



Benchmarking the Ann Arbor Region — 2017

an economic competitiveness
assessment

Ann Arbor SPARK
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SPARK
@nn arbor usa

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Introduction

objectives and important takeaways

The goal of this report is to take the pulse of the Ann Arbor region in comparison to a specific competitive set of technology-driven communities and their economies. The purpose is not to market the region — Ann Arbor SPARK identifies, tracks, and compares numerous metrics that confirm and support our marketing message: the Ann Arbor region is a great place to live, work, and play. The purpose of this study is to compare ourselves to peer communities on more *foundational* metrics, and to ask ourselves where and how we can do better.

There are eight individual metrics in this report, and important findings for each are discussed in the conclusion. However, there are five central highlights and areas for further research:

Venture Capital Activity

Ann Arbor performs well on this metric, but why is Boulder doing so much better? What sets Boulder apart?

Population Movement

Washtenaw County is a popular destination for movers within Michigan, but has a negative differential for those moving state-to-state.

Housing Affordability

Washtenaw County is expensive for Michigan, but below the nation as a whole and in the middle of the competitive set.

Labor Market

Washtenaw County has enjoyed positive job growth since 2010 and a steady decline in unemployment, puzzlingly coupled with a decline in labor force participation. What can we learn from places like Madison and Minneapolis—what are they doing differently to engage a larger portion of their workforce?

Driving Industry Employment

Washtenaw County performs lower than many of its competitor regions in driving industry employment, though higher than the national average. What lessons can be learned from regions with high levels of driving industry employment?

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.

The 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.

Bloomington, IN / Monroe County, IN

- Home of the University of Indiana, Bloomington, 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.

*Recently designated by the federal government as a national automated vehicle proving ground

Methodology - continued

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.

The following regions are included (if data is available) to set context and benchmark the Ann Arbor Region against Southeast Michigan (Detroit metro area), Western Michigan, the state of Michigan, and national averages:

- **Detroit-Warren-Dearborn Metropolitan Statistical Area**
- **Grand Rapids-Wyoming Metropolitan Statistical Area**
- **Michigan**
- **United States**

The metrics:

University R&D Expenditures

- Measured using the National Science Foundation rankings by total R&D expenditures.

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 US average.

Housing Affordability

- Measured using a ratio of median income to median home sale price. The higher the ratio, the less likely someone earning the median income is able to afford a house.

Population Movement

- Measured using the US Census Flowmapper. 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.

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.

Income Inequality

- Measured using the Gini coefficient. This number, which ranges between 0 and 1 and is based on residents' net income, helps define the gap between the rich and the poor, with 0 representing perfect equality and 1 representing perfect inequality.

The Labor Market

- Measured using both the unemployment rate and the labor force participation rate.

*Recently designated by the federal government as a national automated vehicle proving ground

Methodology - continued

What Year?

Each metric is evaluated using the data available at the time of collection. Most often the data available is from no later than 2015 (and sometimes 2014). It is dependent upon the data source and whether the metric has been normalized for population (new Census population data for 2016 will not be available until later in 2017).

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 15

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



Holding

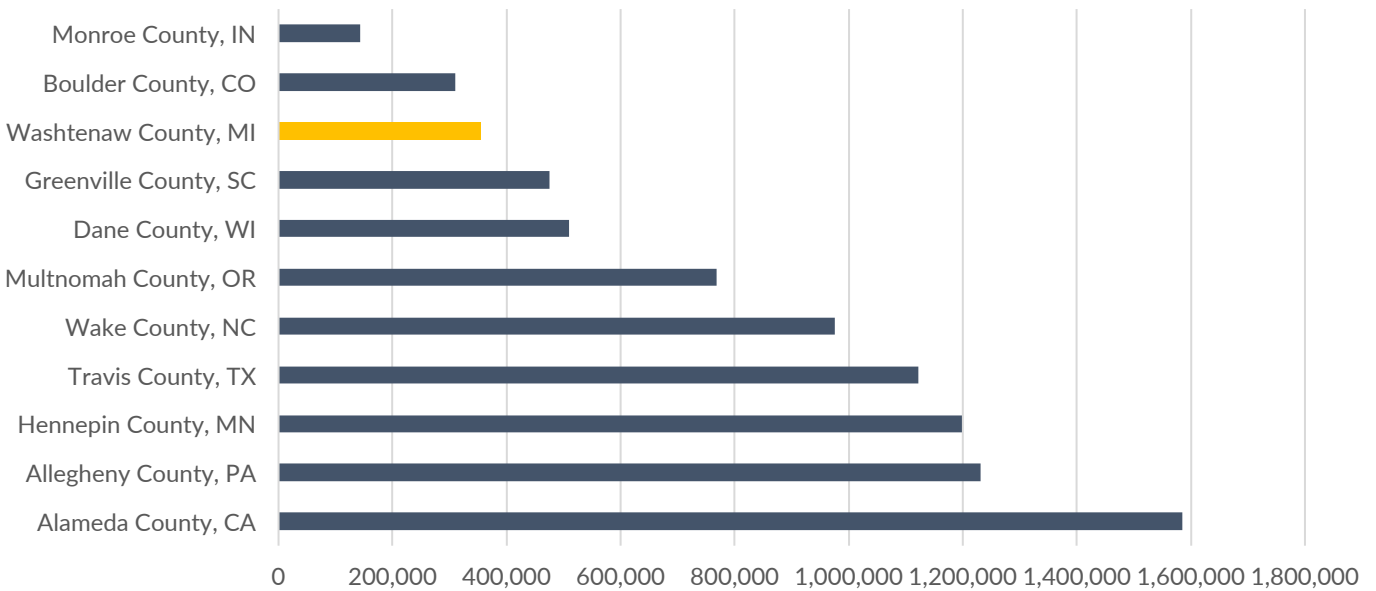
The average performance of the top five regions for this metric.

Population

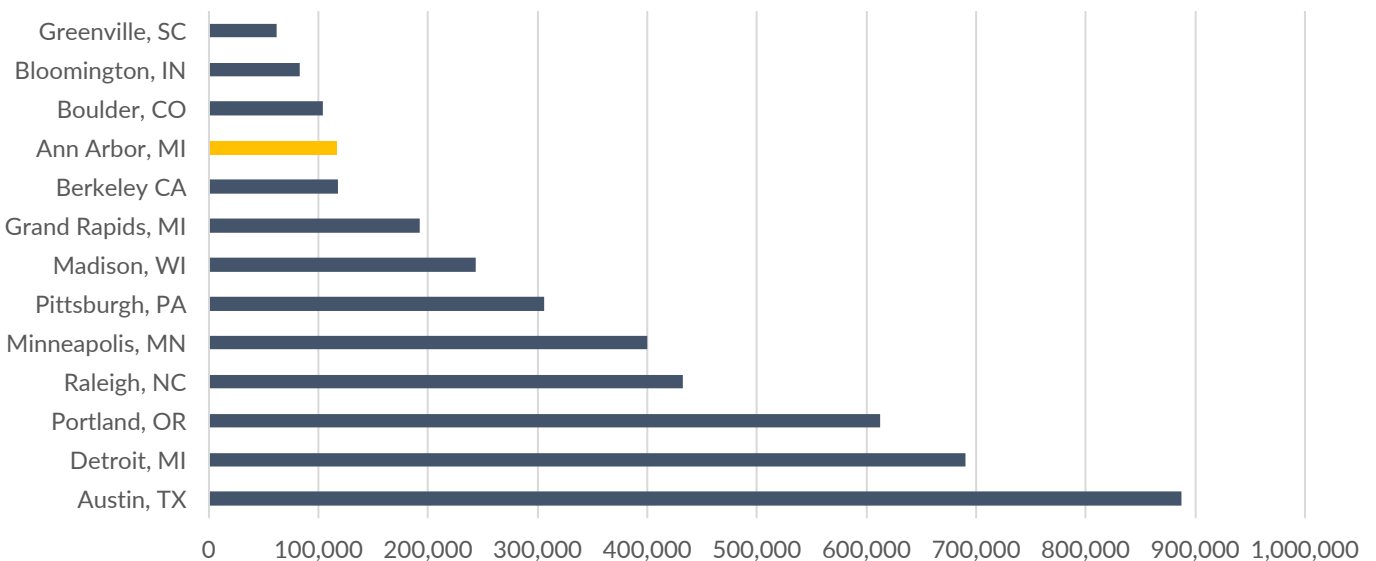
setting the stage: the importance of context

