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2018 Michigan Entrepreneurship Score Card

Prepared by MiQuest

Empowering Michigan Entrepreneurs

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2018 - Fourteenth Annual Edition

Michigan Entrepreneurship Score Card

Empowering Michigan Entrepreneurs

MiQuest

Growth Economics, Inc., in partnership with ROI – Research on Investment, Canada

The Michigan Entrepreneurship Score Card 2018 – Fourteenth Annual Edition is published by MiQuest.

The Score Card analytics and methodology were developed in 2004.

The 2018 – Fourteenth Annual Edition report was authored by Dr. Graham Toft, President of GrowthEconomics Inc. and Loch McCabe, President of Shepherd Advisors. Neil Sheridan, President of Sheridan Venture Partners LLC provided very helpful editorial assistance for Section 3.

The inaugural edition of the Entrepreneurship Score Card was created and produced in 2004-05 by the Small Business Foundation of Michigan. The Small Business Foundation of Michigan merged with Great Lakes Entrepreneur's Quest in 2014 to form MiQuest. The mission of MiQuest is to "Ignite, Unleash, and promote a Culture of Entrepreneurship in Michigan".

MiQuest is grateful for the generous sponsors and supporters who help underwrite the production and distribution of the Michigan Entrepreneurship Score Card each year.

Why the Score Card

As we report out the 14th Michigan Entrepreneurship Score Card I want to take a step back and share the "why" behind this report. When the Small Business Association of Michigan set a bold goal for Michigan to become a "Top 10" entrepreneurial state more than 15 years ago, we knew that it was crucial to understand all of the factors that influence such a ranking.

When the Michigan Entrepreneurship Score Card was first created, it offered real insight into the path Michigan needed to take in order to be THE state for entrepreneurship. By looking at all of the factors that impact the entrepreneurial climate – from education and transportation to business costs and workforce preparedness – these reports offer digestible data that can help guide effective change. With 14 years of data under our belt, we can start to see that while Michigan has improved there is still work to be done in really supporting small business growth in this state.

The Score Card offers ranks on Entrepreneurial Climate, Entrepreneurial Change and Entrepreneurial Vitality. Despite large improvements in the post-recession years, this year's report shows a leveling off in these areas. Keeping tabs on Michigan's performance in these areas will be crucial in years to come in order to have a vibrant entrepreneurial economy.

In this report you'll learn about the specific factors that go into our rankings. For example, Michigan's general Business Climate is improving (though still mediocre) but there is work to be done regarding small business healthcare premiums. The quality of life in Michigan is attractive to and supportive of entrepreneurs, but poor infrastructure is a threat to business growth.

The ability to have a holistic view of these types of factors is what will enable the work of MiQuest and its founding partners to support an entrepreneurial economy for Michigan's business community. We must limit our vulnerabilities and build attention around Michigan's entrepreneurial economy and the positive impact it has on us all. When we work together to achieve these goals, Michigan can be THE state of entrepreneurship.

Sincerely,

Rob Fowler
President and CEO, Small Business Association of Michigan
Director, MiQuest Board of Directors

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MiQuest Vision
Michigan is THE State of Entrepreneurship

MiQuest Mission
Ignite, Unleash and Promote a Culture of Entrepreneurship

MiQuest welcomes collaborative partnerships and invites entrepreneurs, business coaches, educators, and investors to become involved with current and developing initiatives.

For More Information: *www.MiQuest.org*

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SCORE CARD SPONSORS

MiQuest extends a special thank you to this year's Score Card financial sponsors. Without sponsorship support this publication would not be possible.

Blue Cross Blue Shield of Michigan

Blue Cross Blue Shield of Michigan, nonprofit mutual insurance company, is the largest health insurer in Michigan, serving 4.5 million people here and 1.6 million more in other states. BCBSM is committed to providing affordable, innovative products that increase access to affordable health care, enhance the quality of care patients receive and improve the health of Michigan's citizens and communities.

Consumers Energy

Consumers Energy provides natural gas and electricity to 6.6 million of the state's 10 million residents in all 68 Lower Peninsula counties. Consumers Energy is a founding participant of the Pure Michigan Business Connect campaign, and is committed to spending $1 billion more with Michigan-based companies in the current five-year period.

DTE Energy

DTE Energy Company is a diversified energy company involved in the development and management of energy-related businesses and services nationwide. DTE's largest operating subsidiaries are DTE Electric and DTE Gas. These regulated utility companies provide electric and/or gas services to more than three million residential, business and Industrial customers throughout Michigan. Their electric and gas utility businesses have each been in operation for over a century. DTE has leveraged their wealth of experience and assets to develop a number of non-utility subsidiaries which provide energy-related services to business and industry nationwide.

MiBiz

MiBiz publishes business news in a bi-weekly print magazine, a variety of e-newsletters and through its web and social media sites. The print edition is mailed every two weeks to business executives in the West Michigan region as well as subscribers throughout the state and the Midwest. MiBiz also publishes a variety of e-newsletters covering specific business beats and provides exclusive daily business reporting on MiBiz.com.

Michigan Association of State Universities

The Michigan Association of State Universities serve as the coordinating board for Michigan's 15 public universities, providing advocacy and fostering policy to maximize the collective value these institutions provide in serving the public interest and the State of Michigan.

Each year, Michigan's public universities serve nearly 290,000 students, providing excellent undergraduate and graduate education, internationally renowned research, and services to Michigan's employers, government leaders, non-profit organizations and citizens. Learn more at *www.masu.org*.

Michigan Municipal League

We love where you live — The Michigan Municipal League is dedicated to making Michigan's communities better by thoughtfully innovating programs, energetically connecting ideas and people, actively serving members with resources and services, and passionately inspiring positive change for Michigan's greatest centers of potential: its communities.

Michigan State Housing Development Authority (MSHDA)

MSHDA's mission is to enhance economic and community vitality through housing and historic preservation activities.

By forging creative and collaborative partnerships, sharing knowledge and targeting resources, our investments help build a strong and vibrant Michigan and a better quality of life for the residents we serve.

Small Business Association of Michigan

The Small Business Association of Michigan (SBAM) is a Michigan-based industry association that focuses the buying power, political power, and shared resources of thousands of small business members. SBAM has been successfully serving small businesses in all 83 counties of Michigan since 1969. With more than 26,000 small business members, SBAM is the only statewide association that focuses solely on serving the needs of Michigan's small business community. All of SBAM's programs and services exist to improve the business climate and conditions in which Michigan small businesses operate.

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EXECUTIVE SUMMARY

This 2018 – 14th Annual Edition of the Michigan Entrepreneurship Score Card reports a continuing slowdown in the positive trends that have been at work in the Michigan entrepreneurial economy during the post-2009 economic recovery. For the previous three years the Score Card has pointed to the positive trends continuing, but with progressively 'less gusto'. Michigan remains a top performer among the Industrial Midwest states, although the remarkable growth trajectory in Michigan's key entrepreneurial metrics has leveled off.

Michigan's Entrepreneurial Climate, Change and Vitality

Over the past 14 years the Michigan Entrepreneurship Score Card team has used, tested and refined three distinct indexes:

CLIMATE: *The factors that support the entrepreneurial economy*

CHANGE: *The direction and momentum of growth in the entrepreneurial economy*

VITALITY: *The level of entrepreneurial activity relative to that in other states*

Not surprisingly, Michigan Entrepreneurship Scorecard's Indices have improved markedly over 10 years. **Since 2012, however, each Index has moderated or begun to decline, suggesting that while Michigan is still growing, its entrepreneurial economy has been and is now slowly losing ground relative to other states.** While many positive trends remain strong, risks to Michigan's future entrepreneurial economy are rising.

2018 Score Card
Michigan Entrepreneurial Climate, Change and Vitality Rankings Relative to Other States (Out of 50) From 2006 - 2016

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ENTREPRENEURIAL CLIMATE	39	40	42	39	14	12	10	25	25	22	24
ENTREPRENEURIAL CHANGE	50	50	49	42	38	10	10	6	13	47	32
ENTREPRENEURIAL VITALITY	38	39	46	33	39	30	15	27	33	30	36

Note: Annual rankings are revised as additional data becomes available.

Note: Green shading indicates "Top 10" ranking and Red shading indicates "Bottom 10" ranking.

Michigan, which ranked 24th in 2016, has meaningfully improved its **Entrepreneurial Climate Index** since 2009. After being flat and then declining for most of the 2000s, Michigan's Entrepreneurial Climate experienced exceptional and rapid gains in 2010 through 2012 and its Entrepreneurial Climate rank was in the "Top 10" of states nationally. Since 2012, Michigan has experienced a significant degradation of Entrepreneurial Climate momentum relative to other states, falling from a Top 10 position in 2012 to a rank 24 in 2016.

Beginning in 2009, Michigan's **Entrepreneurial Change Index** rank rose dramatically to 6th in 2013, lost steam in 2014 and fell to a national rank of 47 in 2015. Fortunately, the 2016 Entrepreneurship Change index shows sign of moderation, ranking at 32 and above 3 of its 4 industrial Midwest competitors.

Relative to other states, Michigan's **Entrepreneurial Vitality Index** score has remained in the same "lower 30's" range in the past three years, at rank 36 in 2016, slightly down from 30 in 2015 and 33 in 2014. The Entrepreneurial Vitality Index is a slow-to-change structurally-driven outcome index that captures the size of the entrepreneurial economy, relative to that in other states. It realistically may take decades for Michigan to experience the very robust Economic Vitality that Michigan likely had in Michigan's industrial heyday.

Five Insights about Michigan's Evolving Entrepreneurial Economy

The 2009-2012 rebound notwithstanding, Michigan's entrepreneurs continue to struggle with a range of conditions and economic uncertainties. The data points to five different "insights" about the evolution of Michigan's entrepreneurial economy, a dynamic and important slice of Michigan's total economy:

Insight #1:

The rate of improvement in Michigan's post-recession entrepreneurial economy is slowing. Yet, there is an overall better entrepreneurial economy today than 10 years ago and dynamism across existing businesses today is particularly encouraging.

Insight #2:

Michigan holds onto key 'technology and high-skill economy' leadership advantages remarkably well. But there is slippage in some key areas.

Insight #3:

Michigan's general Business Climate (which supports its start-up, existing, and relocating businesses) remains mediocre, but is improving, except for small business healthcare premiums.

Insight #4:

Michigan's Quality of Life continues to support and attract entrepreneurs.

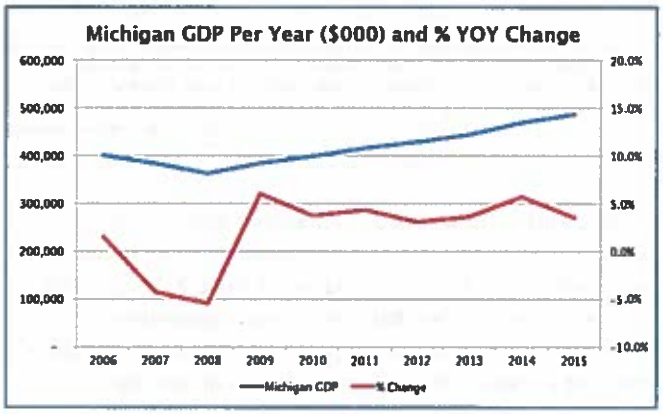
Insight #5:

Poor Infrastructure continues to worsen and progressively threaten business growth.

Michigan maintains many critical ingredients for more robust entrepreneurial growth in the next decade. Yet, Michigan's entrepreneurial economy is also experiencing accumulating "drags" that inhibit the success of Michigan's entrepreneurs.

The State of the Michigan Entrepreneurial Economy

Michigan stands solid with an unemployment rate of 4.7% as of December 2017 is well below historical averages with skilled labor and managerial shortages across the state's economy. From 2006 through mid-2009, Michigan's Gross Domestic Product[1] consistently grew at slower rates than GDP growth rates for the country and the Midwest region as a whole. But since mid-2009, Michigan's GDP growth rates have been consistently equal to or higher than national and Midwest GDP growth rates. This is important as higher GDP growth rates broadly points to greater economic prosperity.

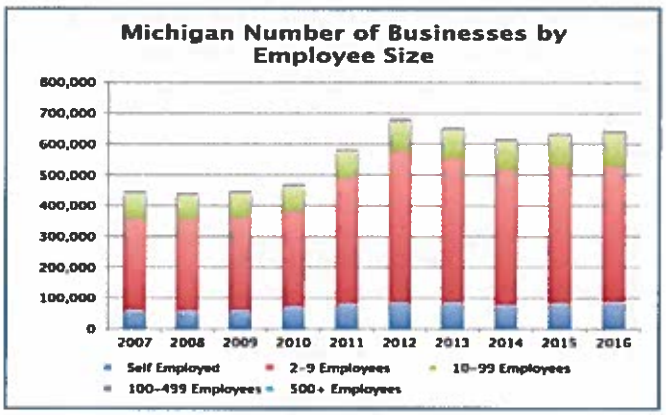


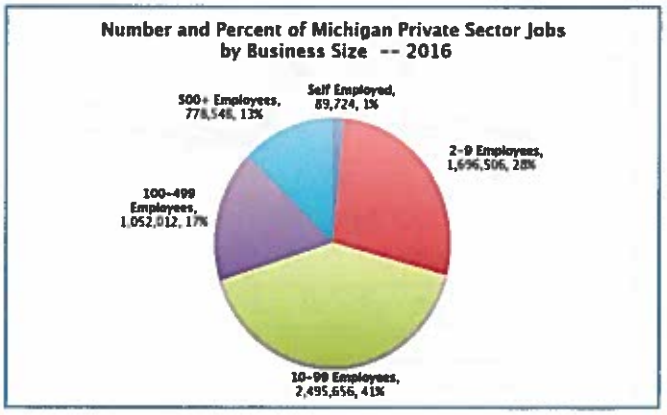
A key contributor to GDP growth is changes to levels of employment -- the actual numbers of people working in Michigan from year to year. Between early 2010 and early 2014, Michigan's employment rate growth markedly exceeded that of the U.S. and rest of the Midwest. Michigan's employment rate growth then fell towards national averages, with some acceleration between late 2015 and late 2016. However, Michigan job growth slowed down again in 2017, though with some encouraging signs of re-acceleration in November and December 2017.

The term 'entrepreneurial economy' refers to the combination of Michigan's self-employed and small business companies, companies that have up to 500 employees. In this analysis, we further segregate the Entrepreneurial Economy into four business "stages" defined by numbers employed.

Entrepreneurial Business Stage	# of Employees
Self-Employed	No employees.
Stage 1	Businesses with 2-9 employees
Stage 2	Businesses with 10-99 employees
Stage 3	Businesses with 100-499 employees

Michigan's entrepreneurial economy comprises 99% of Michigan's businesses and 87% of Michigan's private sector jobs. While Stage 1 companies represent the bulk of Michigan companies by Stage, Stage 2 companies hire the most people. Indeed, in 2016, Stage 2 companies comprised 41% of the private sector workforce, while Stage 1 companies hired 28% of the workforce. Companies with 500+ employees employed 13% of the workforce.

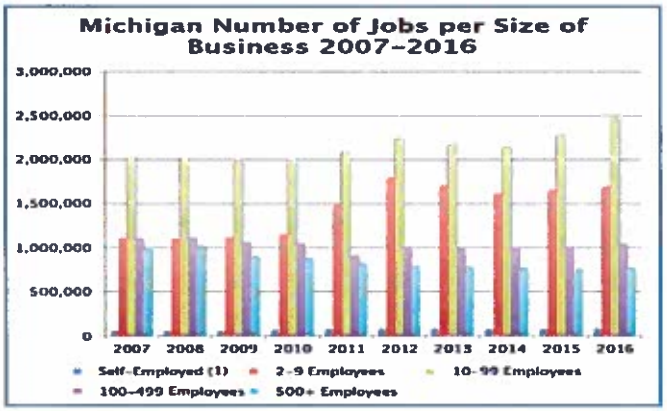




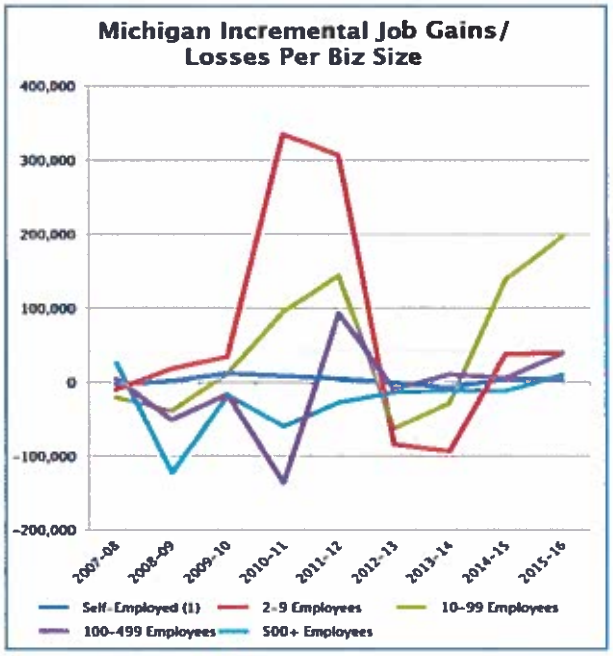
[1] Gross Domestic Product (GDP) is the total monetary value of all final goods and services produced in a specific geography

Indeed, the number of jobs in Michigan in Stage 2 companies has steadily increased while the number of jobs in companies with 500+ employees has steadily fallen, from more than 1 million in 2007 to fewer than 800,000 in 2016.

Breaking the data down further to focus on incremental net new job creation and decline across Stages, an important pattern emerges. Across the different stages of businesses, Michigan job creation/decline performances over the last 10 years, and especially over this current business cycle, have been very dynamic.



Big picture, net job gain in businesses of size 1 to 99 employees has become critically important to Michigan. As shown in this chart below, Stage 1 companies led net job growth creation as Michigan emerged from the Great Recession. Yet, as the expansion has matured, Stage 2 companies have become the primary creator of net new jobs. In Michigan from 2015 to 2016, when nearly 290,000 net new jobs were created, 68% of these net new jobs were created by Stage 2 companies. Stage 1 companies created another 14%. From 2015 to 2016, firms with 500+ employees created just 4% of net new jobs.



Michigan Entrepreneurial Economy Trend Watching

In this year's Score Card, we introduce a number of specific data points to help readers and policy makers become "more current" on the evolving state of Michigan's entrepreneurial economy. Using eight specific "Trend Watch Indicators," one can observe more recent dynamic movements of Michigan's entrepreneurial economy:

Indicator	Indicator Description	Recent Movement
#1 Michigan's State Coincident Index	Track's a state's overall economic conditions	Regained momentum in the first half of 2017, followed by a slowdown in the second half of 2017.
#2 Michigan Economic Activity Index	A composite published by Comerica Bank	Gains in the first half of 2017, followed by stalling conditions in the second half of 2017. The index's February 1st 2018 report cites an uptick of two monthly gains as of November 2017.
#3 Michigan State's Leading Index	Comprises metrics known to indicate forward movement	Strong the first half of 2017, and then deterioration beginning July 2017. The latest December report, however, moves Michigan up several notches in growth outlook for the first half of 2018.
#4 Michigan Breadth of Job Creation	Shows the percent of existing establishments adding net new jobs	Slight but noticeable downward trend since 2016.
#5 Michigan Net Job Gains from Business Expansions Minus Contractions	Indicator of the degree to which businesses are taking on risks	Encouragingly, net job creation picked up slightly in Q2 2017.
#6 Michigan Business Expansion and Contraction Rates	Percent of businesses expanding and contracting	The positive gap between expansion and contraction rates narrowed in 2017.
#7 Michigan Private Establishment Formation Rate	Rate of new business creation as a percentage of all businesses	Shows a significant trend decline since 2010, with stabilization since 2015.
#8 Michigan Expansion/Later Stage Venture Capital	Expansion/Later Stage venture capital as a percent of state GDP	Michigan expansion/ later stage VC declined beginning 2015, and the downturn accelerated in 2017.

What do these Trend Watch Indicators suggest? While any initial prognosis is preliminary and should be treated with caution, our broad compilation of these 8 Trend Watch Indicators suggest that **Michigan's entrepreneurial economy, while showing signs of stress, is nonetheless holding up well. Yet caution signs are mounting.**

Importance of Supporting Second Stage Company Growth

More than 15 years ago, SBAM set out a goal for Michigan to become a "Top 10" entrepreneurial state. In pursuit of this goal, SBAM first created the Michigan Entrepreneurship Score Card to create the structure to better understand what it actually means to be a "Top 10" state. Then about

10 years ago, SBAM introduced "Economic Gardening" as a "grow your own" approach to economic development that focuses on providing specific types of high-end support for local growth-focused Stage 2 companies to accelerate their success.

Nearly 15 years of Michigan's Score Card data now strongly suggest that **supporting the continuing growth of Michigan's Stage 2 companies is a key foundational strategy for Michigan's long-term economic prosperity.**[2] In 2016, more than 109,000 Stage 2 companies in Michigan accounted for 2.5 million private sector jobs, a full 40% of Michigan's private sector jobs. Further, Michigan's Stage 2 companies created the most of the net new jobs by large margins.[3] Indeed, of the 1.13 million net jobs added to the Michigan economy the past 15 years, 51% have been created by Stage 2 businesses.

To help Stage 2 companies accelerate growth, numerous surveys point to common growth support needs identified by second stage CEOs:

- Market research, marketing methods and selling
- Recruiting, developing and retaining employees
- Identifying and using new technologies and processes
- Accessing growth capital (e.g. loans, investment and grants)
- Management and administration issues
- Peer learning networking with other Stage 2 company CEOs

Fortunately, Michigan today has a sound foundation of economic development programs and services that can be scaled up to provide growth-focused assistance to many of Michigan's Stage 2 companies. Current Michigan Economic Development Corporation (MEDC) programs that support growth of Stage 2 companies include:

- An Economic Gardening Service
- "Pure Michigan Business Connect" and its innovative supplier-matching service
- Export assistance
- Talent management assistance

In addition, SBAM along with the Michigan Small Business Development Centers (SBDC), MEDC, Edward Lowe Foundation and the Michigan Business Network (and its founder, Chris Holman) have developed the very successful "50 Companies To Watch" program that highlights 50 promising Michigan second stage growth companies. Since 2005, this initiative has selected and highlighted more than 700 successful, growth-focused Stage 2 companies. SBAM, Edward Lowe and the SBDC, along with the MEDC, today form a strong collaborative foundation for identifying and growing the pool of Stage 2 growth companies, and are positioned to provide even more robust future economic gardening-like efforts. .

Michigan has **thousands of growth-focused second stage companies** that can benefit from effective growth-acceleration support. Going forward, we believe that Michigan has the experience and capabilities to significantly augment and expand support growth-acceleration of Stage 2 companies. Indeed, scaling up to support hundreds of second stage companies would, we believe, give Michigan an opportunity to reset its economic growth trajectory and indeed become a prosperous Top 10 entrepreneurial state.

