	$46,308
Wake County, NC	$51,482
Alameda County, CA	$66,243

Gap: Housing Affordability

Rank: 4th Lowest of 10

level: 3.8
top 5 average: 3.6

What it is:

The difference between the housing affordability ratio for the White population and the Black or African American population. This ratio measures affordability by dividing the median home value (which is the same for both groups) by the median income (which differs widely between groups).
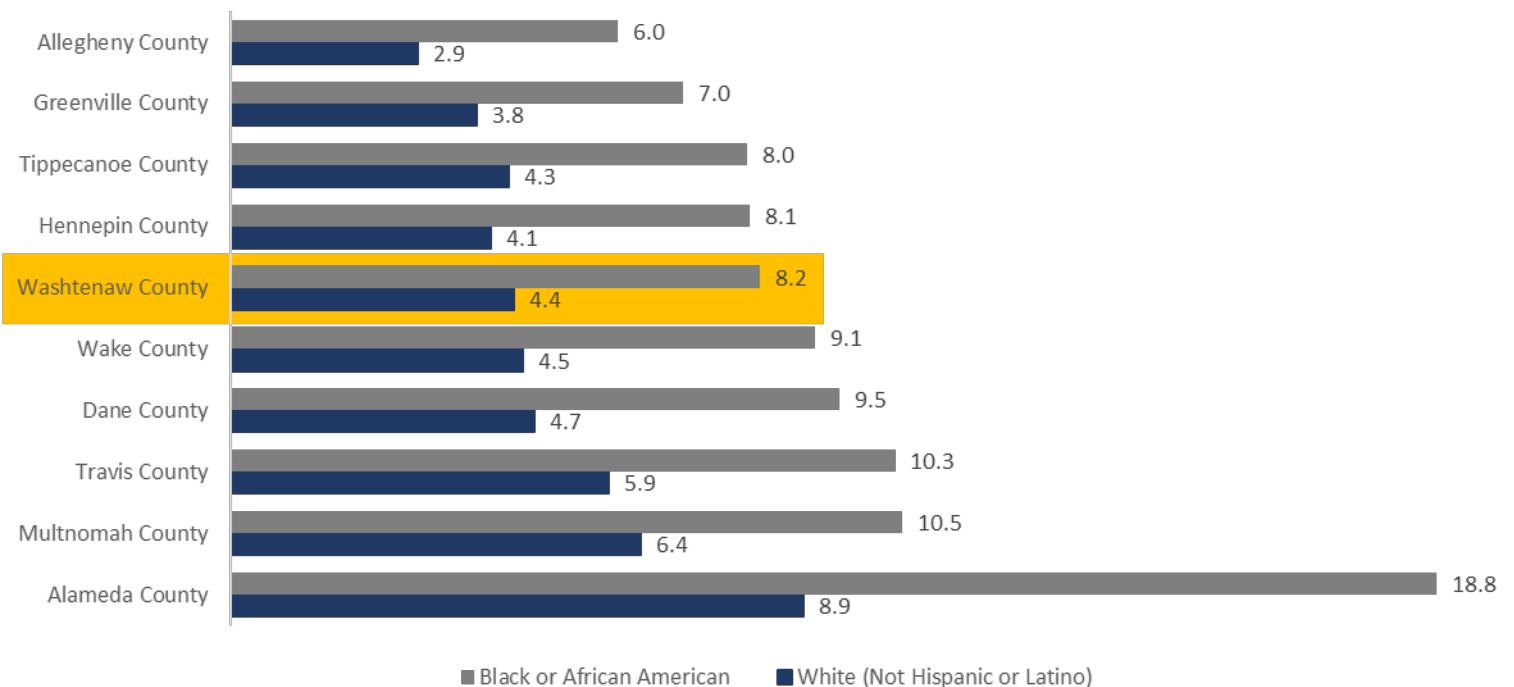
Why it matters:

Buying a home is one of the steppingstones toward building wealth. Poverty rate and housing affordability highlight some of the major generators of the racial wealth gap. The differences highlighted here illustrate a high level of income inequality across the board.