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 2015

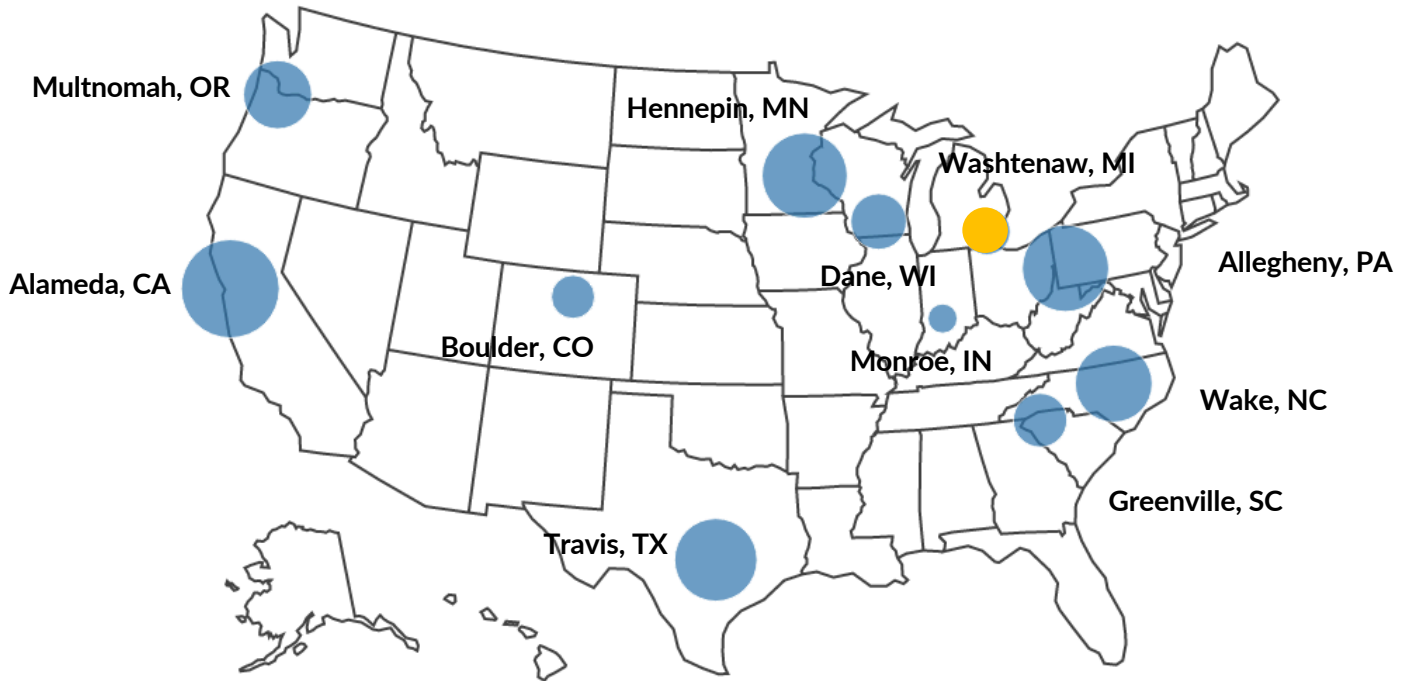


City Population 2015

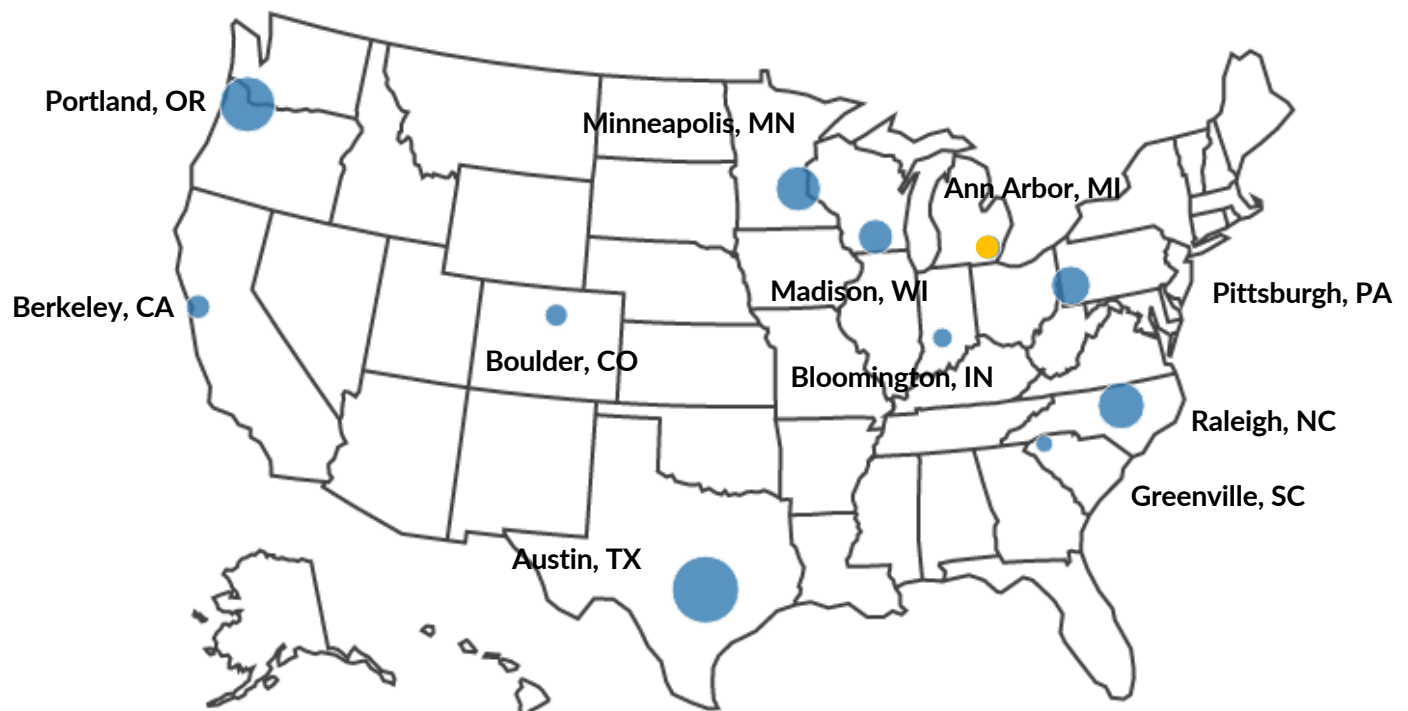


Population - continued

County Population 2015



City Population 2015



Key Findings

Ann Arbor regional dashboard

Metric	Ranking	1 Year Trend	Level	MI Level	US Level	Top Community
University R&D Expenditure	1 st _{of 14}	↑	\$1.4 billion	\$2.3 billion	\$68.8 billion	U of M/ Ann Arbor, MI
Venture Capital Activity	2 nd _{of 11}	↑	5.8	0.5	1.0	Boulder, CO
Housing Affordability	5 th _{of 11}	↓	3.5	2.8	3.8	Pittsburgh/ Allegheny County, PA
Population Movement	8 th _{of 11}	N/A	+9,889 net migration	-10,575 net migration	N/A	Austin/ Travis County, TX
Driving Industry Employment	9 th _{of 13}	↔	17.1%	17.9%	13.0%	Minneapolis /Hennepin County, MN
Income Inequality	9 th _{of 15}	↓	0.47	0.46	0.48	Raleigh/ Wake County, NC
<i>Labor Market</i>						
Unemployment	5 th _{of 15}	↑	3.5%	5.4%	5.3%	Boulder/ Boulder County, CO
Labor Force Participation Rate	10 th _{of 15}	↔	64.6%	61.0%	63.1%	Madison/ Dane County, WI

Metrics and Rankings

University R&D Expenditure

Rank: 1st of 14

level: \$1.4 billion

trend: ▲

top 5 average: \$990 million

What it is:

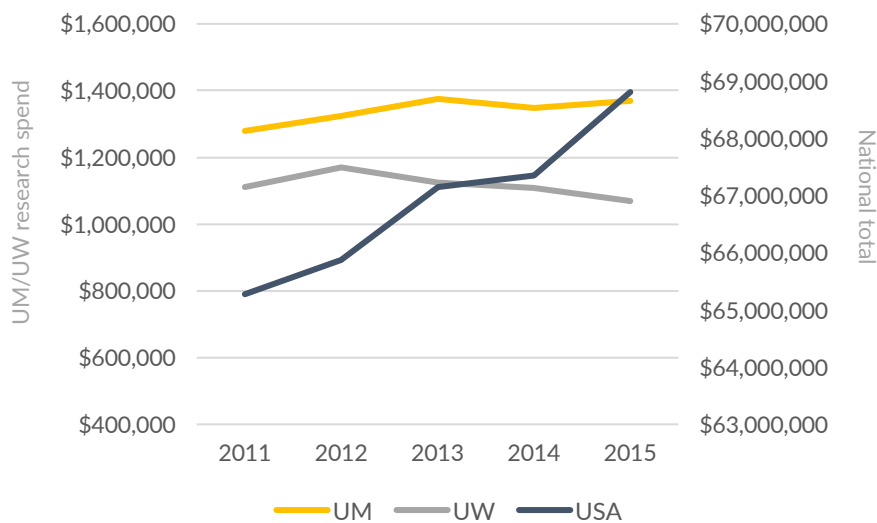