[2] It must be noted that Stage 1 companies have also been a major source of job growth over the past 10-15 years, and that Michigan's economy benefits significantly from their success as well.
[3] See www.youreconomy.org

SECTION 1

Michigan's Entrepreneurial Climate, Change & Vitality: 2006-2016

This year's Score Card is released with the backdrop of nearly 9 years of slow but solid U.S. economic recovery since the end of the Great Recession in 2009 along with the first full year of the new federal Administration's policies toward strengthening U.S.-based business growth. Michigan stands solid with an unemployment rate of 4.7% as of December 2017 and a 2017 annual employment gain of 1.3%.

The Michigan Entrepreneurship Score Card seeks to document how well Michigan's entrepreneurial economy has been performing within Michigan's broader regional and national economic context.

Broadly, how has Michigan "Entrepreneurial Economy" been doing? The short answer is "much better" than 10 to 15 years ago, but some cautionary signs are emerging. When the 2004-2005 Michigan Entrepreneurship Score Card was first released 14 years ago, Michigan's entrepreneurial conditions were challenging relative to other states, and then worsened significantly during the Great Recession of 2007-09. Since mid-2009, however, Michigan's entrepreneurial economy has been on a robust rebound, driven by a number of factors including:

- Recovery of the overall national economy
- Cumulating impacts of growth efforts started in the mid-2000s by the Michigan Economic Development Corporation, Michigan universities and Michigan's broader economic development community to provide more effective support to Michigan entrepreneurs and startup companies, and
- The introduction in 2011-12 of more favorable business tax policies and a broad shift in the State's economic development priorities from "attraction" to "economic gardening," an approach that prioritizes augmenting the success of growth businesses based in Michigan.

Not surprisingly, the 2017 Michigan Entrepreneurship Scorecard's Indices have all improved markedly over 10 years. Indeed, as shown later in this chapter, Michigan's Entrepreneurial Climate, Change and Vitality indices bottomed out in 2007-08 and then grew rapidly and reach peaks in 2011-12. **Since 2012, however, each index has moderated or begun to decline, suggesting that while Michigan is still growing, its entrepreneurial economy has been and is now slowly losing ground relative to other states.** While many positive trends remain strong, risks to Michigan's future entrepreneurial economy are rising.

Michigan's Entrepreneurial Climate, Change and Vitality Indices

Michigan's entrepreneurial economy is complex, with many nuances/dimensions. As such, Michigan's entrepreneurial economy cannot be effectively understood through a single measure or metric. This challenge is compounded further when, as we do with the Score Card, we wish to understand how Michigan's entrepreneurial economy is positioned relative to the entrepreneurial economies of other states.

To better address this complexity over the past 14 years, the Michigan Entrepreneurial Score Card team developed tested, and refined three distinct indices of **Entrepreneurial 'Climate,' Entrepreneurial 'Change,'** and **Entrepreneurial 'Vitality.'** Together, these three indices do a remarkably comprehensive and effective job capturing the 'health' of Michigan's entrepreneurial economy relative to other states.

While Entrepreneurial Climate, Change and Vitality are each described more fully later in this section, it's helpful to understand first how these indices relate to one another. As shown in this pyramid, the Entrepreneurial Vitality and Change indices are 'outcome' metrics influenced by the set of "Primary Driver" metrics that make up the Entrepreneurial Climate Index. Entrepreneurial Climate is in turn affected by a very wide range of supportive, yet background, "Secondary Driver" metrics that are also presented in the Score Card.

The Vitality, Change and Climate indices track specific dynamics of Michigan's entrepreneurial economy that have different degrees of focus on Michigan's entrepreneurial economy in a given year. The separation of these indices is intentional, and a unique feature of the Michigan Entrepreneurship Score Card methodology.

Scanning Michigan's Entrepreneurial Climate, Change and Vitality rankings over the past 10 years gives a sense of the "arc" of the early weakness, the gathering strength, and the current moderation of Michigan's entrepreneurial economy.

2018 Score Card
Michigan Entrepreneurial Climate, Change and Vitality Rankings Relative to Other States (Out of 50) From 2006 - 2016

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Note: Annual rankings are revised as additional data becomes available.

Note: Green shading indicates "Top 10" ranking and Red shading indicates "Bottom 10" ranking.

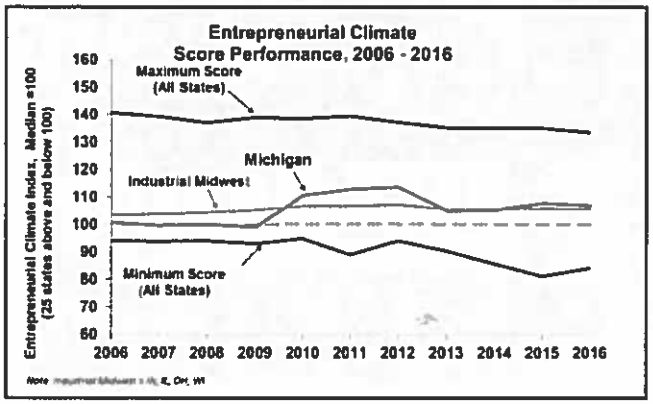
Michigan's Entrepreneurial Climate – Rank 24 (2016)

Michigan's Entrepreneurial Climate is a Primary Driver index made up of metrics that together give a composite indication of the *underlying supporting conditions for the entrepreneurial economy relative to other states*. A high Entrepreneurial Climate rank for a state implies a "pro-entrepreneurship climate" that fundamentally makes it more conducive for entrepreneurs to establish and grow their businesses in that state relative to other states.

The Entrepreneurial Climate Index is comprised of three sub-indices related to innovation, capital access, and general business conditions. The Research and Innovation sub-index seeks to measure investment in and returns from a variety of innovation-focused activities. The Financial and Institutional Capital sub-index takes the pulse of actual cash flow as well as institutional support for small firms and startups. The General Business Growth sub-index captures the vitality and health of the underlying business economy that supports entrepreneurial dynamism.

Entrepreneurial Climate is also influenced by Secondary Driver metrics that include measurements of education, workforce and labor productivity, business costs, and infrastructure. And of course Entrepreneurial Climate is affected by broader national and international economies as well.

Michigan has meaningfully improved its Entrepreneurial Climate since 2009. After being flat and then declining for most of the 2000s, Michigan's Entrepreneurial Climate experienced exceptional and rapid gains in 2010 through 2012, when Michigan outperformed all of its Midwest competitors and its Entrepreneurial Climate rank was in the "Top 10" of states nationally. Since 2012, Michigan has experienced a significant degradation of Entrepreneurial Climate momentum, falling from a Top 10 position in 2012 to a rank 24 in 2016.

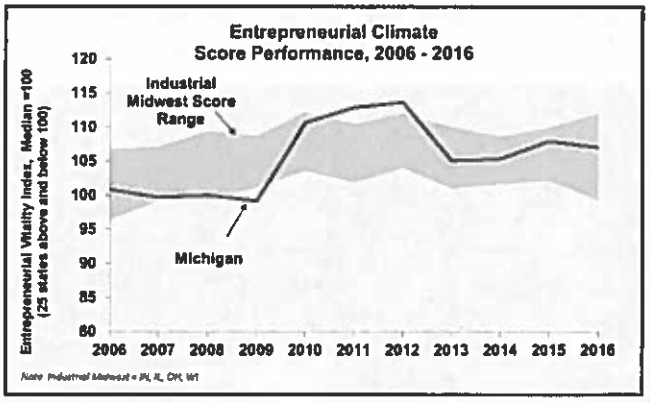


To be fair, Michigan is not the only Industrial Midwest state to have lost Entrepreneurial Climate steam since 2013. But Michigan's relative position to other industrial Midwest states has worsened compared to five years ago.

Factors contributing to the relative decline in Michigan's 2016 Entrepreneurial Climate included reductions in ranking for:

- NSF Funding
- SBIC Funding
- Seed/Early Stage Venture Capital
- Export Growth, and
- Housing Construction growth

Compared to other states, Michigan continues its historic vulnerability in terms of lower than average capital access for its entrepreneurs.

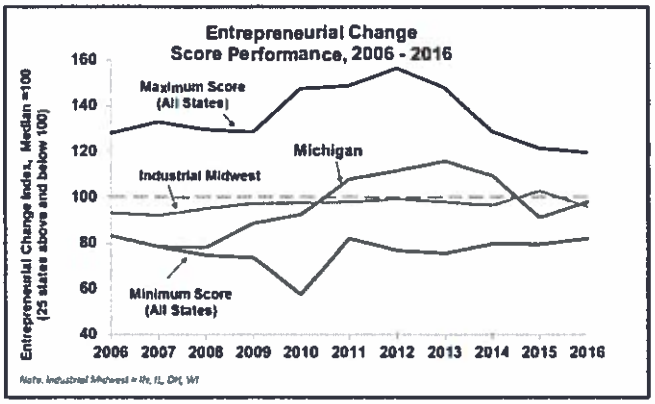


Note: These charts capture two things: where Michigan's score places among other states and how strong/weak that score is. Each Index is scaled so that the mid-point state/ median score is 100. Typically, 25 states fall above and 25 states fall below 100 (if there are no missing data or identical values). The spread between the upper and lower lines shows the range of scores from top to bottom performing states. The median 100 does not necessarily lie "in the middle" of the score range as top performers might have exceptionally high values, or in the reverse case, poor performers may have exceptionally low values.

MICHIGAN'S ENTREPRENEURIAL CHANGE – Rank 32 (2016)

Entrepreneurial Change is a "movement" index that shows *the direction a state's entrepreneurial economy is going relative to entrepreneurs in other states*. Entrepreneurial Change speaks to the level of success entrepreneurs are actually experiencing relative to other states. An improvement in a state's

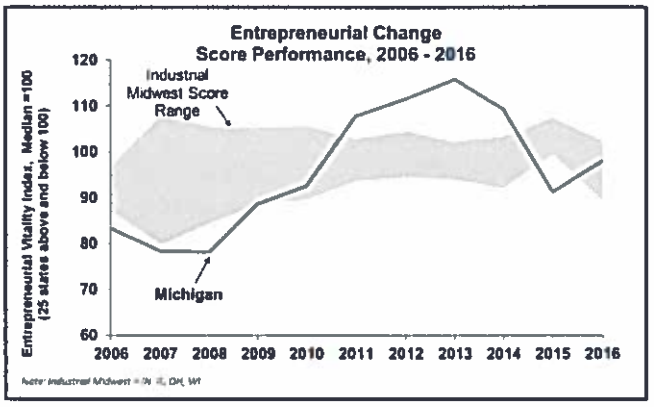
Entrepreneurial Change rank suggests that entrepreneurs in that state are actually generating more new firms, more new jobs and more new wealth at higher incremental rates compared to entrepreneurs in other lower rankings states.



Entrepreneurial Change is comprised of running three-year averages of variables that broadly indicate the direction of entrepreneurial economy growth or decline. The Entrepreneurial Change index includes *incremental rates of change data* for commercial enterprises including rates of change in business growth, start-ups, fast-growth/high tech businesses, payroll, and proprietor income.

As Michigan's Entrepreneurial Climate began to improve quickly from the depths of the recession, Michigan's Entrepreneurial Change index also improved. Beginning in 2009, the Entrepreneurial Change Index picked up dramatically, suggesting that even as the recession dragged on, Michigan's entrepreneurs began to become more active. Then their rising rate of activity – and success – began to compound. Indeed, by 2013, Michigan's Entrepreneurship Change rank had rocketed to 6th in the nation, up from a lowly 2010 rank of 39 just 3 years before.

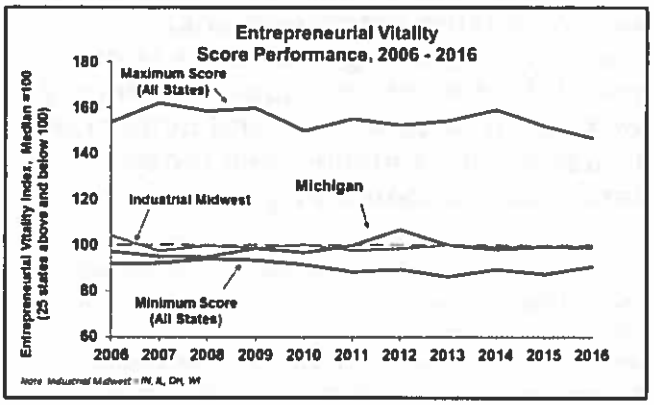
However, as Michigan's Entrepreneurship Climate cooled after 2012, so did its Entrepreneurship Climate ranking relative to other states. The relative ranking decline was swift, losing steam in 2014 and falling to a national rank of 47 in 2015. Though other Industrial Midwest states saw their own slowdowns, Michigan lost growth momentum faster than others. Fortunately, the 2016 Entrepreneurship Change index shows sign of moderation, ranking at 32 and above 3 of its 4 industrial Midwest competitors.



The factor that contributed most to Michigan's 2016 relative improvement in Entrepreneurial Climate was an acceleration of "net new establishments." This means that the rate of Michigan's entrepreneurs opening up new businesses locations ticked up at a higher rate relative to many other states.

MICHIGAN'S ENTREPRENEURIAL VITALITY – Rank 36 (2016)

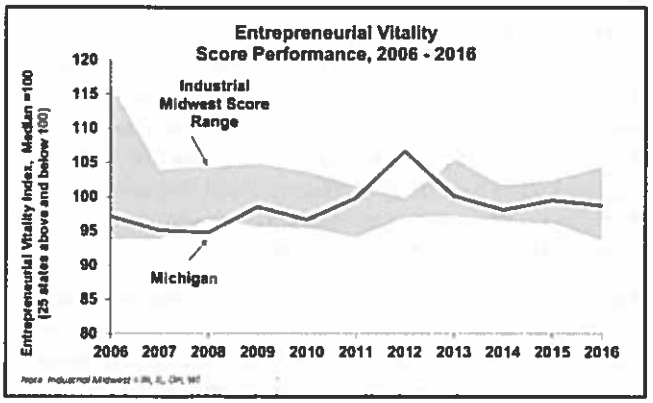
The direction of Entrepreneurial Change in turn influences a state's *relative level of entrepreneurial activity – its Entrepreneurial Vitality.* Entrepreneurial Vitality variables together present a broad measure of the level of entrepreneurial activity going on in a state relative to other states. Given that Economic Vitality is an Outcome measure that is influenced by Entrepreneurial Climate, Economic Vitality often has a one- or two-year lag behind change in the Entrepreneurial Climate index.



Relative to other states, Michigan's Entrepreneurial Vitality score has remained in the same "lower 30's" range in the past three years, at rank 36 in 2016, slightly down from 30 in 2015 and 33 in 2014. It is just below the median dashed line of 100 (where it is bunched tightly with many lower scoring states). The top performer state for Entrepreneurial Vitality is Massachusetts. Indeed, Massachusetts' exceptionally high score causes the scale of the changes in Michigan and other lower performers to appear relatively small.

The Entrepreneurial Vitality Index is a slow-to-change structurally-driven outcome index that **captures the size of the entrepreneurial economy, relative to that in other states**. It realistically could take decades for Michigan's entrepreneurial economy to experience the very robust Economic Vitality that Michigan likely had in Michigan's industrial heyday. Metrics that contribute to a state's Entrepreneurial Vitality include:

- Self-employment per 1000 of labor force
- Net business churn, or turnover
- Fast growing companies
- Investment awards
- 5-year survival rates



Michigan's strides in Entrepreneurial Vitality in 2010 to 2012 suggests that a more rapid rise in Vitality transformation is possible, though the subsequent drop in the state's performance since 2013 is evidence of how difficult it actually is to improve ranking in this Index over the long term. Nevertheless, to become a top 10 Entrepreneurial Vitality state is a desirable aspiration for Michigan and potentially achievable in the long-run. While comparisons with Top 10 Vitality states like Massachusetts, Virginia or California may not be realistic in the near term, comparisons with other Top 10 states like Florida, Utah and Colorado surely are.

A key metric that has sustained Michigan's Entrepreneurial Vitality score for many years is its 5-year establishment survival rates metric, a consistent Top 15 states performer. But Michigan's relative underperformance in other metrics such as Establishment Turnover Rates and Number of High Performance Firms has consistently put downward pressure on Michigan's Entrepreneurial Vitality scores.

SECTION 2
Five Insights about Michigan's Evolving Entrepreneurial Economy

The Michigan Entrepreneurship Score Card data points to five different "insights" that speak to how Michigan's entrepreneurial economy is evolving. Throughout the economic stresses and transformations of Michigan's "Great Recession" – which actually began in the early 2000s – and the rebound that started in earnest in 2010, the Michigan Entrepreneurship Score Card has chronicled a slow, often uneven, but nonetheless positive improvement of Michigan's entrepreneurial economy. In the Score Card data across all metrics for the 2006 to 2016 period we see clear evidence that while Michigan's entrepreneurial economy was particularly hard hit by Michigan's Great Recession, Michigan's entrepreneurs remained resilient and Michigan's entrepreneurial economy "held its own."

Importantly, Michigan has maintained many critical ingredients for more robust entrepreneurial growth in the next decade. Yet, today's Michigan's entrepreneurs are experiencing a growing set of conditions and uncertainties that have and continue to inhibit the success of Michigan's entrepreneurial economy. Five insights that stand out are:

INSIGHT #1: The rate of improvement in Michigan's post-recession entrepreneurial economy is slowing. Yet, there is an overall better entrepreneurial economy today than 10 years ago and dynamism across existing businesses today is particularly encouraging.

INSIGHT #2: Michigan holds onto key 'technology and high-skill economy' leadership advantages remarkably well. But there is also seeing slippage in some key areas.

INSIGHT #3: Michigan's general Business Climate (which supports its start-up, existing, and relocating businesses) remains mediocre, but is improving, except for small business healthcare premiums.

INSIGHT #4: Michigan's Quality of Life continues to support and attract entrepreneurs.

INSIGHT #5: Poor Infrastructure continues to worsen and progressively threaten business growth.

Insight #1:
The rate of improvement in Michigan's post-recession entrepreneurial economy is slowing. Yet, there is an overall better entrepreneurial economy today than 10 years ago and dynamism across existing businesses today is particularly encouraging.

There are several different metrics through which to see this dynamic of challenge and rebound. But as shown below the lenses of business survivability, business and job creation and growth, firm and employee bottom lines, and capital availability are particularly good ones. In the table below, Michigan's rankings relative to other states for select metrics over the 2006-2016 decade are shown. Periods when Michigan ranked in the "Top 10" are shaded in the lighter green, and periods when Michigan is ranked "Bottom 10" are shaded in darker orange.

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Growth in Net Expansion Job Gains	1	19	9	44	47	43	23	28	38	23	11
Increase in High Performance Firms	41	44	43	42	28	8	11	3	4	19	21
5-Year Establishment Survival	38	45	41	45	25	25	9	10	11	11	11
High Performance Firms	27	34	35	30	35	30	26	31	30	19	41
IPO Financing	16	35	35	30	1	1	1	30	13	15	14
Fortune 500	8	8	7	9	7	9	9	9	9	10	11
Private Business Profit Growth	49	39	49	48	35	9	5	12	11	5	(n/a)
Large Business Payroll Growth	49	49	49	49	47	34	10	16	19	14	(n/a)

The Score Card data in the table above shows several metrics reflecting the viability of existing business metrics showing healthy improvement over the past 10 years. Yet, a broad decline in many growth-focused 2015-16 Score Card rankings suggest Michigan's entrepreneurial dynamism is softening.

Insight #2:

Michigan holds onto key 'technology and high-skill economy' leadership advantages remarkably well. But we are also seeing slippage in some key areas.

Michigan has historically had a strong technology R&D and talent base, and continues to rank in the Top 10 in numerous R&D and high-tech workforce metrics. This is a critical economic competitive advantage for Michigan's entrepreneurs.

Michigan's strong position here is in part because Michigan's public and private sectors invest heavily relative to most other states in a number of key areas that are critical to future technology-led entrepreneurial growth, including:

- R&D (both university-based and industry-based)
- Innovation (measured in patents per worker)
- STEM educated workers pre- and post-BS
- STEM and related 'knowledge' credentialing programs
- Excellence in graduate and undergraduate programs
- High tech employment (both mfg. and services high-tech)

Thirteen Entrepreneurial Score Card metrics that really give a sense of how Michigan has maintained, and even enhanced, its "technology" and "high skill" assets over the past 10 years are shown below.

Select 10-year Michigan Entrepreneurship Score Card "Technology/High Skill" Metrics (2006-2016)

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Industry R&D Performance*	2	2	5	7	7	5	5	5	4	5	(n/a)
University R&D Performance	18	17	13	9	8	7	7	5	5	5	6
Patent per Innovation Worker	9	9	8	9	9	9	9	9	9	8	7
4Y+ Tech Credentials Output*	10	10	8	7	7	7	6	5	6	6	(n/a)
Pre-BA Tech Credentials Output*	21	22	18	24	24	28	21	26	28	30	(n/a)
4Y+'Knowledge'Degrees (excl. Tech) Output	21	24	22	25	27	25	23	26	25	30	30
Technology & Technician Workers	23	24	22	22	22	17	14	16	16	19	20
Phys. Science & Engineering Workers	8	5	5	4	6	2	4	4	1	1	2
Other 'Knowledge'/ Innovation Workers	21	24	22	25	27	25	23	26	25	30	30
Top Ranked Graduate Program	(n/a)	(n/a)	(n/a)	(n/a)	7	6	11	11	10	7	7
Top Ranked Undergraduate Program	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	14	16	13	16	15	15
High Tech Manufacturing Employment	1	1	1	4	4	4	3	2	1	2	1
High Tech Services Employment	13	13	14	16	14	13	12	12	12	12	12

**2016 not released yet*

However, it is also the case that Michigan's entrepreneurial companies must contend with a much more mediocre talent pool for non-technology workers, as Michigan has had slippage over the last five years relative to other states in workers with pre-BA technical credentials, 4+ year non-technical knowledge degrees, and other knowledge and innovation workers. The weakening of these talent pools raise future talent supply risks for Michigan's many non-tech growth companies.

Insight #3:

Michigan's general Business Climate (which supports its start-up, existing, and relocating businesses) remains mediocre, but is improving, except for small business healthcare premiums.

Michigan's business climate, which corresponds to the level and nature of costs that businesses incur related to their operations in Michigan, remains a challenge. The Chief Executive's 2017 annual survey of senior executives ranks Michigan at 36 on "Best and Worst States for Business," but up from rank 40 the year before.[1] But there have been some major improvements over the last five years in a number of relevant metrics.