Gap in Housing Affordability Between White (Not Hispanic or Latino) and Black or African American Householders
2022

County	Value
Allegheny County	3.1
Greenville County	3.2
Tippecanoe County	3.7
Washtenaw County	3.8
Hennepin County	4.0
Multnomah County	4.1
Travis County	4.5
Wake County	4.5
Dane County	4.8
Alameda County	9.9

In every county in the competitive set, income inequality makes housing less affordable for the Black or African American population, regardless of home price. In Washtenaw County, home prices are 4.4 times the median income for the White (Not Hispanic or Latino) householders and 8.2 times the median income for the Black or African American householders.

Housing Affordability Ratio by Race
2022

County	Black or African American	White (Not Hispanic or Latino)
Allegheny County	6.0	2.9
Greenville County	7.0	3.8
Tippecanoe County	8.0	4.3
Hennepin County	8.1	4.1
Washtenaw County	8.2	4.4
Wake County	9.1	4.5
Dane County	9.5	4.7
Travis County	10.3	5.9
Multnomah County	10.5	6.4
Alameda County	18.8	8.9

■ Black or African American ■ White (Not Hispanic or Latino)

ANN ARBOR SPARK

Final Thoughts
Economic Vitality and Equality for All

The metrics analyzed in this report do not exist in isolation; they are interconnected and mutually influential.

Consider this scenario: an idea originates at the University of Michigan resulting from research and development funding, later entering the community through a venture-funded startup. The startup company performs well in its initial years, achieving rapid growth and fostering diversity in its workforce. Given the intricacy of its product or service, the company recruits employees from other regions who then grapple with a unique housing market upon relocation. Recruiting from outside the state presents challenges, necessitating the promotion of the region and its positive aspects. As the company gains prominence, local economic development recognizes its contributions to the ecosystem. Ongoing expansion leads to labor shortages, prompting a shift towards hiring both locally and remotely. The extent to which the community can effectively cater to the company's growth and enable its sustained success hinges on efforts to mitigate income disparities that hinder a segment of the local population from fully engaging in the burgeoning economy. This scenario demonstrates the importance and interconnection of the various metrics analyzed.

Before the pandemic, Washtenaw County began to attract more people from other states than it was losing. Despite rising housing costs, the Ann Arbor region remained competitive when compared to the selected competitive set of regions (though less affordable within Michigan). The area witnessed a consistent drop in unemployment and a concurrent increase in the labor force participation rate. Simultaneously, the University of Michigan continued substantial investments in research and development.

Benchmarking our region against others and understanding baseline metrics is imperative for continued economic vitality that benefits *everyone*. Some of the economic challenges exacerbated by the pandemic had preexisting roots, while others emerged anew.

"Continuous effort - not strength or intelligence - is the key to unlocking our potential."
- Winston Churchill

Appendices

Key Findings
Benchmarking Dashboard: 2023

Region (alpha order by city)	University R&D Expenditure Rank	Population Movement Rank	Share of Remote Jobs	Venture Capital Activity Rank	Housing Affordability Rank	% in Poverty and ALICE	Driving Industry Employment Rank	UI Rate Rank	LFP Rate Rank	Gap: % in Poverty	Gap: Housing Affordability
Ann Arbor, MI/Washtenaw County, MI	1st	3rd	3rd	3rd	5th	9th	10th	9th	8th	5th	4th
Austin, TX/Travis County, TX	8th	2nd	2nd	4th	8th	7th	2nd	5th	1st	1st	7th
Berkeley, CA/Alameda County, CA	7th	11th	4th	2nd	11th	5th	4th	8th	9th	4th	10th
West Lafayette, IN/Tippecanoe County, IN	9th	4th	12th	6th	4th	10th	5th	6th	7th	8th	3rd
Boulder, CO/Boulder County, CO	10th	5th	1st	1st	10th	3rd	1st	3rd	2nd	Not enough data	Not enough data
Greenville, SC/Greenville County, SC	13th	8th	11th	9th	3rd	8th	8th	4th	11th	7th	2nd
Madison, WI/Dane County, WI	2nd	6th	5th	11th	6th	1st	6th	1st	3rd	3rd	9th
Minneapolis, MN/Hennepin County, MN	6th	9th	7th	7th	2nd	4th	3rd	2nd	5th	9th	5th
Pittsburgh, PA/Allegheny County, PA	5th, 12th	10th	9th	5th	1st	6th	9th	11th	10th	10th	1st
Portland, OR/Multnomah County, OR	14th	7th	8th	10th	9th	11th	11th	10th	4th	6th	6th
Raleigh, NC/Wake County, NC	3rd, 4th, 11th	1st	6th	8th	7th	2nd	7th	7th	6th	2nd	8th

Methodology
How to Read this Report

In this report, we use a series of common measures to determine the strength of the Ann Arbor region in comparison to select competitor regions in the United States.