The amount each university spends on research and development. Much of this funding comes directly from the federal government and other grant sources, as well as university sources.

Why it matters:

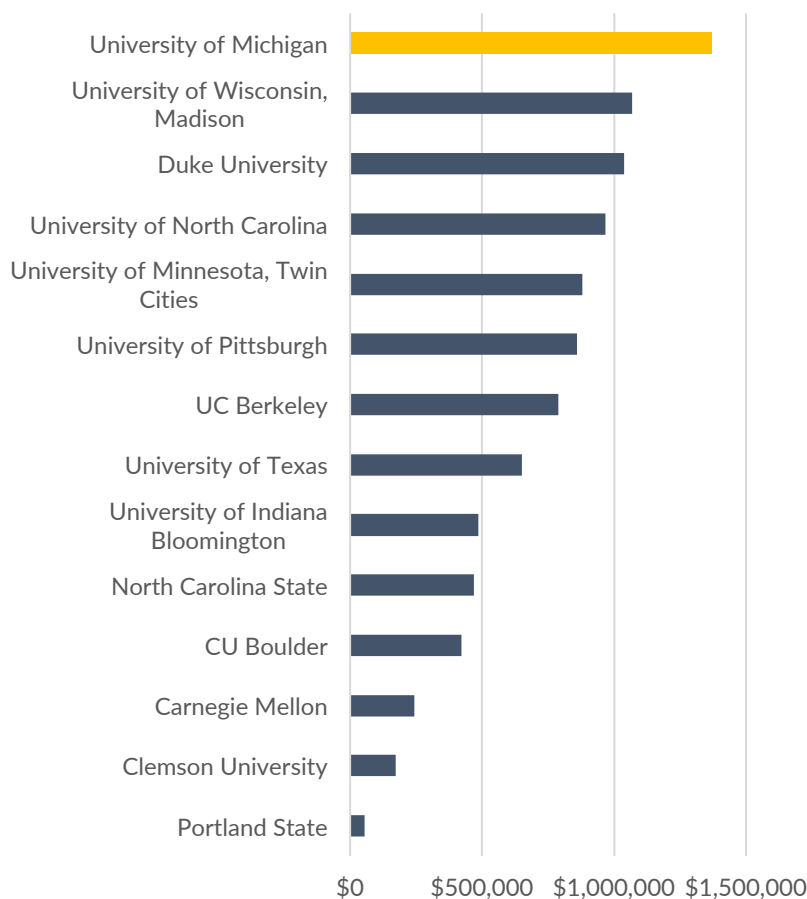
University R&D expenditures are important because they provide opportunities for risk taking, proving ideas, and add to the innovation pipeline. R&D funding helps to build a conduit of research for future innovations. Nationally, levels of university R&D spending have been growing in the last ten years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

The University of Michigan is ranked #1 against the competitive set in this metric with R&D expenditures at \$1.4 billion. Nationally, the University of Michigan is ranked #2 for research spending (behind Johns Hopkins).

5 Year Trend (millions)



R&D Spend 2015 (millions)



Venture Capital Activity

Rank: 2nd of 11

level: 5.8

trend: ↑

top 5 average: 6.0

What it is:

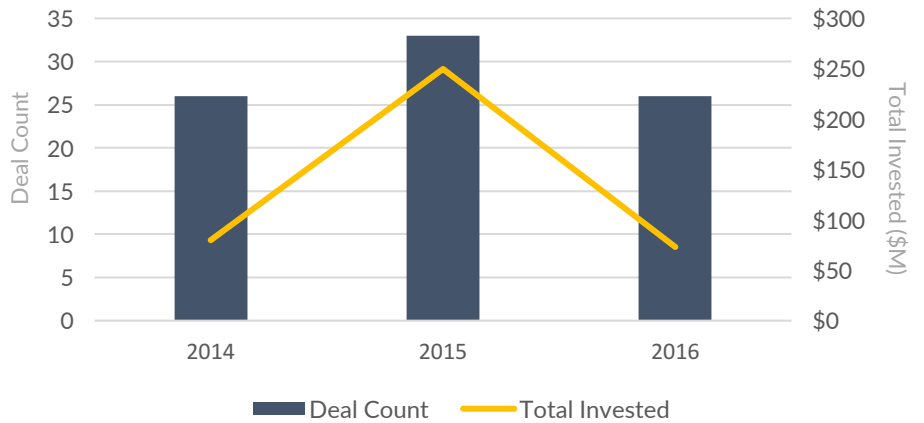
Regional concentration of venture capital deals, normalized for population. The location quotient measures a region's performance relative to the nation. 1.0 means the region and the nation are equally specialized, anything above 1.0 indicates the region has a higher concentration than the nation. This particular 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.