Michigan's tax climate, which had previously long been sorely challenged, has improved dramatically relative to other states due to tax reform in 2011. Three recent reports that rank the states on business and tax climate place Michigan among Top 15 states:

- The "2018 Small Business Tax Index" by the Small Business and Entrepreneurship Council placed Michigan at #12
- The CNBC's "Top States for Business 2017" placed Michigan at #11
- The Tax Foundation's 2018 "State Business Tax Climate Index" placed Michigan at #12.

Another positive metric is Unit Labor Costs, a major business location and retention factor, which has improved from a rank in the Bottom 10 states to the midpoint in 2013 and 2014, and business liability costs have improved in the most recent 2015 data.

Some key variables that continue to depress Michigan's overall entrepreneurial business climate continue to include relatively high unemployment insurance costs, and high malpractice costs combined with a "moderate" legal climate that together mean that opportunities for legal actions against businesses related to malpractice and tort are relatively more likely to occur than in many other states. In addition, Michigan's ranking for small business health care premium costs dropped dramatically from 2015 to 2016, suggesting that small business Health Care premiums are worsening for Michigan's businesses relative to other states.

Select 10-year Michigan Entrepreneurship Score Card "Business Climate" Metrics (2006-2016)

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Unit Labor Cost	48	38	42	42	36	37	30	31	29	31	34
Energy Costs	31	32	29	30	34	34	39	38	37	34	35
Business Taxes	16	28	27	30	19	13	9	8	5	4	1
State Business Tax Structure	50	48	48	48	48	49	8	9	9	7	8
Metro Industrial Rents	(n/a)	(n/a)	(n/a)	(n/a)	7	5	2	13	13	14	14
Small Business Health Care Premiums	39	32	20	38	29	22	16	16	22	25	43
Workers' Compensation Costs	(n/a)	20	(n/a)	28	(n/a)	19	(n/a)	17	(n/a)	17	(n/a)
Workers' Compensation Premiums	(n/a)	19	13	24	9	11	8	7	7	7	(n/a)
Unemployment Insurance Costs	49	49	50	49	49	49	48	49	47	47	46
Unemployment Insurance Structure	42	45	46	45	45	45	44	44	47	48	47
Business Liability Costs	17	17	27	31	21	22	20	17	18	10	(n/a)
Liability System Reputation	23	33	30	30	28	27	26	26	24	21	21
Malpractice Costs	46	47	46	46	46	42	40	40	42	42	40

[1] https://chiefexecutive.net/2017-best-worst-states-business/

Insight #4:

Michigan's Quality of Life continues to support and attract entrepreneurs.

Michigan's Quality of Life attributes have been and continue to be impressive for an industrial state, with several PlaceMaking / 'Pure Michigan' strengths conducive to "next economy" economic mobility and tech/entrepreneurial growth being strong or improving.

Michigan's Quality of Life attributes are directly related to PlaceMaking in the state, which has emerged for policy makers as a key ingredient for building a more robust and healthy local entrepreneurial economy. Indeed, as Governor Rick Snyder in a presentation to the Michigan Municipal League, Board of Trustees in January 2011 aptly noted,

> "I don't separate *PlaceMaking* from economic development. They are intertwined."

Within this context, key Score Card metrics point to a number of "Quality of Life" attributes that have maintained strengths despite the Great Recession and significant reductions in state and local government budgets the decade-long recession imposed. For example, metrics related to parkland and golf courses have consistently been in the Top 15 states over the past 10 years. Residents enjoy relatively high homeownership rates and improving air quality, lower crime rates and urban cost of living.

Michigan's efforts to maintain and improve PlaceMaking have arguably been one of the more important contributors to improvements in Michigan's entrepreneurial economy over the past decade. PlaceMaking is based on the principle that entrepreneurs and the talent they need choose to settle in places that offer the amenities, social and professional networks, resources and opportunities that support thriving lifestyles. Michigan has moved up in its rank to 26 from last year's rank of 32 for the Quality of Life metric of Generational Creative Class (see page 110) - an indicator that efforts in PlaceMaking are paying off. One sees the results of successful PlaceMaking most readily in the urban centers like Detroit and Grand Rapids where young, skilled workers are now flocking to find opportunities and live.

Select 10-year Michigan Entrepreneurship Score Card "Quality of Life" Metrics (2006-2016)

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Airport Performance	33	29	27	16	43	31	23	14	14	17	22
Water Systems	2	6	9	3	13	13	6	6	4	3	5
Golf Courses	12	11	10	10	10	11	10	11	11	11	12
Parkland	10	10	10	10	10	10	11	11	11	11	(n/a)
Homeownership Rates	5	2	3	4	6	6	2	5	3	2	3
Urban Cost of Living	30	20	24	26	21	13	22	18	16	(n/a)	(n/a)
Urban Housing Affordability	27	26	24	22	22	24	22	23	22	19	23
Clean Air	39	32	32	32	32	32	32	16	17	21	25
Crime Index	26	26	24	27	25	24	21	21	20	14	14
Lack of Health Insurance	8	11	17	13	19	16	14	14	13	12	11

Insight #5:

Poor Infrastructure continues to worsen and progressively threaten business growth.

Infrastructure performance threatens older states and Michigan is no exception. The metrics used in the Score Card target infrastructure outcomes and service quality not costs or budgets. Infrastructure for Michigan ranks mostly in the 4th quintile among the 50 states. This is not helpful to Michigan's entrepreneurs.

As mentioned in previous Score Card reports, infrastructure impacts all businesses and related business support systems in the state. Michigan's entrepreneurial economy is particularly affected by infrastructure that affects goods delivery, timeliness and mobility, the overall cost of doing business, and the ability to attract and keep talent. Many of Michigan's entrepreneurs must make do with the infrastructure that they have at hand. And as global and speed-of-business forces require ever greater connectedness, Michigan's already mediocre roadway, energy, digital and air infrastructure means that improvements to Michigan's infrastructure will provide outsized benefits for Michigan's entrepreneurs and entrepreneurial economy.

Relative to other states, Michigan's poorer highways, broadband, and air access, are all creating constraining drags on both Michigan's entrepreneurial and broader business sectors.

Indeed, we would suggest that the growing negative impacts of Michigan's deteriorating infrastructure on Michigan's entrepreneurial economy become an increasingly prominent factor in infrastructure-related policy discussions and decisions.

Select 10-year Michigan Entrepreneurship Score Card "Infrastructure" Metrics (2006-2016)

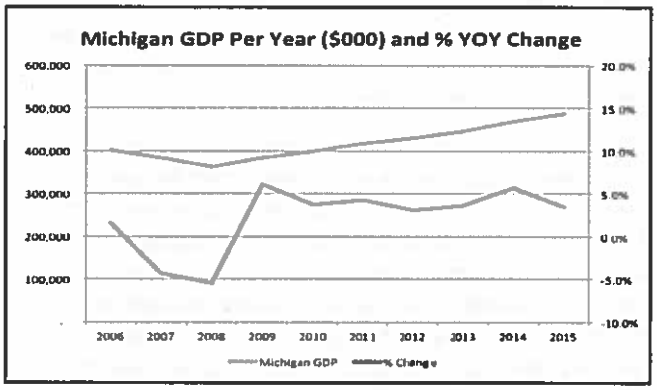
Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Airport Performance	33	29	27	16	43	31	23	14	14	17	22
Major Market Air Access	36	36	36	35	35	35	34	34	33	31	30
Bridge Quality	27	27	29	29	27	27	24	25	35	36	37
Energy Reliability	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	20	24	20	17
Highway Quality	43	40	40	40	41	40	36	35	38	37	47
Broadband Connection	34	35	41	41	36	34	30	28	39	42	42
Broadband Coverage	(n/a)	(n/a)	(n/a)	34	36	37	34	35	36	37	38
Next Generation Internet	34	35	33	38	43	47	47	47	47	47	47

SECTION 3

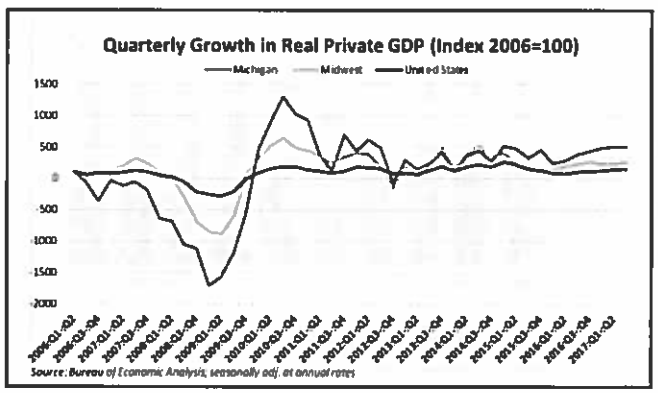
Michigan's Entrepreneurial Economy, Trend Watch Indicators, and the Importance of Supporting Second Stage Company Growth

This year's Score Card is released with the backdrop of nine years of slow but solid U.S. economic recovery since the end of the Great Recession in 2009 along with the first full year of the new federal Administration's policies toward strengthening U.S.-based business growth. Michigan stands solid with an unemployment rate of 4.7% as of December 2017 is well below historical averages with skilled labor and managerial shortages across the state's economy.

In 2016 and continuing into 2017, Michigan's economy growth has been robust. Previous Score Cards have observed that dynamism in the entrepreneurial economy parallel changes in the broader Michigan economy. While we don't know as yet to what extent a dynamic entrepreneurial economy is a causal factor in Michigan's economic progress, we do know it is a fellow traveler.

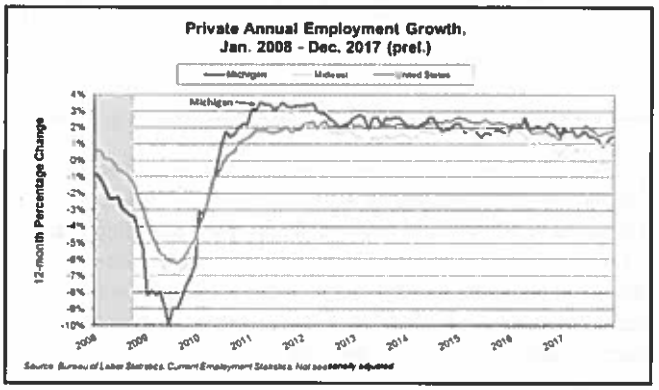


From 2006 through mid-2009, Michigan's Gross Domestic Product[1] consistently grew at slower rates than GDP growth rates for the country and the Midwest region as a whole. But since mid-2009, Michigan's GDP growth rates have been consistently equal to or higher than national and Midwest GDP growth rates. This is important as higher GDP growth rates broadly points to greater economic prosperity.



A key contributor to GDP growth is changes to levels of employment -- the actual numbers of people working in Michigan from year to year. Indeed, increases in new private sector employment is a critical driver of Michigan's GDP growth.

Between early 2010 and early 2014, Michigan's employment rate growth markedly exceeded that of the U.S. and rest of the Midwest. Between late 2015 and late 2016, there were signs of acceleration. However, Michigan job growth slowed down again in 2017, though with some encouraging signs of re-acceleration in November and December 2017.



Given the centrality of private sector employment growth to overall Michigan GDP growth, it is important to understand more clearly which size businesses have been and are creating new jobs. These are more fully explored next.

Michigan's Entrepreneurial Economy

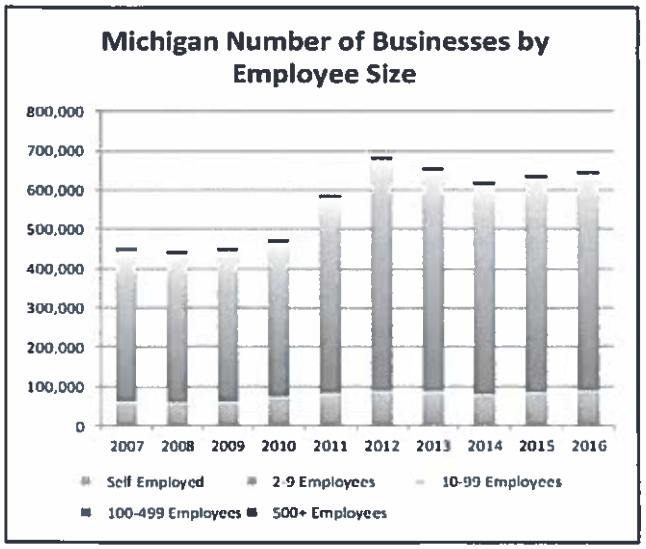
The term "entrepreneurial economy" refers to the combination of Michigan's self-employed and small business companies. For our purposes, a "Small Business" is defined as a company with up to 500 employees. In this analysis, we further segregate the Entrepreneurial Economy into four business "stages" defined by numbers employed.

Entrepreneurial Business Stage	# of Employees
Self-Employed	No employees.
Stage 1	Businesses with 2-9 employees
Stage 2	Businesses with 10-99 employees
Stage 3	Businesses with 100-499 employees

Over the past 10 years the number and stage structure of Michigan's businesses has trended upwards, with an

[1] Gross Domestic Product (GDP) is the total monetary value of all final goods and services produced in a specific geography.

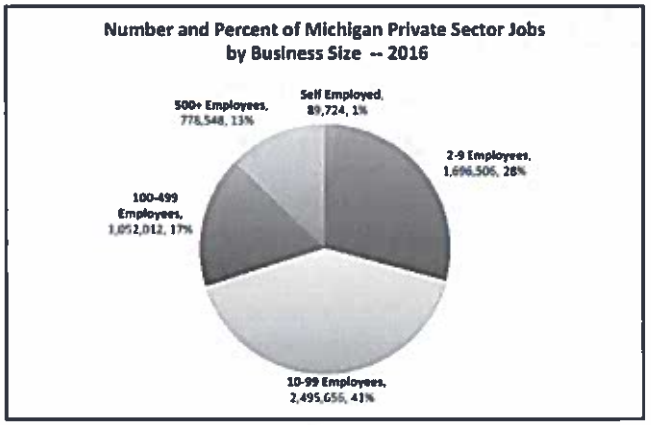
estimated 200,000 more businesses operating in Michigan in 2016 than in 2007. The stage that grew the most in terms of number of businesses was Stage 1 companies, especially between 2008 and 2012. Since then, however, the number of Stage 1 companies then declined to 440,000 businesses in 2016, a level 10% lower than 2012.



According to www.youreconomy.org, a definitive source of statistics on state and local businesses, 645,000 businesses in Michigan in 2016 were responsible for more providing than 6.1 million jobs in Michigan. Of all businesses 14% were self-employed, 68% had 2-9 employees, 17% had 10-99 employees and 1% had 100-499. This pattern is within the norm as nationwide percentages are 12%, 71%, 15%, and 1% respectively.

The Stage 1 and Stage 2 segments in particular are known for their dynamism – with many establishments forming, merging, surviving, failing, expanding, contracting, moving and growing. A business typically begins to enter its second stage when it approaches $1 million in total receipts. The transition process may continue until it hits $100 million in receipts, although for most companies $50 million represents the upper limit of the second stage. Employee numbers and revenue ranges vary by industry, but the population of firms with 10 to 100 employees and/or $750,000 to $50 million in receipts includes the vast majority of second-stage companies. As mentioned earlier, for our analysis Stage 2 companies are those with 10-99 employees.

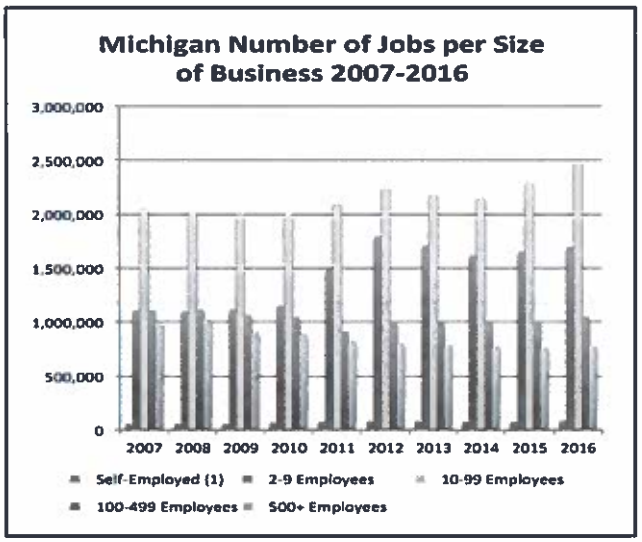
In terms of economic competitiveness, Stage 2 firms are particularly important as most have passed the volatile startup Stage 1 phase, and now face issues of scale up and growth rather than survival. Most Stage 2 company founders, owners, and senior executive managers (e.g. CEO, CFO, COO, etc.) have also progressed from a startup management style to a more professional strategic management approach that emphasizes formal organizational structure, specialization, delegation, process and wider market penetration.



Yet, because they still have limited access to resources, Stage 2 companies continue to be very adept at working in creative ways to keep innovating, generate new ventures and deepen local supply-buy linkages. Not surprisingly, a high proportion of high growth companies are Stage 2 companies. Growth companies are important because on average they are strong job and wealth generators.[2]

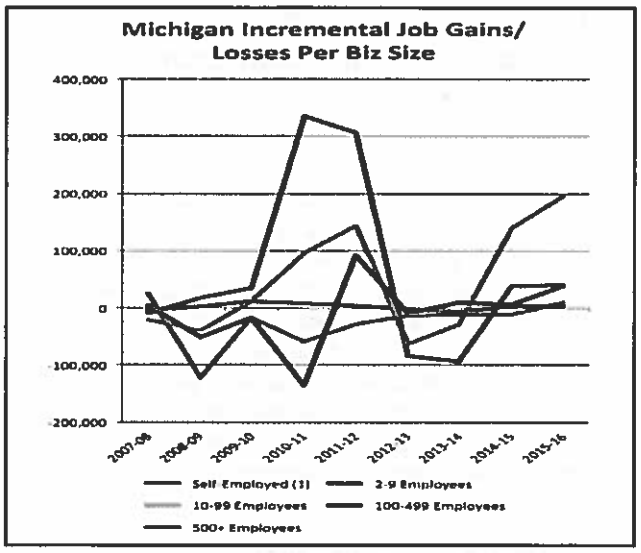
While Stage 1 companies represent the bulk of Michigan companies by stage, Stage 2 companies employ the most people. In 2016, Stage 2 companies employed 41% of the private sector workforce, while Stage 1 companies employed 28% of the workforce. Companies with 500+ employees employed 13% of the workforce.

Indeed, the number of jobs in Michigan at Stage 1 and Stage 2 companies has progressively increased over the past 10 years. The number of jobs in Stage 1 firms grew particularly rapidly from 2010 to 2012, although a slight decline has occurred since. Stage 2 companies have been a real "job engine," with steady growth since 2009 and real acceleration starting in 2014. In contrast, Stage 3 employment has remained stable, and the number of jobs in companies with 500+ employees has steadily fallen, from more than 1 million in 2007 to less than 800,000 in 2016.



[2] See the "Michigan 50 Companies to Watch" program for excellent examples of high-growth Stage 2 companies.

Looking across the different stages of businesses over the past 10 years of the business cycle, Michigan's private sector incremental job creation/decline performances reveal a very interesting and dynamic job creation pattern.



Net job gains in businesses of size 1 to 99 employees are clearly critically important to Michigan. As shown in this chart, Stage 1 firms led net job growth creation as Michigan emerged from the Great Recession. Yet, as the expansion has matured, Stage 2 companies transitioned into being the primary creator of net new jobs. **In Michigan from 2015 to 2016, when nearly 290,000 net new jobs were created, 68% of these net new jobs created by Stage 2 companies.** Another 14% were created by Stage 1 companies from 2015 to 2016, just 4% of net new jobs were created by firms with 500+ employees.

The cumulative impacts of these trends have been profound for Michigan on Michigan's broader employment landscape. In ten years of change between 2006 and 2016 jobs in all businesses increased by 15% overall, but the number of jobs in Stage 1 and Stage 2 companies increased by 32%. **Whereas in 2006, Stage 1 and Stage 2 enterprises accounted for nearly 60% of all jobs, by 2016 the number had become nearly 70%.**

Given the late stage of the current business cycle, results showing strong job creation performance by Stage 2 businesses in particular are not surprising to the Score Card authors. After a recession, in the early expansion phase, many quality skilled workers fired from employment launch into self-employment and then form Stage 1 companies. As the business cycle progresses, some Stage 1 companies ramp up to become Stage 2 companies, while others falter or dissolve as founders are absorbed back into mainstream employment. As the business cycle continues to mature, these successful growing Stage 2 companies then become an even more energetic part of the existing larger cohort of Stage 2

companies, adding new dynamism to the Stage 2 core of Michigan's entrepreneurial economy, and adding higher rates of job and wealth creation to Michigan's economy overall.

Near-Term Trend Watch Indicators

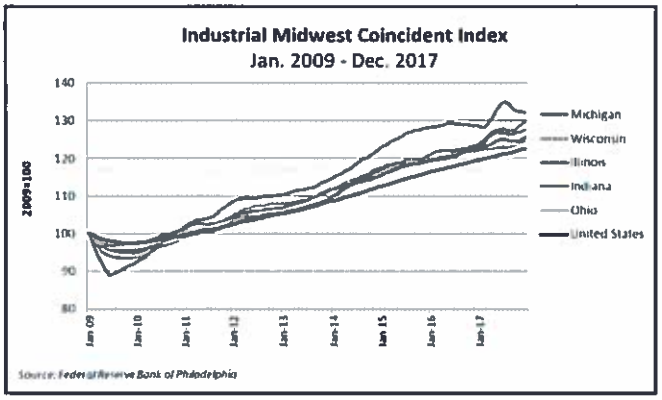
The Michigan Entrepreneurship Score Card has proven to be a valuable tool for understanding structural changes to Michigan's entrepreneurial economy over time. However, because it relies on data that takes up to two years for its providers to gather and process, readers may desire more recent quantitative evidence for analysis and decision-making.

In this year's Score Card, we are exploring a number of specific data points to help readers and policy makers become more current on the evolving state of Michigan's entrepreneurial economy. In this section, we introduce eight specific data sources we are calling "Trend Watch Indicators" to give insights into specific dynamics of Michigan's entrepreneurial economy over the relatively near term.

What do these Trend Watch Indicators suggest? While any initial prognosis is preliminary and should be treated with caution, our broad compilation of these 8 Trend Watch Indicators suggest that Michigan's existing businesses are proving to be resilient given the continued maturation of the business cycle. **Michigan's entrepreneurial economy, while showing signs of stress, is nonetheless holding up well. But caution signs are mounting, with the drop in new business formation rates and falling VC funding raising particular concern.**

Trend Watch Indicator #1: Michigan's State Coincident Index

Looking at the most recent State Coincident Index for Michigan, the economic prognosis for Michigan looks to be moderating. The State Coincident Index is a well-designed and tested monthly index of employment and wage/salary data prepared by the Federal Reserve Bank of Philadelphia. It is one of the best monthly trackers of a state's overall economic condition.[3] What Michigan's Coincident Index shows is that after hurting badly before and during the Great Recession, Michigan's economy took off in late 2009. For six years, Michigan's economy grew at a rate exceeding that of most other Midwest states and of U.S in general. Some deceleration then occurred in mid-2016, but Michigan's economy regained growth momentum in the first half of 2017. Yet, in the second half of 2017 one sees another slowdown leading to some lack of clarity for 2018.