Each region and metric was chosen with input from community members, local CEOs, and a review of the existing benchmarking literature from local economic development agencies, think tanks, and academics. Depending on the metric, county data or city data may be used. Each metric is evaluated using the data available at the time of collection. Most often the data available is from no later than 2017. It is dependent upon the data source and whether the metric has been normalized for population.

Regions:

Ann Arbor, MI / Washtenaw County, MI
The Ann Arbor region, home of the University of Michigan and Eastern Michigan University, recognized for expertise in research and development, automotive and mobility innovation, and a growing technology sector.

Berkeley CA / Alameda County, CA
Home of UC Berkeley, nationally recognized as a center for innovation (producing a large portion of Silicon Valley founders) and has a high concentration of venture capital investment.

Pittsburgh, PA / Allegheny County, PA
Home of Carnegie Mellon and the University of Pittsburgh, a rising eastern innovation hub, and well-known specifically for mobility research.

Boulder, CO / Boulder County, CO
Home of CU Boulder, an established and nationally recognized startup ecosystem and venture capital landscape, and an historic R&D base originating from national laboratories.

Madison, WI / Dane County, WI
Home of the University of Wisconsin, a state capital known for its college town atmosphere, proactive science park development, and frequent Ann Arbor comparison.

Greenville, SC / Greenville County, SC
An up-and-coming cluster of automotive and aerospace R&D and mobility technology, not far from Clemson University.

Minneapolis, MN / Hennepin County, MN
Home of the University of Minnesota, a Great Lakes neighbor with an innovation hub and active entrepreneurial ecosystem.

West Lafayette, IN / Tippecanoe County, IN
Home of Purdue University, a well recognized college town, and a state competitor for incentives and manufacturing talent.

Portland, OR / Multnomah County, OR
A vibrant city with an established entrepreneurial ecosystem, home to several high caliber educational institutions, and competes with Ann Arbor for lifestyle rankings.

Austin, TX / Travis County, TX
A common anecdotal comparison, Austin is home to the University of Texas and also a dynamic and internationally recognized entrepreneurial hub of startups and venture capital activity, as well as the capital of Texas.

Raleigh, NC / Wake County, NC
The Raleigh/Durham region in North Carolina is a nationally recognized innovation nucleus on the east coast that includes the seminal Research Triangle Park, with multiple research universities and competitive incentives.

Methodology continued

Metrics:

University R&D Expenditures
Measured using the National Science Foundation rankings by total R&D expenditures and expenditures by discipline/industry.

Venture Capital Activity
Measured using a location quotient analysis, which normalizes the number of venture capital deals by population. The quotient represents the level of venture capital activity as a multiplier of the national average. A region with a venture capital quotient of 1.0 has a level of activity for its population equivalent to the national average; a region with a quotient of 2.0 is twice as concentrated as the U.S. average.

Population Movement
Measured using the U.S. Census Flowsmapper. These are period estimates that measure where people lived when surveyed (current residence) and where they lived one year prior (residence one year ago). The data are collected continuously over a five-year period. The flow estimates resemble the annual number of movers between counties for a five-year period.

Share of Remote Jobs
The percentage of the jobs in a metropolitan statistical area that can be performed at home, based on research from the University of Chicago Booth School of Business. According to this research, 37% of U.S. jobs can plausibly be performed at home (accounting for 46% of all wages).

Remote Work
Index of 9 community characteristics that contribute to community readiness for remote work. Measure shown is Z-score indicating readiness relative to national average. Positive value indicates better readiness situation than average. Methodology developed by National Association of Realtors.

Housing Affordability
Measured using a ratio of median income to median home value. The higher the ratio, the less likely someone earning the median income can afford a house.

Real Estate Affordability – Multi-Family Residential and Office Space
Effective rent per unit for multi-family is avg rent over the time of lease accounting for concessions. Office space price per square foot is based on asking prices. All as reported by the National Association of Realtors Commercial Metro Market Report

Percent Living in Poverty and under ALICE Threshold
The percentage of the population in each county that lives at or below the poverty line or within the asset-limited-income-constrained-employed group (ALICE) outlined by United Way. This group contains households that earn above the Federal Poverty Level, but not enough to afford a bare-bones household budget.