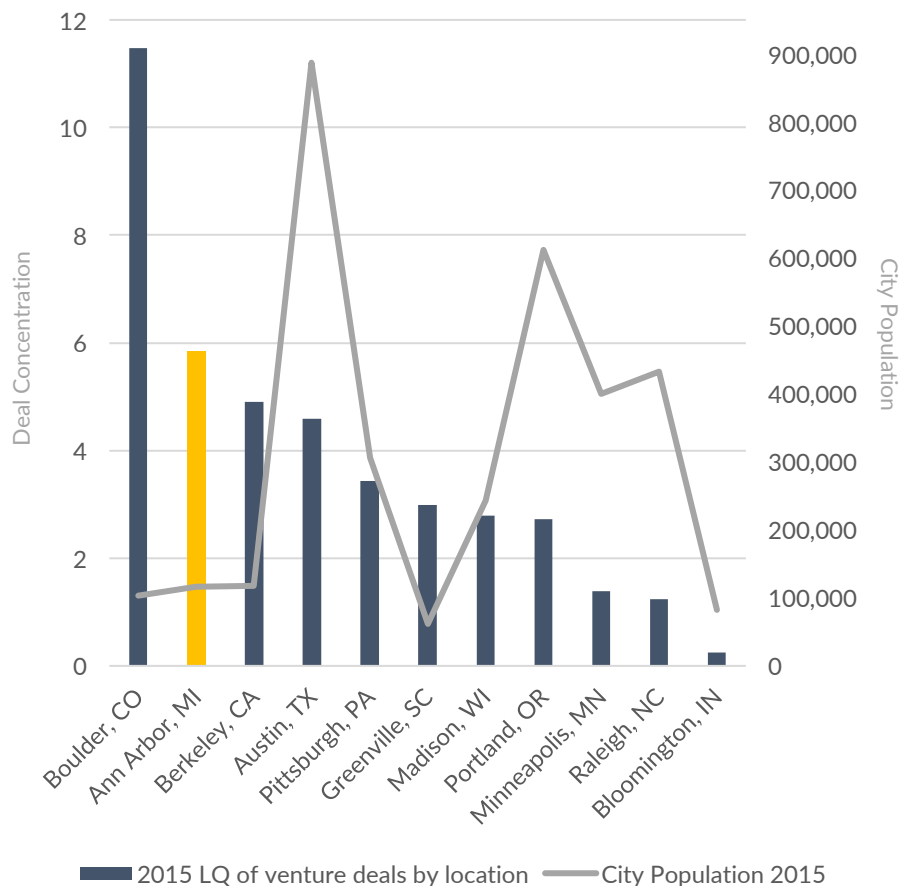
The city of Ann Arbor is second only to Boulder in this metric, with venture capital activity at 5.8 times the national levels.

3 Year Trend - Ann Arbor



NB: Venture Capital data exists for 2016, population data does not.

Deal Concentration Normalized for Population - 2015



Housing Affordability

Rank: 5th of 11

level: 3.5

trend: 

top 5 average: 3.1

What it is:

This ratio measures affordability by dividing the median home price by the median income. A ratio of 3.5 means that median home prices are 3.5 times the median income.

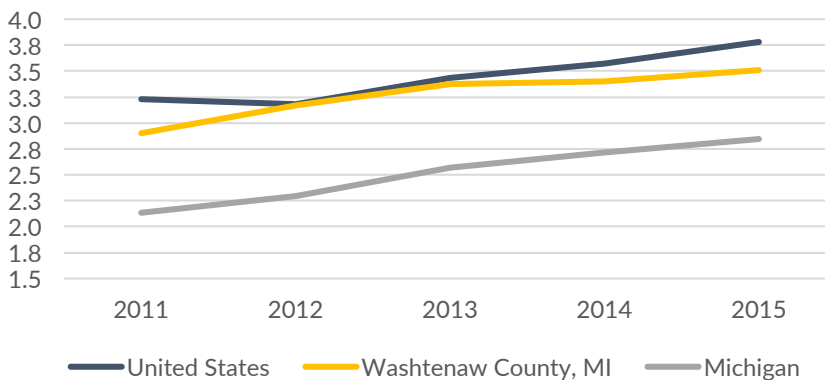
Why it matters:

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.

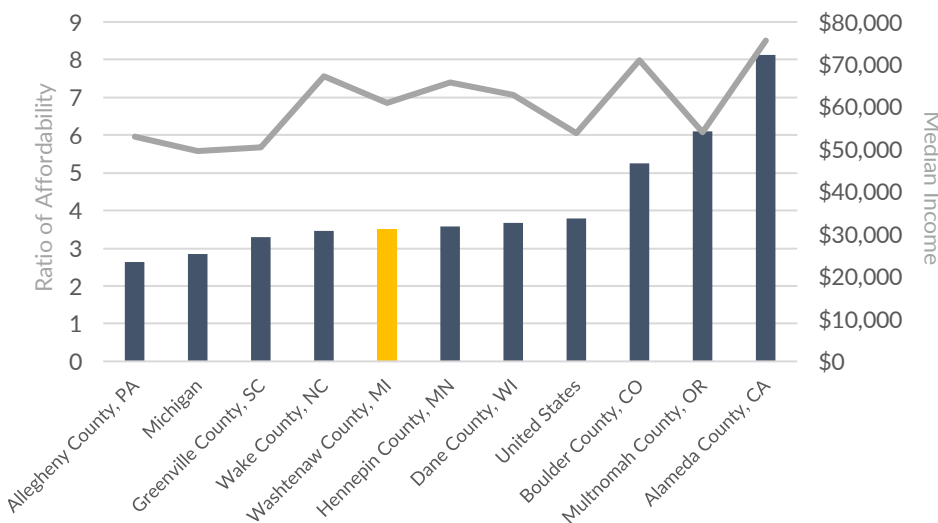
Washtenaw County's home prices have risen over the past five years, and median income has not kept pace. Among the competitive set, Washtenaw County performs well, but within Michigan, Washtenaw County is the least affordable housing market.