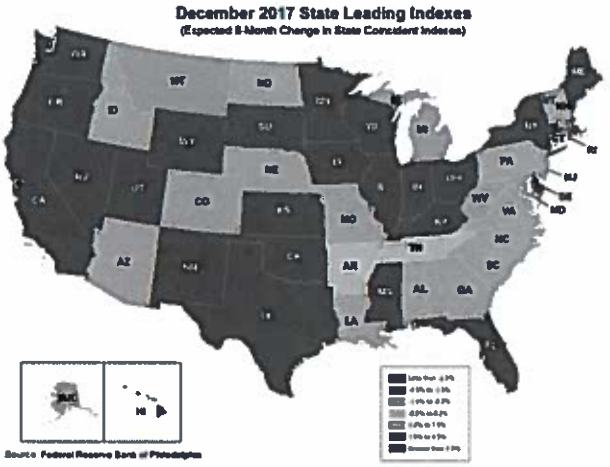


Trend Watch Indicator #2: Comerica Bank's Michigan Economic Activity Index

We see additional recent economic dynamics in Comerica Bank's Michigan Economic Activity Index, prepared monthly by Dr. Robert A. Dye. This index also indicated gains in the first half of 2017, followed by stalling conditions through much of the second half of 2017.[4] However, the index's February 1st 2018 report cites an uptick of two monthly gains as of November 2017 and looking ahead, Comerica's February 13th State Economic Outlook, Michigan reports: "Overall manufacturing conditions remain positive in Michigan. Non-auto related manufacturing is expected to show ongoing gains in 2018, supported by strong domestic and international economic conditions. NAFTA renegotiation is a wild card for the state in 2018."

Trend Watch Indicator #3: Michigan's State Leading Index

Looking forward more directly to the next six months, one can use the State Leading Indexes[5] prepared by the Federal Reserve Bank of Philadelphia. The State Leading Index is a sister index to the State Coincident Index and comprises metrics known to indicate forward movement in the economy such as exports and housing permits.



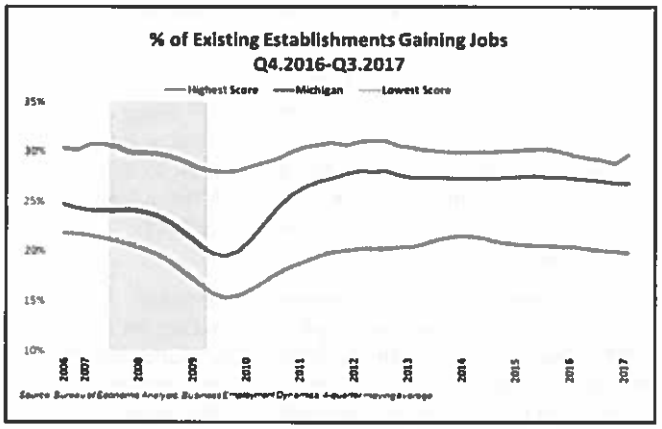
Economic growth outlook in December 2017, measured as a 3-month change in the State Leading Index, forecasts Michigan with a light green shading, which is the third best category for expected 6-month growth. Michigan's State's Leading Index was strong the first half of 2017, and then showed some deterioration beginning July 2017. The latest December report, however, moves Michigan up several notches in growth outlook for the first half of 2018 – an encouraging sign.

[3] As of January, 2017, the methodologies for producing these indices have been adjusted and improved upon. Therefor they are not strictly comparable to previous releases.
[4] www.comerica.com/insights/economic-commentaries/state-indexes/michigan.html
[5] https://www.philadelphiafed.org/research-and-data/regional-economy/indexes/leading/

Going into 2018, Michigan's State Leading Index suggests that Michigan is headed for moderately positive economic growth over the next six months, though growth is projected to be higher in neighbouring Midwest states.

Trend Watch Indicator #4: Breadth of Job Creation

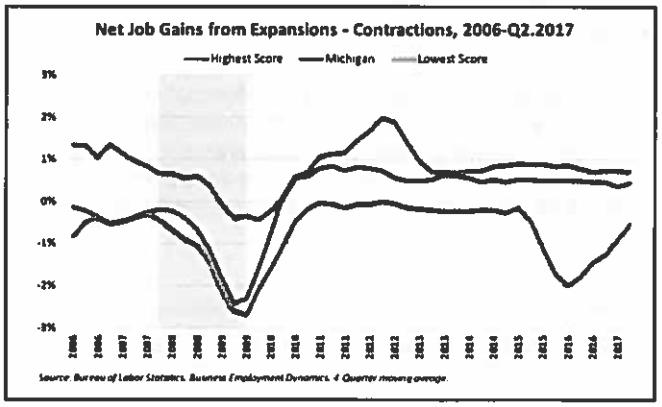
The percent of businesses (large and small) creating jobs in any quarter is a good measure of the job-creating dynamism of a state's economy. In good times, one usually sees at least 25% of existing businesses creating new net jobs in any quarter. This graph shows the percentage of establishments creating jobs by quarter, with Michigan bounded by the highest and lowest performing states. These data have a three-quarter lag so the graph below is up through Q3 2017.



After a rapid improvement starting in 2010, the Michigan job-creating engine plateaued in 2013. Along with highest and lowest performers Michigan presents a slight but noticeable downward trend since 2016. While this is a not unexpected given today's mature business cycle, it raises concerns if Michigan's rate further approaches the 25% threshold.

Trend Watch Indicator #5: Net Job Gains from Business Expansions Minus Contractions

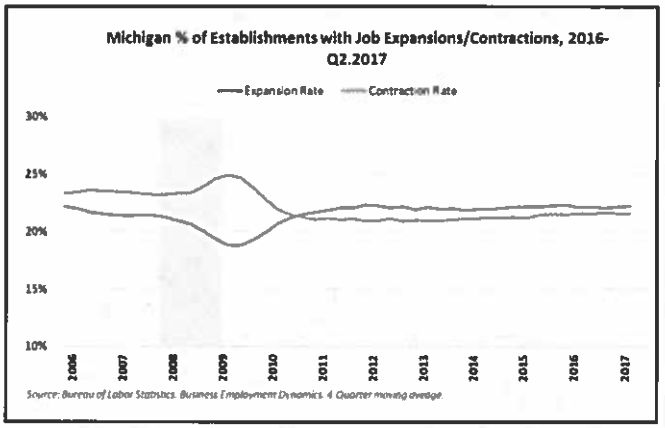
This metric shows the net jobs created from expansions minus contractions relative to the total number of jobs. It is a good aggregate indicator of the degree to which 'businesses in place' are taking on risks and embracing the challenge of success and failure. The higher the rate, the stronger the entrepreneurial economy.



With the share of existing Michigan business creating jobs slowing down, the net job contribution rate of Michigan's businesses has been stagnant as well. Yet, Michigan's performance is and has been close to the highest scoring state and, encouragingly, net job creation picked up slightly in Q2 2017.

Trend Watch Indicator #6: Business Expansion & Contraction Rates

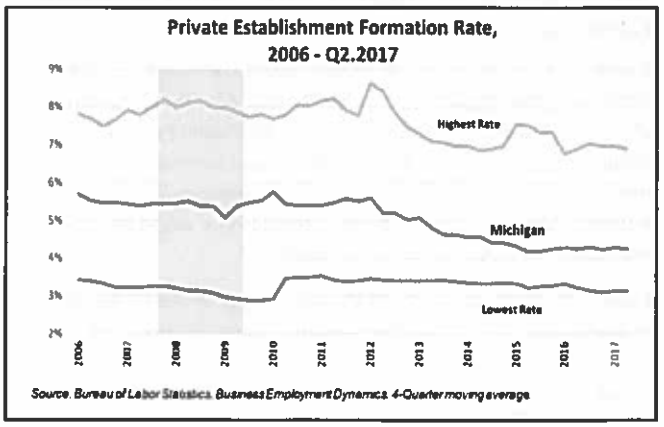
One of the most conspicuous signs of a dynamic and strong business economy is a business expansion rate outperforming the contraction rate. Expansion and contraction rates below are measured in terms of net jobs.



Michigan's expansion rate of existing business turned above the contraction rate in Q3 2010 and has not looked back throughout the post-recession recovery. Yet, the gap between expansion and contraction rates has narrowed this past year. It should be watched closely for signs of a potential emerging economic downturn.

Trend Watch Indicator #7: Michigan's Private Establishment Formulation Rate

Michigan's Private Establishment Formation Rate shows the quarterly rate of new business creation as a percentage of all businesses. Michigan, in line with top performing states, has shown a significant trend decline since 2010, with stabilization since 2015.

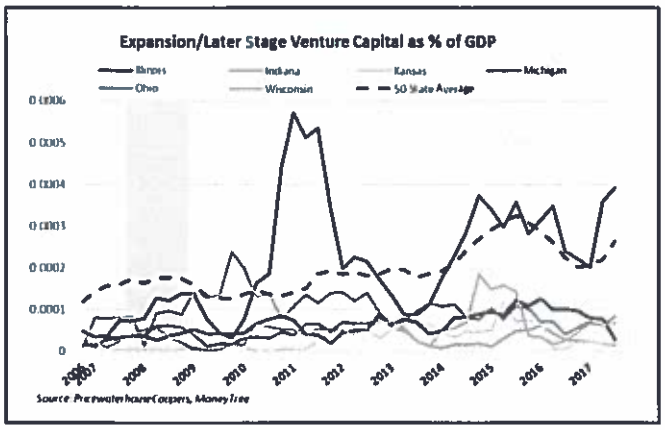


The formation of new businesses is part of the "life blood" of any state's entrepreneurial economy. There is cause for

concern given that Michigan's current establishment formation rates are considerably lower than even pre-recession establishment formation rates.

Trend Watch Indicator #8: Expansion/ Later Stage Venture Capital

Only approximately 3,000 U.S. small businesses per year receive venture capital, and funding focuses largely on two sectors: information technology and health care. Consequently, tracking seed and startup finance to judge a state's business dynamism can be dubious. However local access to expansion/later stage financing often makes it much easier for promising Stage 1 and 2 companies to raise and deploy additional investment capital to significantly accelerate their growth rates -- and turn them into solid job creators.



Michigan has not been highly successful in attracting expansion/later stage venture capital, placing below the 50-state average. However, it has performed usually near the middle or better among its Midwest peers. The only neighboring state performing consistently better then Michigan has been Illinois. All expansion/later stage venture capital funding declined beginning 2015 and Michigan's downturn accelerated in 2017. This deserves watching closely as declining venture capital can be a detriment to the success of rapidly growing companies, especially technology-focused ventures.

Importance of Supporting Second Stage Company Growth

Numerous indicators in this year's Score Card suggest the post-recession growth rate of Michigan's economy may be slowing. This would not be surprising as business growth often begins to slow as the business cycle's expansion phase matures. When a potential economic slowdown approaches, how can Michigan avoid catching pneumonia when the rest of the nation's economy catches a cold?

More than 15 years ago, SBAM set out a goal for Michigan to become a "Top 10" entrepreneurial state. In pursuit of this goal, SBAM first created the Michigan Entrepreneurship Score Card to create the structure to better understand what it actually means to be a "Top 10" state. Then about 10 years ago, SBAM introduced the concept of "Economic Gardening" to Michigan's policy makers and economic development community. Economic gardening is a "grow your own" approach to economic development that focuses on providing specific types of high-end support for local growth-focused Stage 2 companies to accelerate their success.

In 2010, SBAM commissioned research that resulted in a white paper entitled, *Blueprint for Propelling a New Economic Direction of Michigan*. In this white paper, SBAM proposed a change in Michigan's economic development priorities from corporate attraction incentive-based strategies or "hunting" to embracing and supporting Michigan's existing entrepreneurs. Indeed, SBAM's recommendation was for the state to provide economic gardening services to "500 to 600 companies per year after startup, with the number growing over time."[6]

The potential impact for SBAM's 2010 recommendation continues to grow. In 2016, more than 109,000 Stage 2 companies in Michigan accounted for 2.5 million private sector jobs, far more than any other business stage group and 40% of Michigan's private sector jobs. Further, Michigan's Stage 2 companies created the most of the net new jobs by large margins.[7]

Nearly 15 years of Michigan's Score Card data now strongly suggest that **supporting the continuing growth of Michigan's Stage 2 companies is a key foundational strategy for Michigan's long-term economic prosperity.[8] Of the 1.13 million net jobs added to the Michigan economy the past 15 years, 51% have been created by Stage 2 businesses. Across the state, second stage** companies have demonstrated the ability to create jobs, diversify the economy, react nimbly to new opportunities and contribute consistently to the quality of life in their communities.

To help Stage 2 companies accelerate growth the state would do well to understand what second stage company leaders actually seek as needed assistance. Numerous surveys[9] conducted in Michigan point to common growth support needs identified by second stage CEOs:

- Market research, marketing methods and selling
- Recruiting, developing and retaining employees
- Identifying and using new technologies and processes
- Accessing growth capital (e.g. loans, investment and grants)
- Management and administration issues
- Peer learning networking with other Stage 2 company CEOs

Fortunately, Michigan today has a sound foundation of economic development programs and services that can be scaled up to provide growth-focused assistance to many of Michigan's Stage 2 companies. In 2011, the incoming Snyder administration agreed with SBAM's economic gardening

[6] *Blueprint for Propelling a New Economic Direction for Michigan*. SBAM. October 2010.
[7] See www.youreconomy.org/
[8] It must be noted that Stage 1 companies are and have also been a major source of job growth over the past 10-15 years, and that Michigan's economy benefits significantly from their success as well.
[9] (1) Survey in 2016 of over 1,400 SBAM members and SBDC clients conducted by SVPI, LLC and Public Policy Associates. (2) 2014 telephone survey of SBAM members by Shepherd Advisors, LLC., (3) 2014 survey of SBAM members by Public Policy Associates for the Sense of Place Council found that access to a talented workforce was the most important factor for selecting a new location, after availability of broadband internet.

proposal. They prioritized economic gardening initiatives and rebalanced staff and financial resources of the MEDC to better serve Michigan's existing small businesses in numerous ways. Specific programs created that still support growth of Stage 2 companies include:

- An Economic Gardening Service that provides qualified, growth-focused second stage companies with professional and technical assistance to help CEOs build stronger teams, identify new markets and sharpen their competitive edge using high-end corporate research tools. Since late 2011, MEDC's Economic Gardening service has provided nearly 500 service engagements for more than 300 Michigan Stage 2 companies. At current funding levels, MEDC's Economic Gardening program provides services for 50 engagements per year.
- "Pure Michigan Business Connect" is an innovative new supplier-matching service that facilitates small and medium-sized enterprises' efforts to meet and sell to corporations and large organizations. Holding "Buyer-Supplier" summits in collaboration with trade groups and hosting a procurement opportunities database were successful tactics.
- Export assistance to help new and expanding exporters with technical advice, market introductions, matching grants and other services useful in facilitating new export market entry success. Recently, this team was recognized with a Presidential "E" award for excellence in exporting assistance and results.
- Talent management assistance, providing small business employers with a broad range of labor and management candidates.

Across the organization, MEDC has stressed the importance of growing small companies as a strategic and service planning focus, encouraging more attention and creativity to be paid to their needs.

In addition, SBAM along with the Michigan Small Business Development Centers (SBDC), MEDC, Edward Lowe Foundation and the Michigan Business Network (and its founder, Chris Holman) have developed the very successful "50 Companies to Watch" program which annually highlights 50 promising Michigan second stage growth companies. Since 2005, this initiative has selected and highlighted more than 700 successful, growth-focused Stage 2 companies. SBAM, Edward Lowe and the SBDC, along with the MEDC, today form a strong collaborative foundation for identifying and growing the pool of Stage 2 growth companies, and are positioned to provide even more robust future economic gardening-like efforts.

We believe Michigan has **thousands of growth-focused second stage companies** that can benefit from effective growth-acceleration support. Going forward, we are confident that Michigan has the experience and capabilities to support growth-acceleration of many more Stage 2 companies. Leveraging best practices from other states and its own learning over the last eight years, Michigan has a golden opportunity to augment and scale up support to hundreds of Michigan second stage companies a year. And by doing this, we believe Michigan can fundamentally reset its economic growth trajectory and indeed become a true and prosperous Top 10 entrepreneurial state.

SECTION 4
Michigan's Entrepreneurship Score Card Metrics

THE STATE OF MICHIGAN'S ENTREPRENEURIAL ECONOMY IN 2016

This section reports specifically on the Michigan's Entrepreneurship Score Card rankings for data year 2016, the latest year for which complete cross-state data is available. The same framework for description is used with the three unique Indexes:

- **Entrepreneurial Climate** measures known primary conditions for fostering entrepreneurial growth. Entrepreneurial Climate consists of three sub-indexes know to be primary external factors affecting entrepreneurial initiative: Research and Innovation, Financial and Institutional Capital and General Business Growth.
- **Entrepreneurial Change** measures how much business growth has occurred in the recent three years, using a three-year running average of various metrics.
- **Entrepreneurial Vitality** measures how much small and entrepreneurial business activity occurs in Michigan relative to other states.

The Great Recession hit Michigan's economy and the Score Card results showed dismal rankings in the recessionary years of 2007-09. Nonetheless, we observed data indicating entrepreneurial efforts were underway during those years. We reported encouraging signs of local and regional innovation and entrepreneurship initiatives taking place statewide. Subsequent fruits of that labor, state-wide consensus building, improvements to programs and public policy changes, resulted in much improved Score Card results post-2009 through 2013.

This year's report shows a leveling off of the dramatic improvement seen in the early post-recession years. Still, the improvement over the rankings 10 years ago is remarkable.

Michigan's 2016 Score Card Rankings for Entrepreneurial Climate, Change, and Vitality – Summary Results

National Performance *(1=best out of 50)*	2018 Score Card *Rank (2016 data)*	Change in Rankings From 2006 Data Year	2018 Score Card *Rating (2016 data)*	2017 Score Card *Rating (2015 data)*	2016 Score Card *Rating (2014 data)*	2015 Score Card *Rating (2013 data)*	2014 Score Card *Rating (2012 data)*
Entrepreneurial Climate	24	+15	***	***	***	**	***
Entrepreneurial Change	32	+18	***	**	****	***	***
Entrepreneurial Vitality	36	+2	*	**	*	**	**

Note: *The Score Card uses two methods to compare Michigan with the 49 other states rankings and ratings. Ranks are used because they are simple to understand and widely used.*

- ***Rankings** indicate Michigan's rank order among all 50 states (where 50 is last). But ranks may fail to discern competitive differences. As illustrated in the Methodology section, ten world-class male runners might each do better than 4 minutes in a one- mile race but finishing tenth place may not sound too impressive. Consequently, one needs a way to rate performance as well as rank it.*
- *The Score Card's **Five-Star Ratings** rate performance. Once underlying metric scores are calculated, the data is aggregated to produce state Index scores arrayed from high to low to determine the total range of scores. Each 20% of that range represents a star group -- from five-star to one-star. For example, a five-star state is one that falls into the top 20 percent of the range of scores. Not too infrequently the data in the Score Card is distributed such that a few states score exceptionally well on a metric or index, followed by a moderate number of gradually declining scores then winding out with a large number of underperformers. In such case, a state might rank around midpoint yet only obtain 1-star or 2-star rating. Such is the case for Michigan's Vitality score above.*

Michigan's **Entrepreneurial Climate,** now ranked 24, has continued to stay in a three- star rating, though its rank fell from the previous year. After 6 years of continuous increase in ranking, Michigan's Entrepreneurial Change slipped in 2015 to a rank of 47 but recovered somewhat in 2016 to a current rank of 32, while Entrepreneurial Vitality did not hold onto its improvement in rating in 2015, slipping back to a one-star rating from rank 30 in 2015 to a current rank of 36.

A further breakdown of each of these Michigan's Entrepreneurial Indexes follows.

Entrepreneurial Climate

Michigan's Entrepreneurial Climate, which highlights supporting conditions for Michigan's entrepreneurial economy ranks 24. The state slipped out of the Top 15 in 2013, after being there between 2010 and 2012. The current rank includes continuing relative strength in general business growth, and in research/innovation to support current and future entrepreneurial initiatives. The Financial and Institutional Capital component of Entrepreneurial Climate is the only one of the three components that scores below the mid-point, and even here most related metrics show improvement from 10 years ago. Notably, Michigan's Industry and University R&D performance and Patents per Worker continues to rank in the Top 10.

The metrics detail underlying Michigan's Entrepreneurial Climate Index, plus the change in relative ranking from 10 years ago, and the page number where comparative metric detail for all 50 states can be found, is shown below:

Michigan's Entrepreneurial Climate Index
(Note: Index data is mostly from 2016, the last year all-state data is available)

Metrics	2016 Data Year	Change in Rank From 2006 Data Year	Page #
ENTREPRENEURIAL CLIMATE	**24**	**+15**	**48**
Research & Innovation	**13**	**+4**	**49**
University R&D Performance	6	+12	50
Patents per Worker	7	+2	50
Patents Per R&D Dollar*	35	+10	51
University Licenses to Small Businesses & Startups	14	+2	51
NSF Funding Rate	25	-5	52
University Royalty/License Income	11	+1	52
Entrepreneurial Programs	9	+13	54
Industry R&D Performance	5**	-3	53
Federal R&D	20**	+21	53
Financial & Institutional Capital	**32**	**+0**	**55**
Seed/Early Stage Venture Capital	30	-1	56
2nd/3rd Stage Venture Capital	22	+6	56
IPO Financing	14	+2	57
SBIC Financing	37	+3	57
SBIR Financing	22	0	58
STTR Financing	29	+1	58
Bank Commercial and Industrial Lending	43	-33	59
Business Incubators	11***	+27	60
Private Small Business Lending	16	+2	59
General Business Growth	**15**	**+35**	**61**
Gross Domestic Product Growth	13	+37	62
Manufacturing Capital Investment Growth	44	-16	62
Foreign Business Employment Growth	29**	-	63
Export Growth	26	+13	63
Export-related Jobs	16	-3	64
Large Business Payroll Growth	14**	+35	64
Building Permits Growth	18	+32	65
Fortune 500	11	-3	65
Private Business Profit Growth	5**	+44	66
Renewable Energy Use	31	+4	66
Green Industries	33	-1	67

** In the previous version of the metric, the weight did not include all government R&D spending, hence the magnitude and ranking are quite different in the 2016 Data Year metric.*
*** Data from 2015 was carried forward to 2016 for purposes of this report.*
**** Data from 2014 was carried forward to 2016 for purposes of this report.*

Entrepreneurial Change

Michigan's **Entrepreneurial Change,** which measures average growth of a number of key entrepreneurial growth/decline metrics over the past three years, showed marked improvement from ranking 38 in data year 2010 to ranking 10 in data year 2013, but recently down to rank 47 in 2015 with some signs of recovery to rank 32 in 2016. All underlying metrics improved when compared with the data from 10 years ago, indicating a long-term trend in broad improvement for Michigan's entrepreneurs. 2016 results reflect two metrics with 2015 data and three with 2016 data.