Driving Industry Employment
SPARK defines driving industries as those represented by NAICS codes in exporting industries with economic multipliers. In other words, a job in a driving industry will support (multiply) jobs in other industries by selling goods and services outside our home region.

Measuring the Labor Market
Measured using both the unemployment rate and the labor force participation rate.

Each page represents a single metric or a family of metrics.
Each page also contains a quick reference box spotlighting the Ann Arbor region's performance:

The Ann Arbor region's rank among the chosen competitor regions, with #1 being top performance and #15 being worst performance in the category. Some metrics do not include data for all regions, so the lowest rank may change accordingly.

Rank: 9th of 11
level: 17.1%
trend: ⬌
top 5 average: 21.8%

The Ann Arbor region's level of performance for the most recent year.

One-year trend for the Ann Arbor region:

⬆ Positive   ⬇ Negative   ⬌ No Change

The average performance of the top five regions for this metric.

Sources

Raw Population
Source: U.S. Census data.census.gov, most recent data is population estimates, July 1, 2022 (V2022)
Notes: Technically, Austin TX has population in 3 counties in Texas, but the bulk of its population is located in Travis County.

University R&D Expenditure
Source: National Science Foundation, most recent data is 2021

Venture Capital Activity
Sources: Brookings, Pitchbook, U.S. Census (for population), author's calculations, most recent data was VC 2020 and population 2022
Notes:
Location quotient of venture capital deals calculated using the following equation:
$$LQ = (e_i / e) / (E_i / E)$$
Where

e_i = # of local deals
e = local population
E_i = # of national deals
E = national population

Population Movement
Source: U.S. Census Flows Mapper, 2016-2020

Notes: Net migration is the inbound migration to the reference county from the second county minus the outbound migration from the reference county to the second county. If net migration is negative, then the reference county is losing people to the second county. If net migration is positive, then the reference county is gaining people from the second county.

MI population change overall 2019-2020,
https://www.census.gov/quickfacts/MI

Housing Affordability
Sources: Zillow (2022), U.S. Census data.census.gov (2021)

Real Estate Affordability
Source: National Association of Realtors Commercial Metro Market Report

Share of Remote Jobs
Sources: data comes directly from the University of Chicago Booth School of Business, Becker Friedman Institute for Economics white paper by Jonathan Dingel and Brent Neiman. This score was first reported in the 2020 report and is re-reported here and remains the same.

Remote Work – Community Readiness
Sources: National Association of Realtors Methodology, U.S. Census and FCC for data, 2019 data. Index is a compilation of the following characteristics reported as a z-score relative to U.S. overall rate:
1. % households with a computer or laptop
2. % households with internet broadband access
3. % population with three or more providers
4. % workers who worked at home
5. % area that is urban
6. population growth from 2014 to 2019
7. % in information; finance and insurance; real estate, rental, and leasing; and professional, scientific, management, administrative and waste services,
8. median value of property to median household income
9. % with a mortgage > 30% of income

Work From Home Employment Source: American Community Survey

Poverty Level and ALICE
Sources: U.S. Census data.census.gov, United for ALICE National Overview statistics, most recent ALICE data is for 2018 for all counties except Washtenaw which was only available for 2019. ALICE data summed with 2018 poverty. Poverty gap between White/Black in gap analysis uses 2019 poverty information

Driving Industry Employment
Sources: Lightcast/QCEW, most recent data is 2023
NAICS codes used for Driving Industries:
55	Management of Companies and Enterprises
323	Printing and Related Support Activities
325	Chemical Manufacturing
326	Plastics and Rubber Products Manufacturing
332	Fabricated Metal Product Manufacturing
333	Machinery Manufacturing
339	Miscellaneous Manufacturing
484	Truck Transportation
513	Publishing Industries
517	Telecommunications
518	Data Processing, Hosting, and Related Services
519	Other Information Services
3341	Computer and Peripheral Equipment Manufacturing
3361	Motor Vehicle Manufacturing
54133	Engineering Services
54138	Testing Laboratories
54151	Computer Systems Design and Related Services
54161	Management and Consulting Services
54171	R&D in the Physical, Engineering, and Life Sciences

Measuring the Labor Market
Sources: U.S. Census data.census.gov (2022), and Bureau of Labor Statistics (2022)

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