Not included in data:
 Detroit-Warren-Dearborn, MI Metro Area
 Grand Rapids-Wyoming, MI Metro Area
 Monroe County, Indiana
 Travis County, Texas

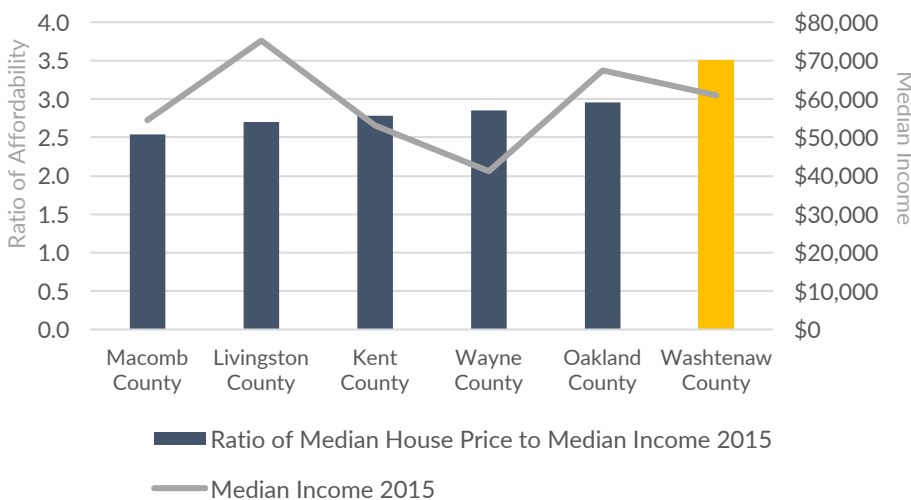
5 Year Trend - Housing Affordability



Housing Affordability - 2015



Michigan Housing Affordability 2015



Population Movement

Rank: 8th of 11

level: 9,889 (2.8% of pop.)

trend: *N/A* (5 year period)

top 5 average: 13,868 (<2% of pop.)

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. The flow estimates resemble the annual number of movers between counties for a five-year period.

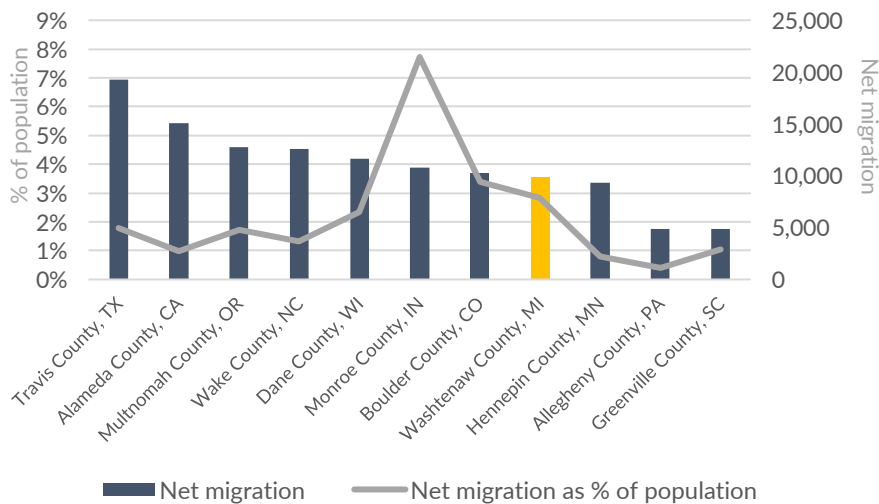
Why it matters:

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.

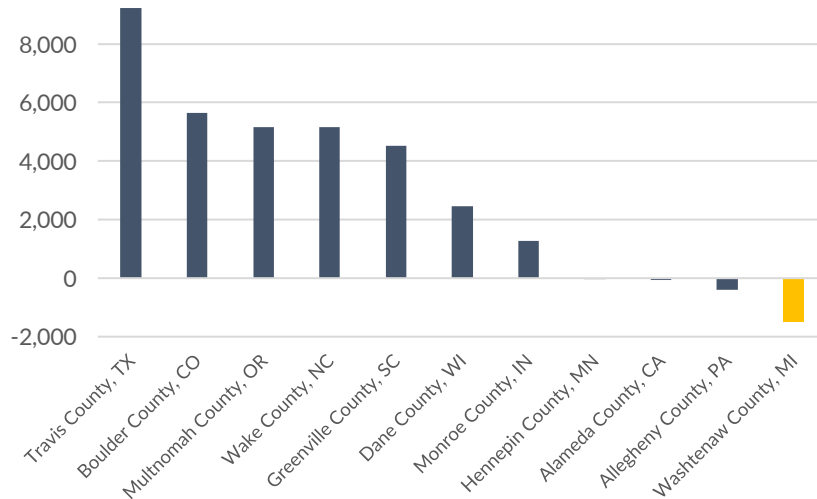
Washtenaw County benefits from significant intrastate movement (movers to a different county, same state). However, among the chosen competitor regions, it loses the most people to other states.

In terms of net migration, Washtenaw county sees a higher net inflow proportional to its population than most competitor regions.

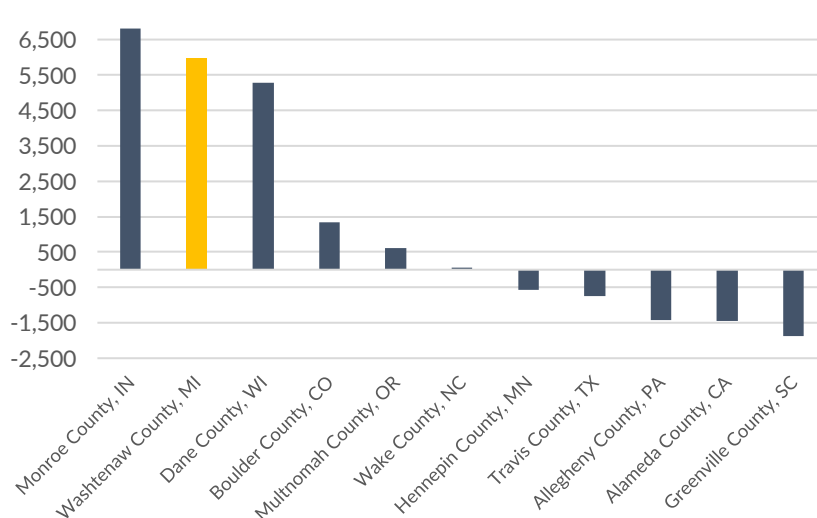
Net Migration 2010-2014



Interstate Differential 2010-2014



Intrastate Differential 2010-2014



Not included in data (county level only):
 Detroit-Warren-Dearborn, MI Metro Area
 Grand Rapids-Wyoming, MI Metro Area
 Michigan
 United States

Driving Industry Employment

Rank: 9th of 13

level: 17.1%

trend: ↔

top 5 average: 21.8%

What it is:

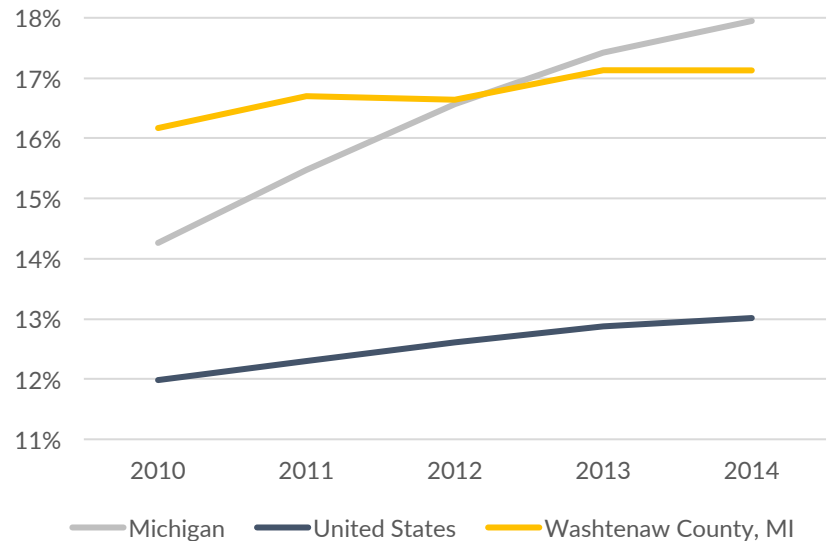
The percentage of the total employed population of a region employed in driving industries (see page 23 for NAICS codes defining driving industries).