The metrics detail underlying Michigan's Entrepreneurial Change Index, plus the change in relative ranking from 2006 data, and the page number where the metric detail for all 50 states can be found, is shown below:

Michigan's Entrepreneurial Change Index
(Note: Index data is mostly from 2016, the last year all-state data is available)

Metrics	2016 Data Year	Change in Rank From 2006 Data Year	Page #
ENTREPRENEURIAL CHANGE	**32**	**+18**	**38**
Small Business Growth	34*	+13	39
Small Business Payroll Growth	22*	+18	39
Increase in High Performance Firms	21	+20	40
Net Establishment Entrants Increase	28	+11	40
Proprietor's Income Growth per Proprietor	30	+11	41

** Data from 2015 was carried forward to 2016 for purposes of this report.*

Entrepreneurial Vitality

Michigan's **Entrepreneurial Vitality** is a measure of the general level of small business and entrepreneurial activity relative to all other states. Entrepreneurial Vitality provides a sense of the underlying structural strength of Michigan's entrepreneurial economy.

Even with the general economic recovery post-recession, Michigan's Entrepreneurial Vitality continues to be weak compared to most other states. As shown below, while the state continued to rank below midpoint (i.e. a rank of 25), it nonetheless showed some improvement from 10 years ago. Contributing to that improvement has been noticeable gains in the state's five-year business survival rate and increased share of high performance firms. This year the state's high-performance firms and establishment turnover ranked substantially lower. Some other metrics of note both last year and this year are disappointing rankings for university spinouts and self-employment rates.

The metrics detail underlying Michigan's Entrepreneurial Vitality Index, plus the change in relative ranking from 2006 data, and the page number where the metric detail for all 50 states can be found, is shown below:

Michigan's Entrepreneurial Vitality Index
(Note: Index data is mostly from 2016, the last year all-state data is available)

Metrics	2016 Data Year	Change in Rank From 2006 Data Year	Page #
ENTREPRENEURIAL VITALITY	**36**	**+2**	**42**
Net Establishment Entrants	20	+29	43
Establishment Turnover	40	-24	43
Nonfarm Self-Employment	33	+7	44
University/Research Institutions Spinoffs	31	-16	44
High Performance Firms	41	-14	45
IPO Awards	25	-4	45
SBIR Awards	20	+4	46
STTR Awards	21	-1	46
SBIC Awards	26	+5	47
5-Year Establishment Survival	11	+27	47

Gauging 2016's Entrepreneurial Momentum – the Sensitivity Index

To get a snapshot of very recent changes in entrepreneurial economy direction and momentum, the Score Card team developed the **SESI, State Entrepreneurial Sensitivity Index**. First used in the 2009/10 edition of the Score Card, SESI is a relatively new and still improving experimental index that attempts to compare how much very recent change (12-18 months) in business dynamism has occurred over the most recent complete year of data.

National Performance *(1=best out of 50)*	2018 Score Card Rating & *Rank (2016 data)*	2006 to 2016 Data Year Change in Rankings	2017 Score Card *Rating (2015 data)*	2016 Score Card *Rating (2014 data)*	2015 Score Card *Rating (2013 data)*	2014 Score Card *Rating (2012 data)*
SESI	** / 22	-7	**** / 29	** / 43	* / 47	*** / 10

After a substantial slippage in the SESI rank in the 2015 and 2016 Score Cards (based on 2013 and 2014 data), Michigan has improved its entrepreneurial economy dynamism significantly to a current rank of 22, but its star rating slipped to 2 stars in the most recent year. This means that while there are fewer states ahead of Michigan (reflected in Michigan's higher ranking), the distance between Michigan and the leader in terms of the actual metric scores has actually become much wider (reflected in Michigan's lower star rating[1]).

The SESI is by nature a volatile index. Because this Index measures one-year change and because the Score Card methodology allows the distance to the leader and bottom performer to be taken into account, wide variation can occur from year to year between ratings and rankings. For example, establishment startup rates can vary substantially from year to year but the difference between leaders and bottom performers could be very small such that looking at rankings alone would overstate the difference unnecessarily. In such cases ratings are a more useful measure for comparison and interpretation in terms of how far a state has to catch up. Throughout the past decade, Michigan's SESI ratings have been two- and three-star with the exception of the one-star rank in the 2015 Score Card and the 4-star rating in the 2017 Score Card.

[1] Note that the rating system intentionally highlights the spread between an average performing state and the leaders.

Secondary Driver Metrics – Contributing to Michigan's Broader Entrepreneurial Economy

In the background, Michigan's entrepreneurial economy is indirectly supported and constrained by a host of state and national drivers. The Score Card focuses on the following state-level secondary drivers: education, workforce preparedness, business environment, connectivity, and quality of life. The underlying metrics of these secondary drivers, and the pages where it shows comparisons with other states, are shown below:

Education & Workforce Preparedness

	Rank	Page		Rank	Page
EDUCATION	**31**	**68**	**WORKFORCE PREPAREDNESS**	**13**	**78**
K-12 Education	**31**	69	High School Only Diploma Attainment	25	79
Advanced Placement Score	28	70	Post-secondary pre-BA Attainment	11	79
Public High School Graduation Rate	40	70	Bachelor's Degree Attainment	24	80
SAT Performance	43	71	Physical Science & Engineering Workers	2	80
ACT Score	6	71	Technologist and Technician Workers	20	81
NAEP Mathematics	32*	72	Innovation Workers Outside High Tech Employment	30	81
NAEP Reading	34*	72	High-tech Manufacturing Employment	1	82
			High Tech Services Employment	12	82
Postsecondary Education	**28**	**73**	Adult Education	37*	83
4yr.+ Tech Credentials	6*	74	Skilled Immigrants	21	83
Pre-BA Tech Credentials	30*	74			
4-yr. Knowledge Degrees Excl. Tech Fields	18*	75			
College Migration	38**	75			
Top Ranked Undergraduate Programs	15	76			
Top Ranked Graduate Programs	7	76			
Two-Year College Costs	48	77			
Four-Year College Costs	36	77			

Business Environment
(Costs of Business, Productivity & Labor Supply, Regulatory, Legal)

	Rank	Page		Rank	Page
BUSINESS COSTS	**31**	**84**	**PRODUCTIVITY & LABOR SUPPLY**	**42**	**90**
Unit Labor Cost	34	85	Net Domestic Migration Rate	30	91
Energy Costs	35	85	Prime Working Age Residents	44	91
Workers Compensation Premiums	7*	86	Gross Domestic Product per Job	29	92
Workers' Compensation Costs	17*	86	Service Sector Productivity	31	92
Unemployment Insurance Costs	46	87	Manufacturing Value Added per Hour	39	93
Unemployment Insurance Structure	47	87	Labor Force Participation	37	93
Business Tax Burden	1	88			
State Business Tax Structure	8	88			
Metro Industrial Rents	14	89			
Small Business Health Care Premiums	43	89			
LEGAL ENVIRONMENT	**26**	**94**			
Malpractice Costs	42	95			
Business Liability Costs	10*	95			
Liability System Reputation	21	96			

Getting Around, Getting Connected
(Physical Infrastructure and Digital Connectivity)

	Rank	Page		Rank	Page
PHYSICAL INFRASTRUCTURE	**38**	**97**	**DIGITAL CONNECTIVITY**	**46**	**102**
Highway Quality	47	98	Broadband Connections	42	103
Bridge Quality	37	98	Broadband Coverage	38	103
Major Market Air Access	30	99	Internet Speed	16	104
Airport Performance	22	100	Next Generation Internet	47	104
Water Systems	5	100	Rural Internet Access	25*	105
Energy Reliability	17	101			
Transit Use	29	99			

Quality of Life

	Rank	Page		Rank	Page
QUALITY OF LIFE	**16**	**106**	***Pocket Bock Indicators***	**19**	**117**
Civic Energy & Harmony	**30**	**107**	Urban Cost of Living	16**	118
Charitable Giving	30*	108	Urban Housing Affordability	23	118
Voter Turnout	13	108	Homeownership Rates	3	119
Gender Equity	26	109	Unemployment Rate	27	119
Racial Equity	23	109	Per Capita Disposable Income	32	120
Hate Crimes	33	110	State and Local Tax Burden	32	120
Generational Creative Class	26	110			
Nonprofits	33	111			
Lifestyle & Play	**38**	**112**	***Health & Safety***	**14**	**121**
Time to Work	27	113	Lack of Health Insurance	11	122
Leisure Sector Employment	39	114	Crime Index	14	122
Parkland	11*	114	Law Enforcement Personnel	43	123
Golf Courses	12	115	Healthcare Access	25	123
Trails	33	115	Clean Air	25	124
Cultural Institutions	41	116			
Historical Buildings	30	113			

LOOKING BACK – MOVING FORWARD

Much work remains to be done if Michigan is to be counted among the nation's top entrepreneurial states. States can only dig their way out of fiscal problems or residual economic doldrums by sustained economic growth. In today's fast-changing economy, Michigan's sustained growth has to include an increasingly diverse and successful pool of entrepreneurs innovating in substantial ways.

Much can be learned from Michigan's accomplishments between 2012 and 2016. The table below lists the six Score Card metrics that stand out as five-year gainers for Michigan. Each of these metrics improved in rank by 10 points or more since 2012. The list also shows some overlap with top performers in previous Score Cards such as Growth in Establishments Gaining Jobs, Business Liability Costs, and Hate Crimes.

Years (>10 Ranks of Positive Change)

Growth in Net Expansion Job Gains
Business Liability Costs
Hate Crimes
SBIC Awards
ACT Score
Net Domestic Migration Rate
Generational Creative Class
Gender Equity

SECTION 5
Score Card Indexes and Detailed Metrics

STATE ENTREPRENEURIAL SENSITIVITY INDEX

An entrepreneurial economy is characterized by high 'churning' - people on the move; businesses starting/failing and coming/going; jobs created/destroyed; occupations emerging/changing; innovated products succeeding/failing; and continuous productivity improvement. The consequences from all this dynamism are: 1) interesting and constantly changing jobs and 2) wealth creation. Requisite entrepreneurship behaviors can be found broadly across many sectors, including private, non-profit, government Dand civic sectors. These behaviors are characterized by thinking outside the box with the intent to grow/take on new initiatives with calculated risk; and utilizei networks between colleagues and competitors to forge new ways to do things better, faster, less-expensively and greener.

The State Entrepreneurial Sensitivity Index (SESI) is an experimental Index intended to detect very recent signs of entrepreneurial change. Now with 10 years of updated and improved data collected on all 50 states, the new SESI uses select metrics for which data is available for the most recent full calendar year or the previous one. These data are analyzed as a 'change index,' indicating up-tick or downtick in private entrepreneurship from the prior year.

This Index is a combination of six metrics – three measuring different aspects of entrepreneurial job creation, two measuring business creation/growth and the sixth measuring business survival. These six metrics capture key aspects of a dynamic innovation economy, where entrepreneurship is present in all layers of the private economy, from new business activity to expansion of existing firms and across all commercial sectors.

Midwest Performance

	2016	2014	2012
Wisconsin	***	**	**
Michigan	**	**	***
Indiana	**	***	***
Illinois	**	**	***
Ohio	*	**	**

Rank	State	2016	2014	2012
1	Washington	*****	*	***
2	North Dakota	*****	**	**
3	Minnesota	****	****	**
4	Alaska	****	**	****
5	Texas	****	**	***
6	West Virginia	****	**	**
7	Maine	***	**	***
8	Missouri	***	***	**
9	Vermont	***	****	**
10	Wyoming	***	**	**
11	Nevada	***	**	***
12	Wisconsin	***	**	**
13	Louisiana	***	*	****
14	Arizona	***	***	**
15	Idaho	***	***	*****
16	Utah	***	*	***
17	California	**	**	***
18	Oklahoma	**	**	****
19	Mississippi	**	***	****
20	Kentucky	**	**	***
21	Alabama	**	***	**
22	**Michigan**	**	**	***
23	Colorado	**	**	***
24	Indiana	**	***	***
25	New Jersey	**	****	**
26	South Carolina	**	**	**
27	Oregon	**	***	***
28	North Carolina	**	***	***
29	New Hampshire	**	**	***
30	New York	**	**	***
31	Kansas	**	**	***
32	Illinois	**	**	***
33	Tennessee	**	**	**
34	Virginia	**	****	***
35	Hawaii	**	***	*****
36	South Dakota	**	*	***
37	Nebraska	**	**	*
38	Pennsylvania	**	****	**
39	Iowa	**	***	**
40	Montana	**	*****	****
41	Georgia	*	***	***
42	Rhode Island	*	***	***
43	Florida	*	***	***
44	Maryland	*	*****	**
45	Arkansas	*	****	*
46	Delaware	*	*	*****
47	Connecticut	*	**	**
48	Massachusetts	*	***	**
49	Ohio	*	**	**
50	New Mexico	*	*****	*****

GROWTH IN ESTABLISHMENTS GAINING JOBS

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs)
	50-State Average		*-3.2%*	*-4.6%*
1	Washington	250.0	22.3%	19.3%
2	North Dakota	155.4	2.9%	4.6%
3	Utah	143.1	1.5%	-1.5%
4	New Mexico	127.3	-0.4%	6.5%
5	Nevada	124.7	-0.7%	-0.7%
6	Virginia	120.9	-1.2%	-1.9%
7	Idaho	115.6	-1.8%	-3.6%
8	Arizona	115.3	-1.8%	-4.4%
9	Mississippi	111.8	-2.2%	-4.6%
10	Rhode Island	110.9	-2.3%	-1.9%
11	California	110.0	-2.5%	-7.3%
12	Minnesota	109.5	-2.5%	-3.6%
13	Wisconsin	109.4	-2.5%	-5.1%
14	Iowa	108.6	-2.6%	-7.3%
15	Oregon	107.7	-2.7%	-3.8%
16	**Michigan**	**106.8**	**-2.9%**	**-2.2%**
17	Louisiana	105.2	-3.0%	-3.8%
18	West Virginia	104.8	-3.1%	-3.4%
19	Indiana	104.2	-3.1%	-5.3%
20	Florida	103.5	-3.2%	-7.1%
20	Alabama	103.5	-3.2%	-6.5%
22	Illinois	100.8	-3.5%	-4.7%
23	Kentucky	100.5	-3.6%	-1.7%
24	Texas	100.1	-3.6%	-2.9%
25	Oklahoma	100.1	-3.6%	-2.9%
26	Maryland	99.9	-3.6%	-4.4%
27	Hawaii	98.9	-3.8%	-1.9%
28	Ohio	98.5	-3.8%	-5.3%
29	Kansas	98.3	-3.8%	-6.2%
30	Delaware	97.0	-4.0%	-4.4%
31	Tennessee	96.8	-4.0%	-7.7%
32	Colorado	96.3	-4.1%	-4.8%
33	North Carolina	95.6	-4.2%	-7.9%
34	Vermont	95.2	-4.2%	-7.0%
35	New York	93.7	-4.4%	-6.9%
36	South Carolina	92.0	-4.6%	-8.8%
37	New Jersey	88.5	-5.0%	-5.4%
38	Alaska	86.9	-5.2%	-3.5%
39	South Dakota	85.3	-5.4%	-6.5%
40	New Hampshire	84.5	-5.5%	-9.8%
41	Nebraska	83.5	-5.6%	-5.2%
42	Wyoming	81.5	-5.8%	-9.7%
43	Georgia	81.5	-5.8%	-9.7%
44	Pennsylvania	79.8	-6.0%	-6.9%
45	Connecticut	79.0	-6.1%	-9.7%
46	Massachusetts	78.4	-6.2%	-6.6%
47	Maine	78.2	-6.2%	-11.8%
48	Missouri	70.5	-7.1%	-9.6%
49	Montana	58.6	-8.6%	-5.2%
50	Arkansas	52.1	-9.3%	-10.6%

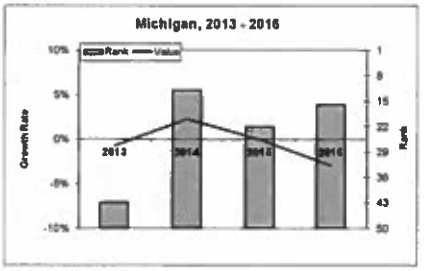
Growth in percent of establishments gaining jobs, 2015-16

This metric measures the breadth of job creation across businesses, regardless of business size or industry. In good times, 30-32 percent of businesses are creating jobs at any given time. States that sustain above that level over a business cycle are exemplars of healthy, diversified dynamism. The above table shows the percent change in the share of establishments gaining jobs in each state.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Growth Rate	Rank
Wisconsin	-2.5%	13
Michigan	**-2.9%**	**16**
Indiana	-3.1%	19
Illinois	-3.5%	22
Ohio	-3.8%	28



SELF-EMPLOYMENT GROWTH DIFFERENTIAL

Rank	State	Score	Growth Differential	Change, 2013-2016 (Abs.)
	50-State Average		*1.10%*	*0.3%*
1	North Dakota	175.9	5.44%	4.8%
2	Wyoming	161.4	4.61%	2.5%
3	West Virginia	148.7	3.89%	1.8%
4	Alaska	140.9	3.45%	2.8%
5	Louisiana	136.2	3.18%	1.2%
6	Oklahoma	120.9	2.31%	1.1%
7	New Mexico	120.2	2.26%	2.5%
8	Vermont	114.9	1.96%	1.4%
9	Kansas	110.8	1.73%	-0.3%
10	Iowa	108.1	1.58%	1.8%
11	Connecticut	107.1	1.52%	0.4%
12	Kentucky	106.5	1.49%	1.2%
13	Illinois	106.4	1.48%	0.6%
14	Pennsylvania	105.8	1.45%	-0.7%
15	South Dakota	104.8	1.39%	-0.3%
16	Mississippi	104.6	1.38%	-0.6%
17	Wisconsin	104.4	1.37%	1.5%
18	Ohio	103.3	1.30%	0.6%
19	Nebraska	102.7	1.27%	0.7%
20	Maine	102.6	1.26%	0.3%
21	New York	101.9	1.22%	0.1%
22	Indiana	101.1	1.18%	1.0%
23	Hawaii	101.0	1.17%	-0.4%
24	Montana	100.9	1.16%	1.3%
25	Arkansas	100.0	1.12%	0.5%
26	Minnesota	100.0	1.12%	1.5%
27	Alabama	100.0	1.11%	1.2%
28	Virginia	99.4	1.08%	-0.4%
29	Missouri	98.9	1.05%	1.3%
30	Delaware	98.8	1.04%	0.7%
31	Rhode Island	97.2	0.95%	0.0%
32	Maryland	95.6	0.86%	-2.4%
33	**Michigan**	**95.2**	**0.84%**	**1.5%**
34	New Jersey	93.2	0.73%	-1.2%
35	Texas	88.9	0.48%	-0.2%
36	New Hampshire	87.4	0.40%	-0.5%
37	Tennessee	86.0	0.32%	0.1%
38	North Carolina	85.6	0.29%	-0.3%
39	South Carolina	84.2	0.21%	0.1%
40	Washington	80.2	-0.01%	0.0%
41	Colorado	79.1	-0.07%	-0.1%
42	California	78.5	-0.11%	-0.1%
43	Oregon	77.4	-0.17%	0.1%
44	Georgia	77.2	-0.18%	-1.0%
45	Arizona	77.2	-0.19%	-0.2%
46	Idaho	68.9	-0.66%	-0.4%
47	Nevada	68.1	-0.70%	-2.1%
48	Utah	67.6	-0.73%	-0.2%
49	Florida	60.7	-1.12%	-3.0%
50	Massachusetts	54.6	-1.47%	-4.7%

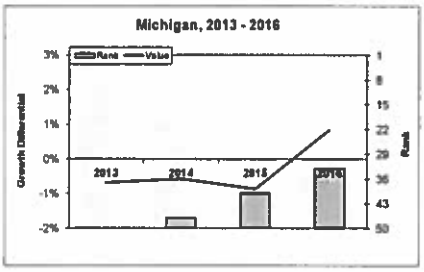
Difference between self-employment and total employment growth, 2015-16

The self-employed are the basis for new employer firms. When self-employment grows faster than total jobs, it is a sign of entrepreneurial dynamism, whether it is due to 'push forces' (loss of tenured jobs forces people to venture out on their own) -- or due to 'pull forces' (good economic times make venturing out more lucrative). The above table shows the growth in the number of non-farm proprietors less total job growth.

Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2016

State	Growth Differential	Rank
Illinois	1.5%	13
Wisconsin	1.4%	17
Ohio	1.3%	18
Indiana	1.2%	22
Michigan	**0.8%**	**33**



GROWTH IN JOB GAINS BY NET EXPN. BUSINESSES

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs)
	50-State Average		*-40.1%*	*-33.5%*
1	Texas	*182.2*	140.0%	161.4%
2	Alaska	137.9	46.2%	76.9%
3	Nevada	132.5	34.8%	1.4%
4	Kansas	127.9	25.0%	-195.0%
5	Washington	119.8	7.7%	43.0%
5	Minnesota	119.8	7.7%	23.1%
7	Virginia	112.8	-7.1%	50.0%
8	South Carolina	111.4	-10.0%	-130.0%
9	Colorado	110.9	-11.1%	-15.0%
10	Indiana	110.2	-12.5%	-39.8%
11	Michigan	108.7	-15.8%	-1.5%
12	Vermont	108.3	-16.7%	38.9%
13	New Hampshire	107.8	-17.6%	-167.6%
14	Florida	107.7	-17.9%	-44.2%
15	Georgia	107.1	-19.2%	-58.1%
16	Idaho	105.5	-22.6%	11.9%
17	Ohio	105.2	-23.1%	-39.7%
18	South Dakota	104.3	-25.0%	-61.4%
18	Arizona	104.3	-25.0%	-15.5%
20	California	103.8	-26.1%	-15.0%
21	Kentucky	102.2	-29.4%	-29.4%
22	Utah	101.8	-30.3%	-8.9%
23	Oregon	101.5	-31.0%	-54.8%
24	Wisconsin	100.4	-33.3%	9.5%
24	Alabama	100.4	-33.3%	-33.3%
26	Maryland	99.6	-35.0%	40.0%
27	New Jersey	97.8	-38.9%	23.6%
28	North Carolina	96.2	-42.3%	-80.8%
29	West Virginia	95.9	-42.9%	-42.9%
29	Massachusetts	95.9	-42.9%	-42.9%
31	Pennsylvania	94.7	-45.5%	-90.9%
31	New York	94.7	-45.5%	-112.1%
33	Montana	94.3	-46.2%	-7.3%
34	Wyoming	93.6	-47.8%	402.2%
35	Missouri	92.5	-50.0%	-200.0%
35	Maine	92.5	-50.0%	-92.9%
37	Tennessee	89.2	-57.1%	-78.6%
38	Nebraska	88.6	-58.3%	-58.3%
38	Illinois	88.6	-58.3%	-58.3%
40	Arkansas	87.3	-61.1%	138.9%
41	Louisiana	87.1	-61.5%	-28.2%
42	Hawaii	86.3	-63.2%	-22.4%
43	Rhode Island	77.3	-82.4%	-115.7%
44	North Dakota	76.1	-84.7%	-59.7%
45	Delaware	75.9	-85.2%	-68.5%
46	Oklahoma	72.3	-92.9%	-47.4%
47	Connecticut	68.9	-100.0%	-60.0%
48	Mississippi	60.6	-117.7%	-92.6%
49	Iowa	45.3	-150.0%	-200.0%
50	New Mexico	*-25.5*	-300.0%	-228.6%

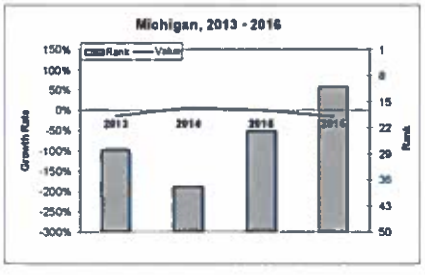
Growth in net job gains from establishment expansions as a share of total jobs, 2015-16

Existing businesses are the major contributors to job growth. This metric shows the net jobs created from expansions minus contractions relative to the total number of jobs. It is a good aggregate indicator of the degree to which 'businesses in place' are taking on risks and embracing the challenge of success and failure.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Growth Rate	Rank
Indiana	-12.5%	10
Michigan	**-15.8%**	**11**
Ohio	-23.1%	17
Wisconsin	-33.3%	24
Illinois	-58.3%	38



GROWTH IN ESTABLISHMENT FORMATION RATE

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs)
	50-State Average		*-0.6%*	*-0.1%*
1	Minnesota	148.9	20.0%	38.3%
2	Missouri	147.5	19.4%	27.8%
3	Maine	144.4	18.0%	20.9%
4	Vermont	126.1	10.1%	6.1%
5	Alaska	125.2	9.7%	20.2%
6	West Virginia	124.0	9.2%	11.5%
7	Montana	119.7	7.3%	13.6%
8	Texas	116.6	6.0%	6.0%
9	Massachusetts	114.2	4.9%	1.4%
10	Oklahoma	111.9	3.9%	1.1%
11	Georgia	109.5	2.9%	2.9%
12	Kentucky	109.2	2.8%	-3.7%
13	Nevada	107.8	2.2%	1.4%
14	Mississippi	107.7	2.1%	3.2%
14	Alabama	107.7	2.1%	-0.1%
16	Hawaii	107.4	2.0%	7.9%
17	Tennessee	107.3	1.9%	5.9%
18	Idaho	106.1	1.4%	-3.8%
19	California	106.0	1.4%	2.8%
20	Wisconsin	105.0	0.9%	0.0%
21	Washington	104.9	0.9%	-0.7%
22	North Carolina	104.7	0.8%	5.2%
23	Illinois	102.8	0.0%	0.7%
23	Colorado	102.8	0.0%	-17.5%
25	Louisiana	100.5	-1.0%	3.7%
26	Arizona	99.5	-1.4%	2.3%
27	Arkansas	98.7	-1.8%	2.0%
28	Nebraska	98.6	-1.8%	-6.3%
29	Wyoming	98.5	-1.9%	-1.9%
30	North Dakota	96.0	-2.9%	9.2%
31	South Carolina	95.1	-3.3%	-17.9%
32	New Mexico	95.1	-3.4%	-8.7%
33	Oregon	94.9	-3.4%	-1.7%
34	Utah	94.5	-3.6%	-9.7%
35	Michigan	94.1	-3.8%	11.3%
36	Pennsylvania	93.3	-4.1%	1.8%
37	New York	93.2	-4.2%	-6.7%
38	Iowa	93.0	-4.3%	-8.7%
39	New Hampshire	92.8	-4.3%	-4.3%
40	South Dakota	90.9	-5.2%	-10.8%
41	Florida	89.1	-6.0%	-6.0%
42	Connecticut	88.7	-6.1%	-6.1%
43	Maryland	86.3	-7.1%	-5.4%
44	Delaware	84.8	-7.8%	-9.3%
45	New Jersey	84.4	-8.0%	-10.7%
46	Indiana	82.5	-8.8%	-8.8%
47	Rhode Island	81.5	-9.2%	-7.5%
48	Ohio	61.7	-17.8%	-22.4%
49	Kansas	59.1	-18.9%	-26.9%
50	Virginia	57.0	-19.9%	-5.4%

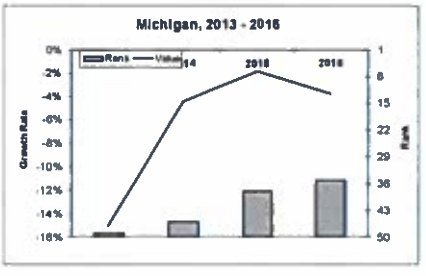
Growth in new establishments as a percent of all establishments, 2015-16

High-growth economies frequently display high business formation rates. These are economies with above average freedoms, flexibilities and motivations to try new ventures. The establishment formation rate is not colored by industry type, firm size, or socioeconomic factors. It is a collective measure of the degree to which existing or new firms take on risks and embrace the challenge of success and failure.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Growth Rate	Rank
Wisconsin	0.9%	20
Illinois	0.0%	23
Michigan	**-3.8%**	**35**
Indiana	-8.8%	46
Ohio	-17.8%	48



GROWTH IN NEW BUSINESS OWNERS

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs)
	50-State Average		*1.5%*	*8.3%*
1	Arizona	132.0	21.2%	56.5%
2	Wyoming	123.2	15.4%	-38.8%
3	Georgia	120.8	13.8%	24.9%
4	Washington	118.9	12.5%	55.8%
4	Oklahoma	118.9	12.5%	15.7%
6	Mississippi	118.3	12.1%	56.3%
7	Minnesota	118.1	12.0%	5.3%
8	Vermont	116.8	11.1%	58.7%
8	Kansas	116.8	11.1%	32.9%
8	Iowa	116.8	11.1%	61.1%
11	North Dakota	116.2	10.7%	59.4%
12	Wisconsin	115.9	10.5%	16.1%
13	Oregon	114.6	9.7%	14.2%
14	New Mexico	114.1	9.4%	44.0%
15	Nevada	111.9	7.9%	48.9%
16	California	111.6	7.7%	10.1%
17	Arkansas	111.2	7.4%	32.4%
18	New Jersey	109.4	6.3%	15.8%
19	Colorado	109.1	6.1%	3.4%
20	Florida	108.4	5.6%	11.1%
21	Missouri	105.2	3.4%	40.6%
22	North Carolina	104.6	3.0%	-20.0%
23	New York	104.3	2.9%	17.6%
24	Texas	103.9	2.6%	13.7%
25	West Virginia	100.0	0.0%	24.4%
25	Utah	100.0	0.0%	9.1%
25	South Carolina	100.0	0.0%	17.1%
25	New Hampshire	100.0	0.0%	7.4%
25	Nebraska	100.0	0.0%	-82.4%
25	Massachusetts	100.0	0.0%	39.4%
25	Maine	100.0	0.0%	27.8%
25	Illinois	100.0	0.0%	3.0%
25	Idaho	100.0	0.0%	-33.3%
34	Louisiana	94.6	-3.6%	18.9%
35	Ohio	93.7	-4.2%	-9.4%
36	Indiana	93.4	-4.3%	34.1%
37	Pennsylvania	91.6	-5.6%	-5.6%
38	Hawaii	90.9	-6.1%	8.9%
39	Connecticut	89.6	-6.9%	5.6%
40	Maryland	89.2	-7.1%	-15.1%
41	Tennessee	87.9	-8.0%	-16.7%
41	Alabama	87.9	-8.0%	-33.0%
43	Alaska	87.4	-8.3%	-17.6%
44	Rhode Island	86.9	-8.7%	21.3%
45	Michigan	84.4	-10.3%	-71.5%
46	South Dakota	82.8	-11.4%	-63.3%
47	Virginia	81.1	-12.5%	-32.5%
48	Montana	78.9	-14.0%	-29.1%
49	Kentucky	78.4	-14.3%	-9.0%
50	Delaware	74.8	-16.7%	-20.4%

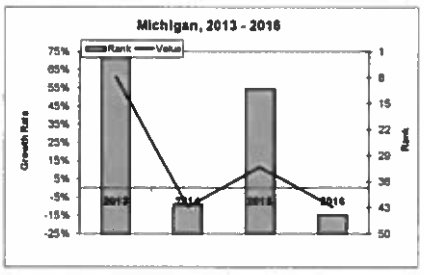
Growth in Kauffman Foundation Entrepreneurial Activity Index, 2015-16

The Kauffman Foundation provides a measure of grassroots startup activity based on the Current Population Survey (U.S. Census Bureau). It measures the rate of business creation at the individual non-coporate owner level. The table shows percent of individuals ages 20–64 who do not own a business in the first survey month, but who start a business in the following month with 15 or more hours worked per week.

Source: Kaufman Foundation

Midwest Performance, 2016

State	Growth Rate	Rank
Wisconsin	10.5%	12
Illinois	0.0%	25
Ohio	-4.2%	35
Indiana	-4.3%	36
Michigan	**-10.3%**	45



GROWTH IN 1-YEAR ESTABLISHMENT SURVIVAL

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs)
	50-State Average		*0.8%*	*-0.4%*
1	Maine	157.6	11.4%	11.0%
2	Missouri	146.9	9.4%	6.5%
3	North Dakota	143.7	8.8%	7.6%
4	Alaska	125.8	5.4%	6.1%
5	Idaho	125.0	5.2%	6.3%
6	Minnesota	121.7	4.6%	5.1%
7	Washington	121.5	4.6%	-14.5%
8	Utah	112.6	2.9%	-2.3%
9	New Jersey	112.3	2.8%	1.5%
10	Tennessee	111.4	2.7%	1.6%
11	Delaware	111.1	2.6%	-4.1%
12	New Hampshire	110.7	2.5%	2.7%
13	Mississippi	109.8	2.3%	1.6%
14	West Virginia	108.9	2.2%	3.0%
15	Montana	108.7	2.2%	4.3%
16	Connecticut	108.2	2.0%	-2.3%
17	California	107.1	1.9%	6.6%
18	Arkansas	105.5	1.5%	1.3%
19	Rhode Island	104.2	1.3%	2.3%
20	Virginia	102.7	1.0%	2.4%
21	Louisiana	102.6	1.0%	0.9%
22	Wyoming	102.2	0.9%	-2.5%
23	South Carolina	101.9	0.9%	-4.3%
24	**Michigan**	**101.9**	**0.9%**	**6.4%**
25	Vermont	100.0	0.5%	0.5%
26	Kentucky	100.0	0.5%	0.8%
27	Pennsylvania	98.6	0.3%	-2.3%
28	South Dakota	98.6	0.2%	-1.0%
29	North Carolina	97.3	0.0%	-2.5%
29	Massachusetts	97.3	0.0%	2.5%
29	Indiana	97.3	0.0%	0.1%
32	New York	95.3	-0.4%	-1.5%
33	Arizona	94.6	-0.5%	-3.1%
34	Alabama	94.0	-0.6%	-1.0%
35	Texas	94.0	-0.6%	-0.7%
36	Wisconsin	94.0	-0.6%	-3.2%
37	Colorado	91.9	-1.0%	-1.0%
38	Nebraska	91.9	-1.0%	-8.3%
39	Iowa	91.4	-1.1%	-1.5%
40	Oklahoma	91.2	-1.2%	-2.5%
41	Nevada	89.2	-1.5%	-1.5%
42	Oregon	88.0	-1.8%	-3.8%
43	Hawaii	88.0	-1.8%	1.3%
44	Florida	87.4	-1.9%	-4.0%
45	Maryland	85.9	-2.1%	-3.2%
46	Illinois	83.5	-2.6%	-4.4%
47	New Mexico	70.9	-5.0%	-0.1%
48	Kansas	69.6	-5.2%	-8.0%
49	Georgia	64.2	-6.3%	-7.5%
50	Ohio	50.8	-8.8%	-8.9%

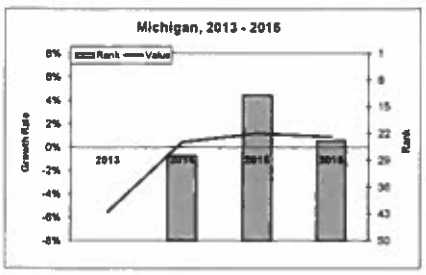
Growth in one-year establishment survival rate, 2015-16

The change in one-year survival rate of businesses indicates how well businesses are making it through the early years. As a one-year change measure, this metric varies considerably from year to year. Usually more than 10 percent of start-ups do not make it to their second year, but due to an administrative break in the data in 2013, the top five states data is likely inflated.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Growth Rate	Rank
Michigan	**0.9%**	24
Indiana	0.0%	29
Wisconsin	-0.6%	36
Illinois	-2.6%	46
Ohio	-8.8%	50



ENTREPRENEURIAL CHANGE

A dynamic economy not only attracts new companies; it also experiences business failures as well as startups, and shows the willingness of individuals to undertake new enterprises and contribute to wealth creation. In fact, one characteristic of today's innovation economy is the degree to which it is "churning"—residents coming and going, new occupations forming while others decline, and businesses forming, relocating and disappearing. These are necessary factors for economic prosperity. This index measures change in five metrics averaged over the most recent three years of data. Metrics capture characteristics of commercial enterprises including numeric growth, start-ups, fast-growth/high tech, payroll, and proprietor income.

Midwest Performance

	2016	2014	2012
Indiana	***	***	**
Michigan	***	****	***
Wisconsin	**	**	**
Illinois	**	**	**
Ohio	*	**	***

Rank	State	2016	2014	2012
1	Missouri	*****	***	**
2	Colorado	*****	****	***
3	Minnesota	*****	***	***
4	Oregon	*****	****	***
5	California	*****	***	****
6	Utah	*****	*****	****
7	Massachusetts	*****	*	***
8	Montana	*****	****	***
9	Georgia	****	****	**
10	Virginia	****	**	**
11	Idaho	****	*****	*
12	North Carolina	****	***	**
13	Maryland	****	*	**
14	Florida	****	****	****
15	Maine	****	**	**
16	South Dakota	****	***	***
17	Arizona	****	***	**
18	Delaware	****	**	***
19	New Hampshire	***	**	**
20	Nevada	***	***	**
21	New York	***	*****	*
22	Texas	***	****	***
23	Connecticut	***	**	***
24	Tennessee	***	***	**
25	Indiana	***	***	**
26	New Jersey	***	*	*
27	South Carolina	***	****	**
28	Alaska	***	**	***
29	North Dakota	***	*****	*****
30	Pennsylvania	***	*	**
31	Nebraska	***	*	***
32	**Michigan**	***	****	***
33	Wisconsin	**	**	**
34	Wyoming	**	***	***
35	Vermont	**	**	**
36	Arkansas	**	**	**
37	Hawaii	**	**	**
38	Illinois	**	**	**
39	Rhode Island	**	**	**
40	Kansas	**	*	**
41	Washington	**	***	*
42	Kentucky	**	**	**
43	New Mexico	**	***	**
44	Alabama	**	**	**
45	Iowa	**	*	***
46	Mississippi	**	*	**
47	Ohio	*	**	***
48	Louisiana	*	**	***
49	Oklahoma	*	****	***
50	West Virginia	*	*	**

GROWTH IN NUMBER OF SMALL BUSINESSES

Rank	State	Score	Growth Rate	Change, 2012-2015 (Abs.)
	50-State Average		*0.64%*	*2.7%*
1	Missouri	150.0	3.12%	5.7%
2	Utah	136.9	2.42%	3.8%
3	Nevada	132.3	2.18%	4.7%
4	Florida	130.7	2.09%	3.8%
5	Texas	127.7	1.93%	1.4%
6	Colorado	127.3	1.91%	3.4%
7	Delaware	125.9	1.84%	4.5%
8	California	124.6	1.77%	3.0%
9	Washington	119.4	1.49%	3.8%
10	Oregon	119.0	1.47%	3.9%
11	Idaho	116.5	1.33%	5.6%
12	North Dakota	114.9	1.25%	-1.5%
13	Arizona	114.3	1.22%	4.9%
14	Georgia	113.6	1.18%	4.2%
15	New York	108.2	0.90%	0.6%
16	Montana	107.3	0.85%	2.7%
17	North Carolina	106.8	0.82%	3.3%
18	South Dakota	106.5	0.80%	1.8%
19	South Carolina	106.2	0.79%	3.9%
20	Massachusetts	105.0	0.72%	2.2%
21	Nebraska	104.6	0.70%	1.4%
22	Virginia	103.6	0.65%	2.8%
23	Alaska	100.8	0.50%	0.9%
24	Maryland	100.5	0.49%	2.9%
25	Maine	100.2	0.47%	3.2%
26	Oklahoma	99.8	0.45%	1.3%
27	Wyoming	99.5	0.43%	1.3%
28	Kentucky	98.9	0.40%	2.8%
29	Illinois	97.6	0.33%	1.8%
30	Minnesota	95.8	0.24%	2.1%
31	New Jersey	94.8	0.18%	2.7%
32	Louisiana	94.8	0.18%	1.2%
33	Hawaii	94.5	0.17%	2.8%
34	**Michigan**	**94.4**	**0.16%**	**3.2%**
35	Tennessee	93.9	0.13%	3.0%
36	Rhode Island	93.2	0.10%	3.4%
37	Pennsylvania	92.5	0.06%	1.7%
38	Connecticut	92.4	0.05%	2.6%
39	Kansas	92.1	0.04%	2.4%
40	Wisconsin	92.0	0.03%	2.8%
41	New Hampshire	90.4	-0.05%	2.8%
42	Arkansas	90.4	-0.05%	2.1%
43	Alabama	87.6	-0.20%	3.3%
44	Iowa	87.4	-0.21%	1.5%
45	Indiana	86.3	-0.27%	2.5%
46	Vermont	85.9	-0.29%	2.1%
47	Ohio	84.8	-0.35%	2.8%
48	Mississippi	84.6	-0.36%	2.6%
49	New Mexico	80.7	-0.57%	2.6%
50	West Virginia	64.8	-1.41%	2.5%

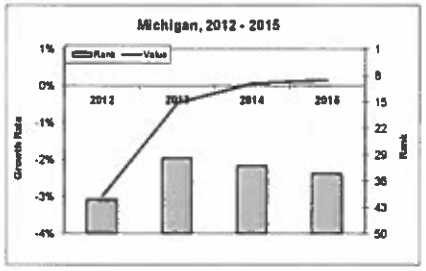
Growth in number of firms with 99 or fewer employees, 2015, three-year avg.

Small firms have been shown to be important contributors to job and economic growth as well as innovative activity. A growing presence of small businesses is therefore imperative for strong economic dynamism. The above table shows the annual growth rate in the number of small firms of 99 or fewer employees for each state, averaged over three years.

Source: Bureau of Labor Statistics

Midwest Performance, 2015

State	Growth Rate	Rank
Illinois	0.33%	29
Michigan	**0.16%**	**34**
Wisconsin	0.03%	40
Indiana	-0.27%	45
Ohio	-0.35%	47



SMALL BUSINESS PAYROLL GROWTH

Rank	State	Score	Growth Rate	Change, 2012-2015 (Abs.)
	50-State Average		*3.4%*	*1.0%*
1	Colorado	133.6	5.6%	2.8%
2	Oregon	131.4	5.4%	3.0%
3	Utah	130.4	5.4%	1.8%
4	Idaho	130.3	5.3%	4.2%
5	Delaware	129.1	5.3%	3.7%
6	Washington	128.6	5.2%	3.3%
7	Florida	126.1	5.0%	1.9%
8	Montana	124.8	5.0%	2.3%
9	North Dakota	121.3	4.7%	-7.1%
10	California	116.7	4.4%	1.9%
11	Nevada	115.8	4.3%	3.3%
12	South Dakota	114.3	4.2%	1.1%
13	Georgia	113.6	4.1%	2.2%
14	South Carolina	113.4	4.1%	3.0%
15	Arizona	112.8	4.1%	2.6%
16	North Carolina	111.3	4.0%	2.1%
17	Texas	111.3	4.0%	-0.8%
18	Nebraska	109.5	3.8%	1.3%
19	Minnesota	109.2	3.8%	0.7%
20	New Hampshire	105.0	3.5%	1.7%
21	Massachusetts	103.5	3.4%	0.6%
22	**Michigan**	**101.7**	**3.3%**	**0.4%**
23	Maine	101.5	3.3%	1.3%
24	Vermont	101.3	3.2%	1.3%
25	Wisconsin	100.1	3.2%	1.0%
26	Arkansas	99.9	3.1%	0.7%
27	Tennessee	99.6	3.1%	0.4%
28	New York	99.2	3.1%	1.1%
29	Iowa	98.9	3.1%	0.6%
30	Indiana	98.1	3.0%	0.9%
31	Virginia	98.0	3.0%	0.3%
32	Wyoming	97.5	3.0%	-0.3%
33	Maryland	96.7	2.9%	0.8%
34	Hawaii	96.3	2.9%	1.9%
35	Rhode Island	94.7	2.8%	1.0%
36	Alaska	93.8	2.7%	-0.4%
37	Missouri	93.1	2.6%	1.2%
38	Ohio	92.6	2.6%	0.4%
39	Alabama	92.5	2.6%	1.2%
40	Pennsylvania	92.0	2.6%	0.5%
41	Louisiana	92.0	2.6%	0.1%
42	Kentucky	89.3	2.4%	1.4%
43	Illinois	88.7	2.3%	0.5%
44	New Jersey	88.3	2.3%	1.0%
45	Kansas	86.6	2.2%	0.1%
46	Mississippi	85.3	2.1%	0.6%
47	Oklahoma	83.7	2.0%	-1.9%
48	Connecticut	82.8	1.9%	0.5%
49	New Mexico	80.8	1.8%	0.6%
50	West Virginia	70.7	1.0%	-0.8%

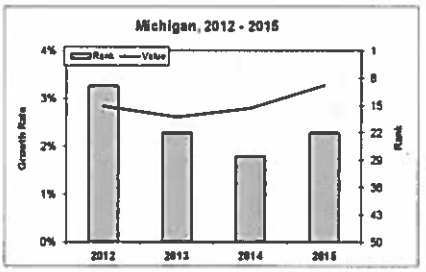
Growth in total nominal payroll of firms with 99 or fewer employees, 2015, three-year avg.