Why it matters:

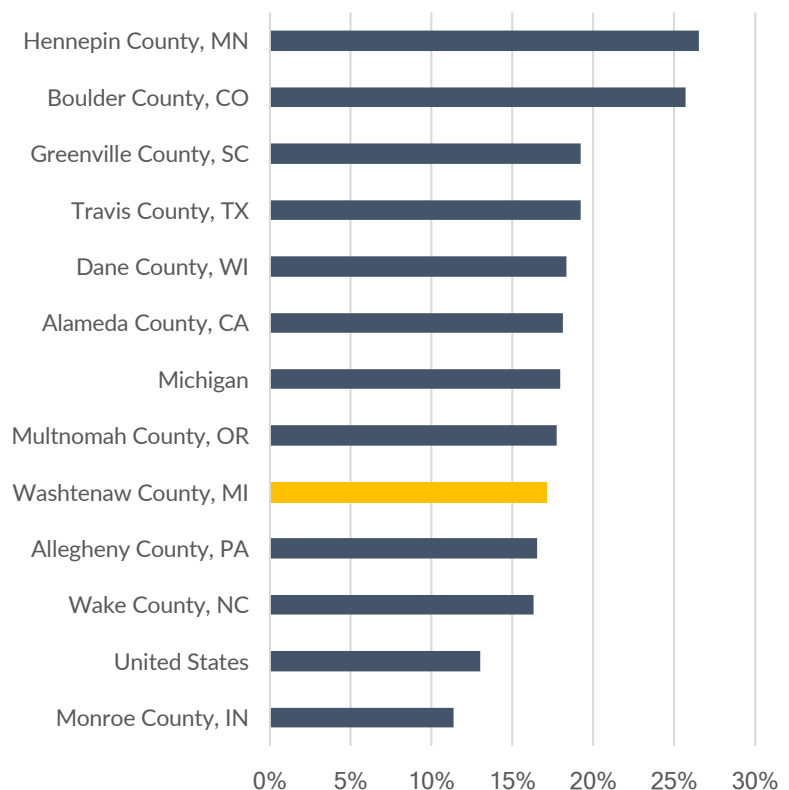
Economies grow and prosper by their ability to make products and deliver services to people and businesses outside their geographic regions, i.e., by exporting. Driving industry jobs create and support jobs in other local industries, and propel economic growth. It is clear that within this competitive 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.

5 Year Trend - Driving Industry Employment



% Driving Industry Employment 2014



Not included in data (county level only):
Grand Rapids-Wyoming, MI Metro Area
Detroit-Warren-Dearborn, MI Metro Area

Income Inequality

Rank: 9th of 15

level: 0.47

trend: ↓

top 5 average: 0.45

What it is:

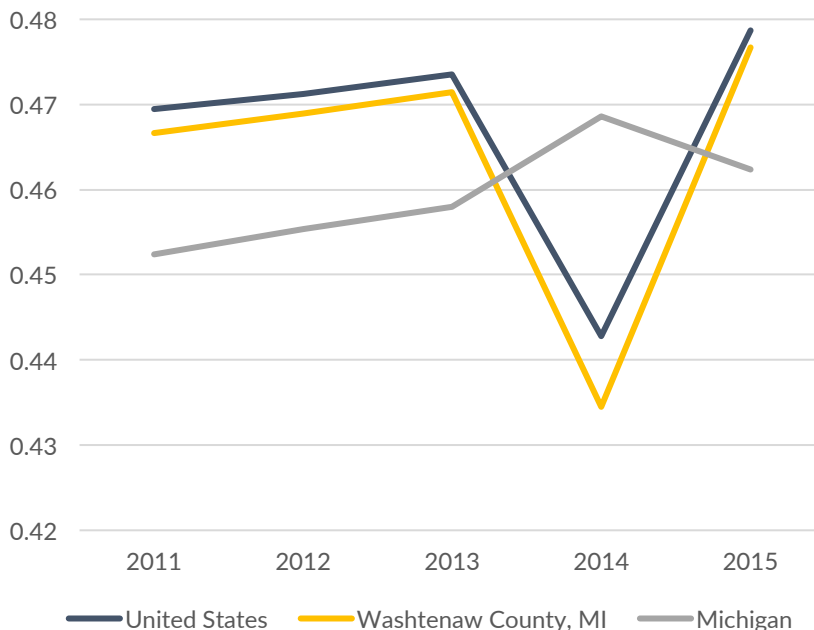
This number, which ranges between 0 and 1 and is based on residents' net income, helps define the gap between the rich and the poor, with 0 representing perfect equality (everyone has equal wealth) and 1 representing perfect inequality (only one person possesses all the wealth).

Why it matters:

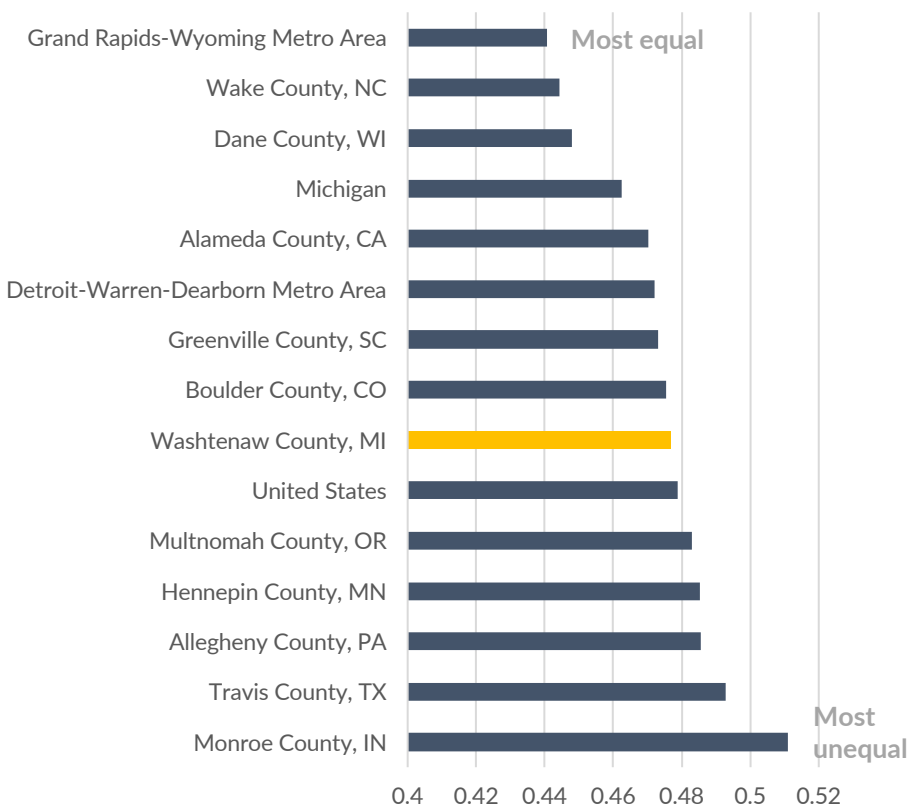
A growing body of research shows strong links among inequality, poverty, and opportunity. For example, of the factors most commonly cited as driving poverty in America—education, family structure, race, and more—the number-one factor by far is the growth in inequality. There is a significant negative 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 in a particular region.

Washtenaw County is following the trend of the nation and the globe in terms of income inequality. Though ranked 9th, it is solidly in the middle of a crowded pack. Inequality seems to be an issue for the entire competitive set.

5 Year Trend - Income Inequality



Income Inequality 2015



The Labor Market

unemployment rate and labor force participation rate

Rank: **10th** of 15 - Labor Force
5th of 15 - Unemployment
 level: 64.6%, 3.5%
 trend: Labor Force ↔ Unemployment ↑
 top 5 average: 71.3%, 4.5%

What it is:

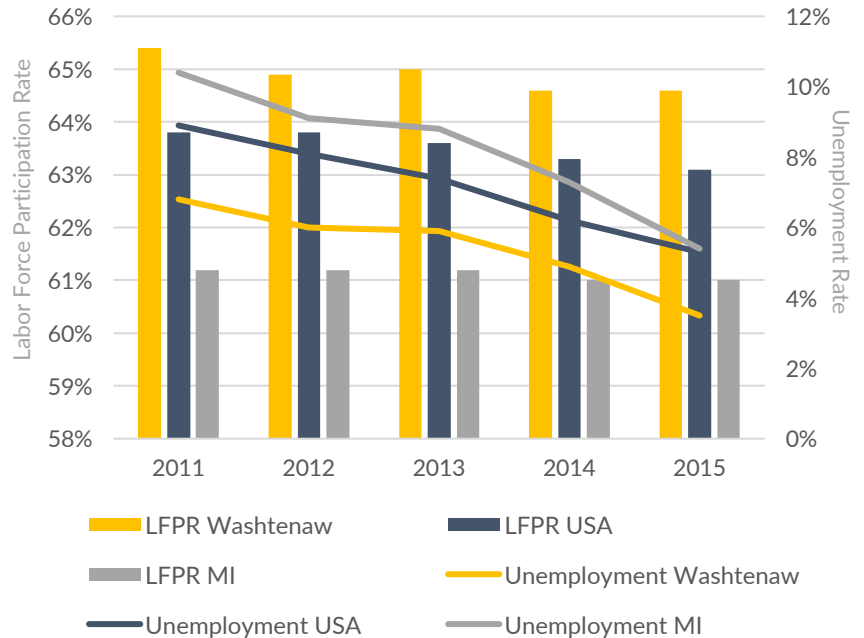
The national unemployment rate reflects the number of unemployed people as a percentage of the labor force. The labor force participation rate measures the number of people in the labor force as a percentage of the civilian noninstitutionalized population 16 years old and over. In other words, it is 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:

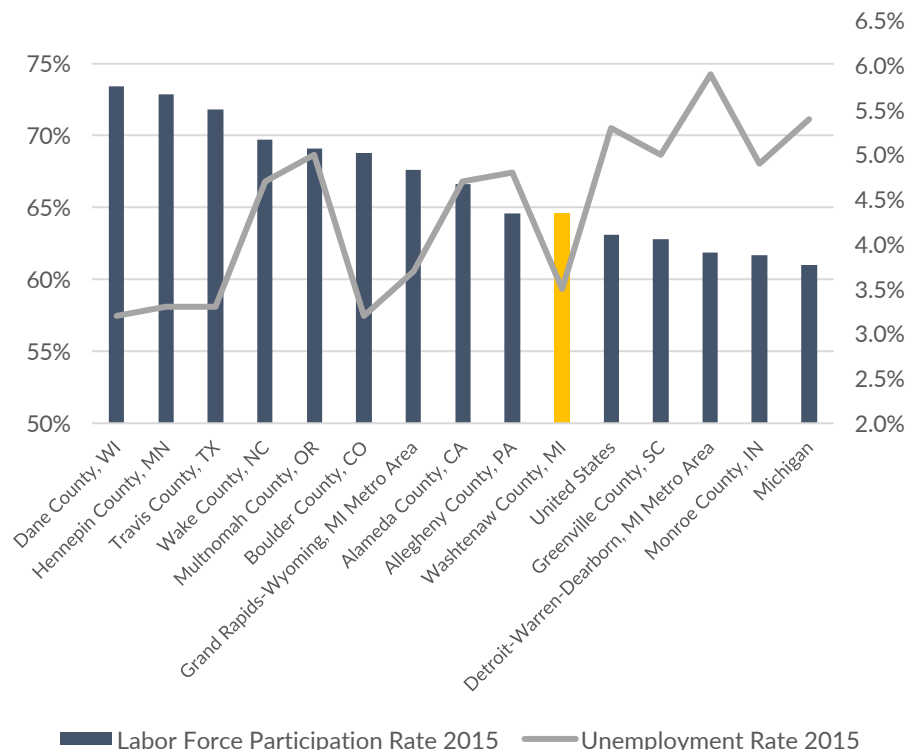
The unemployment rate has been steadily decreasing, as has the labor force participation rate (see page 23 for possible explanations). Usually these two statistics are inversely proportional, just as they are in some of the chosen competitor regions. Policy solutions can work to attract new labor and/or engage labor that has self-selected out of the workforce.

Washtenaw County has enjoyed positive job growth and a steady decline in unemployment, puzzlingly coupled with a decline in labor force participation.

5 Year Trend - Labor



Labor Force Participation and Unemployment - 2015



Key Findings

full dashboard

Region (alpha order by city)	University R&D Expenditure Rank	Venture Capital Activity Rank	Housing Affordability Rank	Population Movement Rank	Driving Industry Employment Rank	Income Inequality Rank	Unemployment Rate Rank	Labor Force Participation Rate Rank
Ann Arbor, MI/Washtenaw County, MI	1 st	2 nd	5 th	8 th	9 th	9 th	5 th	10 th
Austin, TX/Travis County, TX	8 th	4 th	NA (data unavailable)	1 st	4 th	14 th	4 th	3 rd
Berkeley, CA/Alameda County, CA	7 th	3 rd	11 th	2 nd	6 th	5 th	7 th	8 th
Bloomington, IN/Monroe County, IN	9 th	11 th	NA (data unavailable)	6 th	13 th	15 th	10 th	14 th
Boulder, CO/Boulder County, CO	11 th	1 st	9 th	7 th	2 nd	8 th	1 st	6 th
Greenville, SC/Greenville County, SC	13 th	6 th	3 rd	11 th	3 rd	7 th	11 th	12 th
Madison, WI/Dane County, WI	2 nd	7 th	7 th	5 th	5 th	3 rd	2 nd	1 st
Minneapolis, MN/Hennepin County, MN	5 th	9 th	6 th	9 th	1 st	12 th	3 rd	2 nd
Pittsburgh, PA/Allegheny County, PA	6 th , 12 th	5 th	1 st	10 th	10 th	13 th	9 th	9 th
Portland, OR/Multnomah County, OR	14 th	8 th	10 th	3 rd	8 th	11 th	12 th	5 th
Raleigh, NC/Wake County, NC	3 rd , 4 th , 10 th	10 th	4 th	4 th	11 th	2 nd	8 th	4 th
Michigan	NA	NA (city data only)	2 nd	NA (county data only)	7 th	4 th	14 th	15 th
United States	NA	NA (city data only)	8 th	NA (county data only)	12 th	10 th	13 th	11 th
Grand Rapids-Wyoming Metro Area	NA	NA (city data only)	NA (data unavailable)	NA (county data only)	NA (county data only)	1 st	6 th	7 th
Detroit-Warren-Dearborn Metro Area	NA	NA (city data only)	NA (data unavailable)	NA (county data only)	NA (county data only)	6 th	15 th	13 th

Conclusions

The goal of this report is to take the pulse of the Ann Arbor region in comparison to a specific competitive set of technology-driven communities and their economies. 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 this initial list of regions and metrics, including our CEO Roundtable, our Executive Committee and Finance Committee members, and participants at the Ann Arbor IMPACT conference 2016. The report represents the beginning of a series of benchmarking exercises that aim to develop a comprehensive, accurate picture of the region. In the coming months further research will be conducted using the findings of this report.

The data and analysis for each metric answer some questions, but pose many new ones:

University R&D Expenditure - 1st

- This ranking was expected; the University of Michigan is a world-class institution with a well-funded, nationally recognized research complex.
- The future of its funding is less certain as much of it comes from federal sources, some of which are unpredictable.
- For future research, it may be interesting to ask questions like: what is the region's ability to retain innovation and talent that comes out of the University? What are the educational R&D funding trends in competitor regions?

Venture Capital Activity - 2nd

- This ranking is a slight surprise - anecdotally and through other research we know the Ann Arbor region has a high level of venture activity, but nearly six times the national concentration was unanticipated.
- Boulder's level of activity is nearly off the charts relative to its size. Why is Boulder doing so well? There is a history of innovation and government laboratories, but there may be lessons we can learn outside of legacy.
- Beyond competitor regions, it would be informative to look at activity levels of venture capital funding stages, total value of funding, and fundraising activity.

Housing Affordability - 5th

- There is a perception of Washtenaw County as an expensive housing market. However, this report places us in the middle of the pack with regard to our competitive set.
- The trend is toward a more expensive housing market, but this is not unique to Washtenaw County. Still, Washtenaw County is decidedly less affordable within Michigan.
- This analysis emphasizes the importance of relativity in housing discussions. Immediately labeling Washtenaw County as an expensive market is detrimental when attracting talent or companies from our competitive regions.
- Future research should consider growth rates of the housing market and include rents.

Population Movement - 8th

- While the net total is positive, the split between inter and intrastate migration is surprising.
- Washtenaw County is a popular destination for movers within Michigan, but has a negative differential for those moving state-to-state.
- This is an important piece to consider within the context of the governor's population goal, and talent attraction generally. It is certainly an argument in favor of the *MichAgain* campaign.

Conclusions - continued

Driving Industry Employment - 8th

- This concept is best understood through concrete examples, the most powerful of which involve the loss of a driving industry company. The loss of both Pfizer and Borders in Ann Arbor had wider negative impacts in support industries: services, retail, food service, etc.
- These exporting industries support the local economy and are vital to regional economic growth.
- The metric is somewhat new and the ranking relatively unexpected, though logical when considering that the competitive set is defined by high levels of driving industry employment.
- In addition, the current definition of driving industries does not include healthcare or education, which automatically excludes the largest employers in the Ann Arbor region.
- In future research it will be necessary to dig deeper into the composition of driving industry employment (professional technical vs. manufacturing) for the entire competitive set, and look at trends over time. How has the composition changed? What lessons can be learned from regions with high levels of driving industry employment?

Income Inequality - 9th

- This analysis places the region squarely in the middle of the competitive set and demonstrates better performance than the state of Michigan and the US as a whole.
- Income inequality is clearly an issue for all of the competitor regions and the nation.
- In our region there is a heavy focus on Ypsilanti and eastern Washtenaw County with regard to inequality—which is appropriate—but the populations in those areas may not be large enough to notably affect this metric (the eastern part of the county makes up approximately 25% of the total county population).
- This generates more questions than it answers. Future research can focus on other metrics that measure inequality, as well as what sets the competitor regions with less income inequality apart. What can we learn from them?

The Labor Market - 10th for Labor Force Participation, 5th for Unemployment

- Measuring unemployment is a double-edged sword. Depending on the audience, it is either too low or too high. Economists argue the definition of “full employment,” but ultimately the picture of the labor market is incomplete without also considering the labor force participation rate.
- There are many explanations for the decline in labor participation rate: aging population; retirement; increase in workers taking disability; more people in school; a decline in working women (for a time the decline of working men had been offset by the rapid rise in working women, but since its peak in 1999 it has been declining slowly); unemployed people unable to find work may get discouraged, lose their skills, and drop out of the labor force.
- Policy solutions can work to attract new labor as well as engage labor that is no longer in the workforce. Future research can examine the competitor regions with both low unemployment and higher participation rates as to what makes them different labor markets.

Conclusions - continued

Final Thought

The truth is that none of these metrics operates in a vacuum. The eight metrics chosen for this particular study all influence one another.

Envision an idea which originates in the University of Michigan as a result of R&D funding, and makes its way into the community by way of venture-funded startup. The fledgling company does well in its first few years, growing quickly and hiring a diverse group of people. Due to the complex nature of its product, new recruits are often brought in from other regions—and have to grapple with a unique housing market. The company may encounter difficulties in hiring people from out of state, and must raise awareness of the region and its attributes. At a certain point, local economic development will take notice of the company and its growth, marking its impact on the ecosystem. As the company continues to grow, it encounters scarcity of labor—the drawback of a low unemployment rate. It therefore utilizes more creative tactics to recruit new hires. Underpinning the community's response to meeting the needs of such a growing company to stay and flourish here will be its efforts to reduce income disparities that hold back a portion of the region's population from fully participating in an expanding economy.

This report is merely the beginning. With input from community members and considering the questions posed in the conclusions, future research will be conducted to build on the complex picture of the region.

Detailed Methodology and Sources

Raw Population

Source: US Census [American Community Survey](#)

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](#)

Venture Capital Activity

Sources: [Brookings](#), [Pitchbook](#), [US Census](#) (for population), author's calculations

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

Housing Affordability

Sources: [Zillow](#), US Census [American Community Survey](#)

Population Movement

Source: US Census [Flowmapper](#)

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.

Driving Industry Employment

Sources: University of Michigan [RSQE](#), US Census [American Community Survey](#)

NAICS codes used for Driving Industries:

- e323 Printing and Related Support Activities
- e325 Chemical Manufacturing
- e326 Plastics and Rubber Products Manufacturing
- e332 Fabricated Metal Product Manufacturing
- e333 Machinery Manufacturing
- e334 Computer and Electronic Product Manufacturing
- e336 Transportation Equipment Manufacturing
- e339 Miscellaneous Manufacturing
- e484 Truck Transportation
- e511 Publishing Industries (except Internet)
- e517 Telecommunications
- e518 Data Processing, Hosting, and Related Services
- e51o Other Information Services
- e54133 Engineering Services
- e54138 Testing Laboratories
- e5415 Computer Systems Design and Related Services
- e5416 Consulting
- e54171 R&D in Biotech, Physical, Engineering, and Life Sciences
- e55 Management of Companies and Enterprises

Income Inequality

Source: US Census [American Community Survey](#)

The Labor Market

Sources: US Census [American Community Survey](#) and [Bureau of Labor Statistics](#)

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