The goal of becoming a center for entrepreneurial business formation and growth goes beyond simple numbers of new firms. Through high performance, entrepreneurial firms can offer growing wages, high economic multiplier effects and related economic development. The above table measures the annual growth in total payroll of small businesses with 99 or fewer employees, averaged over three years.

Source: U.S. Census Bureau

Midwest Performance, 2015

State	Growth Rate	Rank
Michigan	**3.3%**	**22**
Wisconsin	3.2%	25
Indiana	3.0%	30
Ohio	2.6%	38
Illinois	2.3%	43



INCREASE IN HIGH PERFORMANCE FIRMS

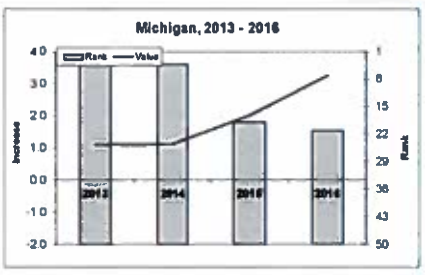
Rank	State	Score	Average Increase	Change, 2013-2016 (Abs.)
	50-State Average		*3.9*	*3.81*
1	Virginia	166.3	14.43	15.1
2	Massachusetts	166.2	14.41	15.9
3	Maryland	136.4	9.19	11.1
4	Georgia	134.0	8.78	7.2
5	Colorado	133.8	8.74	8.8
6	Utah	131.9	8.41	7.6
7	Connecticut	131.3	8.29	9.2
8	New York	129.8	8.04	3.5
9	Minnesota	126.0	7.37	7.4
10	Washington	123.1	6.86	7.3
11	New Hampshire	122.4	6.73	6.7
12	Oregon	121.1	6.51	5.6
13	New Jersey	120.1	6.32	6.7
14	California	116.3	5.66	5.2
15	Missouri	110.1	4.57	4.8
16	Delaware	108.8	4.34	4.5
17	North Carolina	107.0	4.02	4.4
18	Florida	106.8	4.00	3.0
19	Kansas	105.2	3.71	4.2
20	New Mexico	103.3	3.38	3.3
21	**Michigan**	**102.6**	**3.25**	**2.2**
22	Arizona	102.4	3.22	2.8
23	Rhode Island	102.0	3.15	3.2
24	Pennsylvania	101.6	3.09	4.2
25	Illinois	100.0	2.81	2.9
26	Ohio	100.0	2.79	2.9
27	Kentucky	98.6	2.55	2.6
28	Alabama	98.4	2.52	2.6
29	Indiana	97.9	2.44	2.2
30	Nevada	97.9	2.43	2.8
31	Texas	94.7	1.87	2.7
32	Wisconsin	94.6	1.85	1.5
33	Maine	94.1	1.76	1.7
34	Oklahoma	93.6	1.68	1.8
35	Mississippi	93.6	1.68	2.0
36	Tennessee	93.0	1.57	2.4
37	South Carolina	91.7	1.35	0.6
38	Idaho	91.5	1.31	1.3
39	Louisiana	90.7	1.16	0.8
40	Alaska	89.7	0.99	1.0
41	Montana	89.5	0.95	1.0
42	North Dakota	89.4	0.95	0.9
43	Vermont	89.1	0.89	0.9
44	Iowa	89.0	0.86	0.7
45	Nebraska	88.7	0.82	0.7
46	Arkansas	87.2	0.56	0.6
47	Wyoming	85.5	0.25	0.1
48	West Virginia	84.8	0.13	-0.1
48	Hawaii	84.8	0.13	-0.1
50	South Dakota	84.1	0.00	0.0

Change in number of firms with significant revenue/sales growth, 2016, three-year avg.

High-performance and especially technology-oriented companies tend to be more impervious to fluctuations in the overall economy and have a strong multiplier effect on the rest of the economy. The above table shows the absolute increase or decrease for the average number of privately held companies listed with the fastest-growing firms from *Inc.com*, and fastest-growing high-technology companies from Deloitte & Touche's *Fast 500*. *Source: Inc.com & Deloitte & Touche*

Midwest Performance, 2016

State	Increase	Rank
Michigan	**3.3**	**21**
Illinois	2.8	25
Ohio	2.8	26
Indiana	2.4	29
Wisconsin	1.9	32



NET ESTABLISHMENT ENTRANTS INCREASE

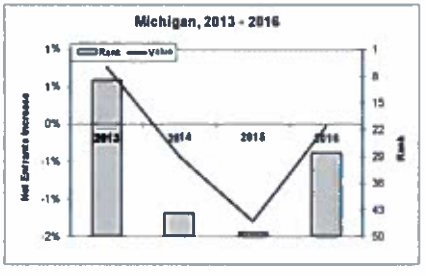
Rank	State	Score	Change in Net Entrants Rates	Change, 2013-2016 (Abs.)
	50-State Average		*0.0%*	*-0.23%*
1	Minnesota	164.1	1.83%	2.5%
2	Missouri	158.1	1.67%	1.5%
3	Maine	135.3	1.03%	0.6%
4	Montana	123.4	0.70%	0.8%
5	Tennessee	122.2	0.67%	0.3%
6	California	116.2	0.50%	0.2%
7	North Carolina	115.0	0.47%	0.3%
8	Arkansas	113.8	0.43%	0.4%
9	Alaska	109.0	0.30%	-0.5%
9	Arizona	109.0	0.30%	0.5%
9	New Mexico	109.0	0.30%	0.8%
9	West Virginia	109.0	0.30%	0.2%
13	Idaho	107.8	0.27%	-1.1%
13	Mississippi	107.8	0.27%	0.2%
13	Virginia	107.8	0.27%	1.1%
16	Massachusetts	106.6	0.23%	0.3%
16	Rhode Island	106.6	0.23%	-0.2%
18	Pennsylvania	105.4	0.20%	0.6%
18	Vermont	105.4	0.20%	-0.1%
20	Alabama	104.2	0.17%	-0.4%
21	New Jersey	103.0	0.13%	-0.1%
21	Texas	103.0	0.13%	-0.1%
23	Indiana	101.8	0.10%	1.0%
23	Maryland	101.8	0.10%	0.0%
25	Colorado	100.6	0.07%	-0.7%
26	Oregon	99.4	0.03%	-0.1%
27	New Hampshire	98.2	0.00%	-0.3%
28	**Michigan**	**97.0**	**-0.03%**	**-0.8%**
29	Connecticut	95.8	-0.07%	1.2%
29	Hawaii	95.8	-0.07%	-0.3%
31	Wisconsin	94.6	-0.10%	-1.1%
32	Florida	93.4	-0.13%	-0.8%
32	Georgia	93.4	-0.13%	-0.8%
32	Nevada	93.4	-0.13%	-0.7%
35	New York	92.2	-0.17%	-0.2%
35	South Dakota	92.2	-0.17%	0.0%
37	Iowa	91.0	-0.20%	-1.2%
37	South Carolina	91.0	-0.20%	-1.1%
39	Illinois	89.8	-0.23%	-0.7%
39	Louisiana	89.8	-0.23%	-0.3%
41	Wyoming	87.4	-0.30%	-0.3%
42	Kentucky	86.2	-0.33%	-1.3%
43	Delaware	82.6	-0.43%	-0.3%
43	Kansas	82.6	-0.43%	-0.8%
45	Utah	80.2	-0.50%	-1.7%
46	Nebraska	75.4	-0.63%	-1.1%
47	Ohio	70.7	-0.77%	-0.9%
48	Oklahoma	62.3	-1.00%	-1.5%
49	North Dakota	61.1	-1.03%	-0.7%
50	Washington	-4.8	-2.87%	-3.8%

Change in the net of new establishments minus failed establishments, as a percentage of total establishments, 2016

The rate of net establishment entrants is one of the most common measures of entrepreneurial activity and its change indicates a very dynamic and optimistic entrepreneurial environment, coincident with high rates of net new business growth and economic multiplier effects. The above table shows the absolute change in net establishment entrants as a percentage of all establishments in the intial year. *Source: U.S. Bureau of Labor Statistics*

Midwest Performance, 2016

State	Change in Net Entrants Rates	Rank
Indiana	0.1%	23
Michigan	**0.03%**	**28**
Wisconsin	-0.1%	31
Illinois	-0.2%	39
Ohio	-0.8%	47



PROPRIETOR INCOME PER PROPRIETOR GROWTH

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs.)
	50-State Average		*1.2%*	*-2%*
1	South Dakota	135.6	13.9%	12.4%
2	Indiana	127.9	11.3%	5.1%
3	Montana	119.3	8.4%	4.5%
4	Nebraska	114.4	6.8%	-0.9%
5	North Dakota	113.8	6.6%	-4.1%
6	Wyoming	112.5	6.1%	2.5%
7	Oregon	111.8	5.9%	2.7%
8	Connecticut	110.5	5.5%	2.8%
9	North Carolina	109.3	5.1%	6.3%
10	Maryland	109.2	5.0%	4.3%
11	Alaska	109.0	5.0%	4.1%
12	Maine	108.6	4.8%	4.5%
13	Idaho	107.8	4.6%	3.2%
14	Hawaii	106.2	4.0%	0.7%
15	Kansas	105.8	3.9%	-1.0%
16	New Jersey	105.8	3.9%	2.2%
17	California	105.3	3.7%	-2.3%
18	Georgia	105.0	3.6%	2.6%
19	New Hampshire	104.7	3.5%	0.4%
20	Tennessee	103.7	3.2%	-1.7%
21	Pennsylvania	103.3	3.1%	0.0%
22	Wisconsin	102.1	2.7%	0.6%
23	Washington	101.6	2.5%	-3.4%
24	Illinois	100.9	2.2%	-0.3%
25	Vermont	100.1	2.0%	-0.6%
26	South Carolina	99.9	1.9%	-0.2%
27	Ohio	97.8	1.2%	-4.4%
28	Colorado	97.0	0.9%	-3.7%
29	Minnesota	95.2	0.3%	-6.5%
30	**Michigan**	**94.4**	**0.1%**	**-6.5%**
31	Utah	92.3	-0.6%	-6.9%
32	Arizona	91.7	-0.8%	-3.3%
33	Arkansas	89.0	-1.8%	-4.5%
34	Iowa	88.5	-1.9%	-2.4%
35	Massachusetts	87.2	-2.3%	-4.1%
36	Kentucky	86.3	-2.6%	-5.9%
37	Missouri	85.7	-2.9%	-6.0%
38	Florida	85.5	-2.9%	-5.9%
39	New Mexico	84.8	-3.2%	-7.4%
40	New York	84.3	-3.3%	-3.0%
41	Oklahoma	83.2	-3.7%	-15.7%
42	West Virginia	81.1	-4.4%	-8.7%
43	Nevada	81.0	-4.4%	-3.3%
44	Virginia	80.0	-4.8%	-10.5%
45	Rhode Island	78.8	-5.2%	-11.0%
46	Mississippi	78.4	-5.3%	-7.2%
47	Delaware	77.9	-5.5%	-5.4%
48	Texas	77.0	-5.8%	-13.6%
49	Louisiana	75.5	-6.3%	-11.2%
50	Alabama	75.1	-6.4%	-10.2%

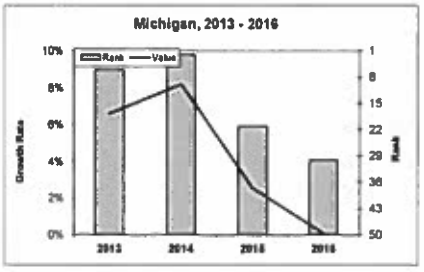
Percent change in proprietor's income per proprietor, 2016, three-year avg.

A healthy entrepreneurial economy is one with a strong presence of individual business owners. They put their money on the line daily and frequently seek creative solutions to market demands. This metric captures earnings from self-employment. The above table shows the rate at which proprietor's income per proprietor grew or contracted annually, averaged over three years.

Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2016

State	Growth Rate	Rank
Indiana	11.3%	2
Wisconsin	2.7%	22
Illinois	2.2%	24
Ohio	1.2%	27
Michigan	**0.1%**	**30**



ENTREPRENEURIAL VITALITY

Entrepreneurial Vitality index is a composite measure of each state's level of entrepreneurial activity – broadly defined as the number of startups and entrepreneurial firms that form the backbone for a dynamic entrepreneurial system. The number of self-employed and the net business churn, or turnover, are both measures of start-up activity, whereas fast-growing companies and investment awards give insight into the successfulness of the innovative activities of incumbent and new firms.

Midwest Performance

	2016	2014	2012
Illinois	**	**	**
Ohio	*	*	*
Michigan	*	*	**
Wisconsin	*	*	*
Indiana	*	*	*

Rank	State	2016	2014	2012
1	Massachusetts	*****	*****	*****
2	Utah	*****	****	*****
3	New Mexico	****	***	**
4	California	****	****	*****
5	Colorado	***	***	****
6	Idaho	***	***	*
7	Maryland	***	***	***
8	Virginia	***	***	***
9	Texas	***	***	***
10	New Hampshire	***	***	***
11	Georgia	***	**	**
12	North Carolina	**	**	**
13	Connecticut	**	***	***
14	Arizona	**	**	**
15	Delaware	**	**	***
16	Minnesota	**	**	**
17	New York	**	**	**
18	Florida	**	**	**
19	Missouri	**	*	*
20	Tennessee	**	*	*
21	Illinois	**	**	**
22	Vermont	**	*	**
23	Montana	**	**	**
24	North Dakota	**	**	**
25	New Jersey	**	**	**
26	Alabama	**	**	**
27	Nevada	**	*	**
28	Maine	**	*	*
29	Hawaii	**	*	**
30	Oregon	**	**	**
31	Pennsylvania	**	**	**
32	Arkansas	*	*	**
33	Kentucky	*	*	**
34	Ohio	*	*	*
35	Louisiana	*	*	*
36	**Michigan**	*	*	**
37	Wisconsin	*	*	*
38	South Dakota	*	*	*
39	Oklahoma	*	**	**
40	Kansas	*	*	*
41	South Carolina	*	*	*
42	Nebraska	*	**	**
43	Iowa	*	*	*
44	Rhode Island	*	*	*
45	Mississippi	*	*	*
46	Indiana	*	*	*
47	Wyoming	*	*	*
48	West Virginia	*	*	*
49	Alaska	*	*	*
50	Washington	*	*	**

NET ESTABLISHMENT ENTRANTS

Rank	State	Score	Churn Rate	Change, 2013-2016 (Abs.)
	50-State Average		*1.1%*	*0.04%*
1	Missouri	162.9	5.90%	5.0%
2	Minnesota	140.2	4.10%	5.5%
3	Idaho	134.0	3.60%	0.8%
3	Maine	134.0	3.60%	3.1%
5	California	130.2	3.30%	1.5%
6	Massachusetts	123.9	2.80%	0.7%
7	Utah	122.6	2.70%	-1.5%
8	Colorado	117.6	2.30%	0.2%
8	Tennessee	117.6	2.30%	2.0%
10	Arizona	116.4	2.20%	0.9%
10	Texas	116.4	2.20%	0.4%
12	North Carolina	115.1	2.10%	1.4%
13	Wisconsin	112.6	1.90%	-0.3%
14	Nevada	111.3	1.80%	-0.4%
15	Florida	110.1	1.70%	-0.4%
15	South Carolina	110.1	1.70%	-0.6%
17	Montana	108.8	1.60%	2.1%
18	Vermont	106.3	1.40%	0.6%
19	Oregon	102.5	1.10%	0.1%
20	Delaware	101.3	1.00%	-1.3%
20	Georgia	101.3	1.00%	-0.1%
20	**Michigan**	**101.3**	**1.00%**	**0.0%**
20	New Hampshire	101.3	1.00%	-0.4%
24	Alabama	100.0	0.90%	0.4%
24	Mississippi	100.0	0.90%	0.7%
24	New Jersey	100.0	0.90%	0.5%
24	Rhode Island	100.0	0.90%	0.8%
28	Iowa	98.7	0.80%	-0.6%
28	Kentucky	98.7	0.80%	-1.0%
30	Arkansas	97.5	0.70%	-0.7%
30	Illinois	97.5	0.70%	1.3%
30	New Mexico	97.5	0.70%	0.9%
30	New York	97.5	0.70%	-0.5%
34	South Dakota	96.2	0.60%	-0.5%
35	Alaska	95.0	0.50%	0.3%
35	Maryland	95.0	0.50%	0.9%
37	Connecticut	93.7	0.40%	-0.2%
38	Nebraska	92.5	0.30%	0.6%
38	Pennsylvania	92.5	0.30%	-1.9%
40	Indiana	91.2	0.20%	0.3%
41	Louisiana	88.7	0.00%	-0.7%
42	Wyoming	87.4	-0.10%	-0.9%
43	Hawaii	86.2	-0.20%	-0.2%
43	Virginia	86.2	-0.20%	0.8%
45	Kansas	84.9	-0.30%	-1.3%
46	West Virginia	81.1	-0.60%	0.9%
47	North Dakota	77.4	-0.90%	-3.1%
48	Ohio	66.0	-1.80%	-2.3%
48	Oklahoma	66.0	-1.80%	-3.0%
50	Washington	29.6	-4.70%	-8.6%

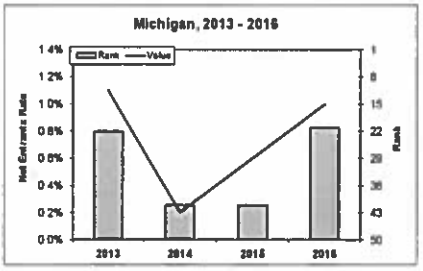
Net of new establishments minus failed establishments, as a percentage of total establishments, 2016

Business churn is one of the most common measures of entrepreneurial activity, and its growth indicates an increasingly dynamic economic environment. High growth areas in the innovation economy are coincident with high rates of new business growth. The above table shows net new establishments as a percentage of all establishments at the beginning of the year.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Net Entrants Rate	Rank
Wisconsin	1.9%	13
Michigan	**1.0%**	**20**
Illinois	0.7%	30
Indiana	0.2%	40
Ohio	-1.8%	48



ESTABLISHMENT TURNOVER RATE

Rank	State	Score	Turnover Rate	Change, 2013-2016 (Abs.)
	50-State Average		*22.0%*	*0.7%*
1	Georgia	130.9	27.4%	2.2%
2	Washington	130.4	27.3%	6.2%
3	Florida	127.1	26.7%	-1.0%
4	Nevada	126.5	26.6%	2.2%
5	California	123.8	26.1%	-0.3%
6	Arizona	121.1	25.6%	1.3%
7	Colorado	120.5	25.5%	1.0%
8	Illinois	118.3	25.1%	2.3%
9	Delaware	117.8	25.0%	0.3%
9	Idaho	117.8	25.0%	-0.6%
11	Virginia	114.5	24.4%	2.2%
12	Utah	112.9	24.1%	0.3%
13	Missouri	110.7	23.7%	3.0%
14	Oklahoma	106.8	23.0%	2.4%
15	Maryland	106.3	22.9%	0.7%
16	Massachusetts	105.7	22.8%	1.3%
17	Rhode Island	105.2	22.7%	0.5%
18	Maine	104.6	22.6%	2.7%
18	Texas	104.6	22.6%	2.2%
20	North Carolina	104.1	22.5%	1.2%
21	New Mexico	103.0	22.3%	-1.5%
21	New York	103.0	22.3%	-0.9%
23	Alaska	101.9	22.1%	1.3%
23	New Jersey	101.9	22.1%	-0.4%
25	Montana	100.3	21.8%	0.3%
26	Kansas	99.7	21.7%	1.1%
27	Oregon	98.6	21.5%	0.1%
27	South Carolina	98.6	21.5%	0.2%
29	Kentucky	98.1	21.4%	0.2%
30	Arkansas	97.5	21.3%	0.3%
30	Wyoming	97.5	21.3%	1.3%
32	Minnesota	96.4	21.1%	2.7%
32	Nebraska	96.4	21.1%	-0.3%
34	New Hampshire	95.9	21.0%	0.2%
35	North Dakota	94.3	20.7%	-1.7%
36	Hawaii	93.7	20.6%	1.6%
37	Vermont	92.6	20.4%	0.6%
38	West Virginia	88.2	19.6%	1.1%
39	Wisconsin	87.7	19.5%	0.9%
40	Louisiana	87.1	19.4%	-2.1%
40	**Michigan**	**87.1**	**19.4%**	**-0.1%**
42	Tennessee	83.3	18.7%	-0.6%
43	Alabama	82.2	18.5%	0.5%
43	Mississippi	82.2	18.5%	0.2%
45	Indiana	81.7	18.4%	-1.1%
45	Ohio	81.7	18.4%	0.5%
47	Pennsylvania	81.1	18.3%	-1.2%
48	Connecticut	79.5	18.0%	0.8%
49	South Dakota	78.4	17.8%	0.1%
50	Iowa	75.1	17.2%	-0.2%

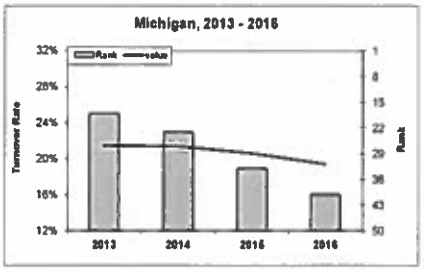
New establishments plus establishment terminations as a percent of total establishments, 2016

The turnover rate is an attempt to get at how dynamic an economy is by adding the formations to terminations and showing as a percent of all establishments. Some refer to this metric as 'churn.' It is widely understood that high-energy entrepreneurial economies have high turnover. But caution is warranted since occasionally flailing economies have high churn.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Turnover Rate	Rank
Illinois	25.1%	8
Wisconsin	19.5%	39
Michigan	**19.4%**	**40**
Indiana	18.4%	45
Ohio	18.4%	45



SELF-EMPLOYMENT

Rank	State	Score	Per 1,000 Labor Force	Change, 2013-2016 (%)
	50-State Average		*252.3*	*3.1%*
1	Wyoming	125.0	310.7	4.9%
2	Montana	121.2	302.3	2.2%
3	Colorado	119.5	298.3	1.3%
4	Vermont	118.2	295.4	5.7%
5	Texas	115.5	289.3	2.3%
6	Louisiana	114.6	287.3	4.2%
7	Connecticut	114.5	287.0	2.4%
8	Florida	112.4	282.4	4.0%
9	California	112.2	282.0	4.1%
10	New York	111.8	281.1	6.7%
11	Oklahoma	111.0	279.2	1.8%
12	Utah	109.4	275.7	-1.7%
13	Georgia	109.1	274.9	3.7%
14	Maine	108.9	274.5	7.3%
15	Idaho	108.8	274.3	-0.5%
16	Alaska	107.5	271.3	4.6%
17	New Jersey	106.9	270.1	6.7%
18	South Dakota	105.0	265.7	2.5%
19	Mississippi	104.6	264.7	4.6%
20	Tennessee	104.0	263.5	3.9%
21	Hawaii	103.3	261.8	0.7%
22	Maryland	102.4	259.8	4.1%
23	Massachusetts	101.8	258.4	4.0%
24	Kansas	100.7	256.1	3.5%
25	Nevada	100.3	255.1	0.8%
26	New Hampshire	99.7	253.7	2.4%
27	North Dakota	97.3	248.3	4.0%
28	Alabama	95.9	245.3	5.3%
29	Oregon	95.8	244.9	-1.9%
30	Arizona	94.1	241.2	-0.3%
31	North Carolina	93.5	239.9	2.4%
32	Illinois	92.1	236.7	5.1%
33	**Michigan**	**91.9**	**236.2**	**1.7%**
34	Arkansas	90.0	231.8	2.1%
35	New Mexico	89.9	231.7	3.2%
36	Nebraska	89.4	230.6	4.7%
37	Virginia	88.5	228.6	6.4%
38	South Carolina	88.4	228.4	1.4%
39	Minnesota	88.3	228.1	2.4%
40	Ohio	87.5	226.3	4.0%
41	Delaware	87.1	225.3	-1.8%
42	Rhode Island	86.8	224.6	6.6%
43	Missouri	85.5	221.8	0.6%
44	Pennsylvania	85.4	221.5	4.7%
45	Washington	85.0	220.6	0.2%
46	Kentucky	83.5	217.3	7.6%
47	Iowa	83.0	216.1	2.4%
48	Wisconsin	76.3	201.2	3.1%
49	West Virginia	74.3	196.6	4.3%
50	Indiana	74.1	196.2	0.5%

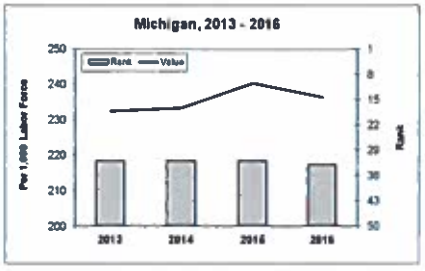
Number of non-farm proprietors per 1,000 labor force participants, 2016

The self-employed are the stock from which employer firms emerge, and high self-employment reflects entrepreneurial opportunities that are realized through an enabling environment. The above table shows the number of non-farm proprietors as a share of the labor force.

Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2016

State	Per 1,000 Labor Force	Rank
Illinois	236.7	32
Michigan	**236.2**	**33**
Ohio	226.3	40
Wisconsin	201.2	48
Indiana	196.2	50



UNIVERSITY SPINOUT BUSINESSES

Rank	State	Score	Spinouts per $1 billion R&D	Change, 2013-2016 (%)
	50-State Average		*61.0*	*98.5%*
1	North Dakota	250.0	558.8	(n/a)
2	Idaho	218.6	349.0	2301.7%
3	Nebraska	159.6	191.9	225.2%
4	Utah	147.5	159.5	45.5%
5	West Virginia	141.9	144.6	510.5%
6	New Mexico	129.6	111.8	108.2%
7	Iowa	122.9	94.1	(n/a)
8	Mississippi	111.2	62.7	35.9%
9	South Carolina	109.2	57.4	23.1%
10	Connecticut	108.6	55.8	0.7%
11	Florida	108.5	55.7	38.7%
12	Montana	107.2	52.3	(n/a)
13	Delaware	106.6	50.6	579.8%
14	Kentucky	105.0	46.3	6.9%
15	Indiana	104.8	45.9	10.2%
16	California	104.3	44.4	76.8%
17	Oregon	104.0	43.5	15.5%
18	Pennsylvania	103.6	42.6	18.4%
19	Oklahoma	100.1	33.3	1.9%
20	Colorado	100.1	33.2	-5.1%
21	Texas	100.1	33.2	48.0%
22	Washington	100.0	33.0	76.9%
23	New Hampshire	100.0	32.9	37.3%
24	Minnesota	99.6	32.0	48.6%
25	Louisiana	99.1	30.5	-3.2%
26	Ohio	98.0	27.6	4.6%
27	Kansas	97.8	27.2	15.1%
28	Georgia	96.5	23.7	-6.6%
29	Maryland	96.0	22.3	54.3%
30	Rhode Island	95.3	20.5	(n/a)
31	**Michigan**	**95.0**	**19.5**	**11.1%**
32	Tennessee	94.6	18.7	14.9%
33	South Dakota	94.1	17.1	40.5%
34	Hawaii	93.2	14.9	1.1%
35	Wisconsin	92.2	12.2	8.4%
36	Arizona	89.9	6.2	-83.7%
37	New York	89.3	4.6	-69.4%
38	Missouri	89.2	4.3	-76.6%
39	Virginia	89.0	3.6	-90.2%
40	Illinois	88.6	2.5	(n/a)
41	North Carolina	88.4	2.2	-93.2%
42	Alabama	88.1	1.4	-94.5%
43	New Jersey	88.0	1.0	-96.2%
(n/a)	Alaska	(n/a)	(n/a)	(n/a)
(n/a)	Arkansas	(n/a)	(n/a)	(n/a)
(n/a)	Maine	(n/a)	(n/a)	(n/a)
(n/a)	Massachusetts	(n/a)	(n/a)	(n/a)
(n/a)	Nevada	(n/a)	(n/a)	(n/a)
(n/a)	Vermont	(n/a)	(n/a)	(n/a)
(n/a)	Wyoming	(n/a)	(n/a)	(n/a)

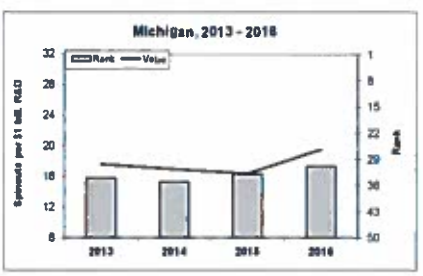
Average university spinout businesses per $1 billion research and development funding, 2016

Academic institutions vary in the degree to which they encourage and support faculty and student spinout discoveries into new local business ventures. Silicon Valley has proven that state and local economies can benefit significantly from their proactive business growth policies and practices. The above table shows the three-year average of the number of start-ups initiated by universities per $1 billion research and development expenditures.

Source: Association of University Technology Managers

Midwest Performance, 2016

State	Spinouts per $1 billion R&D	Rank
Indiana	45.9	15
Ohio	27.6	26
Michigan	**19.6**	**31**
Wisconsin	12.2	35
Illinois	2.5	40



HIGH PERFORMANCE FIRMS

Rank	State	Score	Per 100,000 Firms	Change, 2013-2016 (%)
	50-State Average		*6.5*	*90.5%*
1	New Mexico	250.0	40.5	2724.1%
2	Utah	178.4	20.7	3.1%
3	Massachusetts	161.8	17.3	14.9%
4	California	158.1	16.5	-8.1%
5	Virginia	138.6	12.6	-22.0%
6	Washington	132.5	11.4	13.3%
7	Georgia	131.5	11.2	45.6%
8	New York	128.8	10.6	32.2%
9	Tennessee	127.3	10.3	183.4%
10	Louisiana	124.9	9.8	430.7%
11	Hawaii	115.8	8.0	298.5%
12	Delaware	113.4	7.5	-41.9%
13	Illinois	113.1	7.4	14.1%
14	Maryland	110.5	6.9	-35.4%
15	Colorado	109.7	6.7	-18.0%
16	Texas	109.4	6.7	-10.2%
17	New Jersey	107.1	6.2	-22.5%
18	Arkansas	105.9	5.9	100.0%
19	North Carolina	105.3	5.8	-2.3%
20	Vermont	103.8	5.5	100.0%
21	Idaho	102.8	5.3	286.2%
22	Missouri	102.3	5.2	104.4%
23	Florida	101.5	5.1	-15.7%
24	Pennsylvania	101.2	5.0	-34.4%
25	Ohio	100.5	4.9	50.4%
26	Montana	99.5	4.7	47.3%
27	Nebraska	99.5	4.7	292.5%
28	South Dakota	98.9	4.5	100.0%
29	Mississippi	98.8	4.5	33.6%
30	Alabama	96.7	4.1	19.9%
31	Nevada	96.1	4.0	-23.7%
32	Oregon	95.4	3.8	-51.7%
33	Arizona	95.3	3.8	-56.7%
34	South Carolina	95.1	3.8	17.4%
35	Wisconsin	94.7	3.7	32.6%
36	West Virginia	94.5	3.6	104.9%
37	Kansas	93.5	3.4	-20.4%
38	Minnesota	93.2	3.4	-11.9%
39	New Hampshire	92.7	3.3	-0.5%
40	Maine	91.2	3.0	97.7%
41	**Michigan**	**88.0**	**2.3**	**-27.7%**
42	Kentucky	87.3	2.2	-0.4%
43	Connecticut	86.9	2.1	-78.6%
44	Oklahoma	86.7	2.0	48.8%
45	Indiana	85.7	1.8	-55.6%
46	Iowa	84.5	1.6	-33.4%
47	Alaska	76.6	0.0	0.0%
47	North Dakota	76.6	0.0	0.0%
47	Rhode Island	76.6	0.0	-100.0%
47	Wyoming	76.6	0.0	0.0%

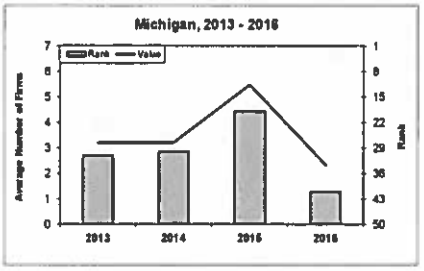
Number of firms with significant revenue/sales growth relative to the total number of firms, 2016

Just as new small companies are an important part of a state's economic dynamism, entrepreneurial firms that continuously innovate their products and processes have an equally significant role in contributing to growth and prosperity. The table above shows the average number of privately held companies listed with the fastest-growing firms from *Inc.com*, and fastest-growing high-technology companies from Deloitte & Touche's *Fast 500*, relative to the total number of firms.

Source: Inc.com & Deloitte & Touche

Midwest Performance, 2016

State	Per 100,000 Firms	Rank
Illinois	7.4	13
Ohio	4.9	25
Wisconsin	3.7	35
Michigan	**2.3**	**41**
Indiana	1.8	45



IPO AWARDS

Rank	State	Score	3-Year Total per 100,000 Firms	Change, 2013-2016 (Abs.)
	50-State Average		*6.3*	*2.4*
1	Massachusetts	194.7	38.1	18.8
2	Connecticut	149.9	22.3	15.3
3	California	137.7	18.0	3.5
4	Texas	125.9	13.8	-2.0
5	Colorado	122.8	12.7	4.1
6	Tennessee	121.9	12.4	8.2
7	Hawaii	120.7	11.9	11.9
8	Utah	118.4	11.1	6.1
9	Vermont	118.2	11.0	11.0
10	New York	118.1	11.0	5.8
11	Pennsylvania	117.7	10.9	4.3
12	North Carolina	116.6	10.5	3.3
13	New Jersey	116.1	10.3	2.1
14	Maryland	112.9	9.2	0.8
15	Arizona	111.2	8.6	2.7
16	Oklahoma	110.1	8.2	-0.1
17	Nevada	109.3	7.9	3.8
18	Kentucky	107.5	7.3	7.3
19	Kansas	106.3	6.9	0.0
20	Washington	104.0	6.0	2.6
21	Virginia	102.0	5.3	1.9
22	Georgia	101.5	5.1	1.0
23	North Dakota	100.9	4.9	4.9
24	Illinois	100.2	4.7	-1.6
25	**Michigan**	**100.0**	**4.6**	**2.9**
26	Wisconsin	100.0	4.6	0.0
27	South Dakota	99.8	4.5	-0.1
28	Ohio	99.2	4.3	3.2
29	Rhode Island	98.7	4.1	4.1
30	Alabama	98.5	4.1	4.1
31	Florida	98.0	3.9	0.1
32	New Hampshire	96.2	3.3	0.0
33	Iowa	96.0	3.2	0.0
34	New Mexico	95.2	2.9	2.9
35	Idaho	94.5	2.7	-0.1
36	Nebraska	93.6	2.3	0.0
37	Missouri	91.5	1.6	-0.1
38	Louisiana	90.5	1.2	-1.2
39	Indiana	89.6	0.9	-5.5
40	Minnesota	89.4	0.8	-2.6
41	Alaska	87.0	0.0	0.0
41	Arkansas	87.0	0.0	0.0
41	Delaware	87.0	0.0	0.0
41	Maine	87.0	0.0	0.0
41	Mississippi	87.0	0.0	0.0
41	Montana	87.0	0.0	0.0
41	Oregon	87.0	0.0	-1.1
41	South Carolina	87.0	0.0	-2.6
41	West Virginia	87.0	0.0	0.0
41	Wyoming	87.0	0.0	0.0

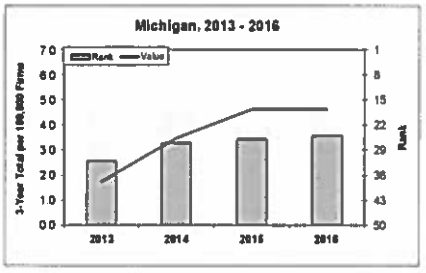
Number of initial public offerings per 100,000 firms over three years, 2016

An Initial Public Offering (IPO) occurs when a company decides to sell stocks to the general public. Companies that go public tend to have established a good performance track record and therefore reflect entrepreneurial success in the form of new and/or improved products or processes. The adjacent table shows thethree-year total of the number of IPOs as a share of all companies in the state.

Source: Renaissance Capital

Midwest Performance, 2016

State	3-Year Total per 100,000 Firms	Rank
Illinois	4.7	24
Michigan	**4.6**	**25**
Wisconsin	4.6	26
Ohio	4.3	28
Indiana	0.9	39



SBIR AWARDS

Rank	State	Score	Awards per 1,000 Firms	Change, 2013-2016 (%)
	50-State Average		*21 3*	*-8.0%*
1	Massachusetts	215.4	110.6	-17.9%
2	New Hampshire	168 6	71 5	-4 7%
3	Maryland	158 9	63 3	-2 2%
4	New Mexico	153 1	58 5	-0 3%
5	Virginia	147 3	53 6	-18 3%
6	Colorado	146 0	52 6	0 4%
7	Delaware	135 6	43 9	11 9%
8	California	132 8	41 6	-9 0%
9	Alabama	130 3	39 5	-4 4%
10	Hawaii	120.4	31.2	13.4%
11	Ohio	117 1	28.4	-9 1%
12	Connecticut	114.7	26.4	-15.2%
13	Pennsylvania	112.8	24 8	-0 5%
14	Utah	111.2	23 5	4.3%
15	Arizona	110.3	22.7	-17.1%
16	Vermont	107.3	20 2	1.7%
17	Rhode Island	107.2	20.1	-3 1%
18	Montana	107.1	20.0	-9.7%
19	Oregon	106.7	19 7	-20.9%
20	**Michigan**	**105.7**	**18.9**	**-4.7%**
21	North Carolina	105.5	18 7	5 7%
22	Washington	104.9	18 2	-14.8%
23	Minnesota	102.9	16 5	-3.4%
24	New Jersey	101 9	15 7	-15 1%
25	Texas	101.0	14 9	-4.4%
26	New York	99.0	13 3	-12 1%
27	Kentucky	97.8	12 2	8 9%
28	Indiana	96.9	11 5	-11.4%
29	Illinois	96.9	11 5	-8 5%
30	Wisconsin	96.5	11 2	-27.4%
31	Arkansas	94 8	9 7	-34 3%
32	Wyoming	94.4	9 4	5 5%
33	Florida	93 7	8 8	-9 4%
34	Georgia	93 5	8 7	-17.6%
35	Nevada	92 8	8 1	3 5%
36	Tennessee	92 7	7 9	-13 9%
37	Iowa	92 7	7 9	30 6%
38	Missouri	92.6	7 9	9 4%
39	Kansas	92 3	7 7	10 2%
40	South Carolina	92.0	7 4	19 8%
41	Oklahoma	91 8	7 2	51 3%
42	Maine	91 7	7 1	-42 3%
43	South Dakota	91 7	7 1	-1 9%
44	Idaho	91 6	7 0	-28 6%
45	Nebraska	89.6	5 4	2 6%
46	Alaska	87.6	3 7	-51 1%
47	West Virginia	87 2	3 4	-53 1%
48	North Dakota	86 9	3 1	-49 9%
49	Louisiana	86.2	2 5	-44 9%
50	Mississippi	85 7	2 1	1 3%

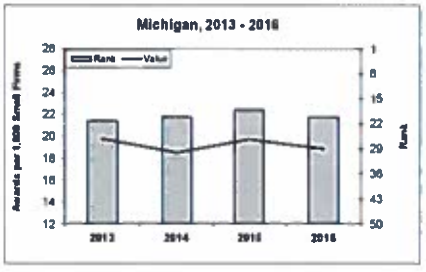
Three-year total of SBIR awards per 1,000 small firms, 2016

Robust research, development, and related commercialization correlate closely with market leadership, growth, and economic development for the communities in which the firms reside. The federal SBIR program provides grants to small businesses to conduct commercially viable R&D for breakthrough technology innovations, products, and processes. The above table gives the number of SBIR awards over three years in each state in relation to the number of firms with less than 500 employees.

Source: U.S. Small Business Administration

Midwest Performance, 2016

State	3-Year Total per 1,000 Small Firms	Rank
Ohio	28 4	11
Michigan	**18.9**	**20**
Indiana	11 5	28
Illinois	11 5	29
Wisconsin	11 2	30



STTR AWARDS

Rank	State	Score	Awards per 1,000 Firms	Change, 2013-2016 (%)
	50-State Average		*3 33*	*23 4%*
1	Massachusetts	192 4	13 73	-18 3%
2	Maryland	161 9	9 98	9 5%
3	New Mexico	157 1	9 40	8 0%
4	Virginia	155 7	9 22	7 3%
5	New Hampshire	144 7	7 87	-0 3%
6	Alabama	140 3	7 33	-5 4%
7	Delaware	128 6	5 89	51 8%
8	Arizona	127 0	5 70	52 8%
9	Utah	123 5	5 26	45 1%
10	California	120 6	4 90	-1 2%
11	Ohio	119 3	4 74	30 9%
12	Connecticut	119 2	4 74	37 4%
13	Colorado	117.4	4.52	-29 5%
14	Pennsylvania	116 0	4.34	63 0%
15	North Carolina	115.6	4.29	56 4%
16	Oregon	111 6	3.80	17 4%
17	Kentucky	111.4	3.77	18 8%
18	Indiana	106.2	3.13	106 4%
19	Minnesota	105 3	3.02	82 8%
20	Montana	104.0	2 87	-11 6%
21	**Michigan**	**103.2**	**2.76**	**-0.5%**
22	Illinois	102.4	2 67	-2 3%
23	Washington	101 2	2.52	-8 3%
24	Nebraska	100 3	2 41	40 4%
25	Texas	100.1	2 39	-2 0%
26	Wisconsin	99 9	2.36	-11 1%
27	New York	99 7	2.34	19 8%
28	New Jersey	99 5	2 31	-2 1%
29	Rhode Island	98 3	2.17	-0 6%
30	Tennessee	98 0	2 13	65 5%
31	Georgia	96 9	1 99	10 1%
32	South Dakota	96 0	1 88	100 0%
33	South Carolina	95 5	1 82	52 4%
34	Nevada	94 2	1 65	281 5%
35	Iowa	94 1	1 65	11 2%
36	Florida	92 8	1 49	-4 2%
37	Kansas	90 8	1 25	-22 5%
38	Hawaii	90 8	1 24	-50 2%
39	Alaska	90 7	1 23	100 0%
40	Wyoming	90 1	1 15	-34 6%
41	Vermont	90 1	1 15	0 5%
42	Arkansas	89 1	1 03	-0 1%
43	North Dakota	89 1	1 03	-34 7%
44	Oklahoma	88 7	0 99	-46 5%
45	Maine	88 2	0 92	-40 6%
46	Idaho	87 4	0 83	-51 7%
47	Missouri	87 4	0 82	17 8%
48	West Virginia	86 9	0 76	-48 7%
49	Louisiana	85 8	0 63	398 2%
50	Mississippi	82 6	0 23	-87 4%

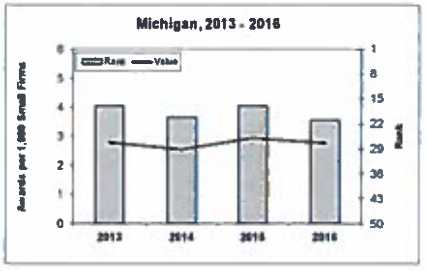
Three-year total of STTR awards per 1,000 small firms, 2016

The federal Small Business Technology Transfer program provides grants to small businesses to conduct commercially viable R&D of breakthrough technology innovations, products, and processes in collaboration with research universities and colleges. The above table shows a state's STTR awards over three years relative to the number of firms with less than 500 employees firms.

Source: U.S. Small Business Administration

Midwest Performance, 2016

State	3-Year Total per 1,000 Small Firms	Rank
Ohio	4 7	11
Indiana	3 1	18
Michigan	**2.8**	**21**
Illinois	2 7	22
Wisconsin	2 4	26



SBIC AWARDS

Rank	State	Score	Awards per 1,000 Firms	Change, 2013-2016 (%)
	50-State Average		*10.4*	*104.5%*
1	Massachusetts	155.6	29.5	-12.8%
2	Utah	150.1	27.4	-18.9%
3	North Carolina	139.1	23.3	161.8%
4	Illinois	131.2	20.4	58.2%
5	Texas	126.0	18.4	50.0%
6	Georgia	123.6	17.5	89.9%
7	Arizona	121.1	16.6	145.9%
8	Minnesota	121.1	16.6	88.6%
9	California	121.1	16.6	51.4%
10	Colorado	118.1	15.5	34.2%
11	Connecticut	117.4	15.2	55.7%
12	Kansas	117.2	15.1	11.4%
13	New York	115.6	14.5	-28.2%
14	New Jersey	115.6	14.5	-35.6%
15	Oklahoma	115.5	14.5	176.5%
16	Tennessee	113.2	13.6	27.1%
17	Florida	109.5	12.3	93.4%
18	Pennsylvania	109.5	12.3	55.3%
19	Louisiana	109.5	12.2	233.3%
20	Missouri	106.2	11.0	107.1%
21	Ohio	105.8	10.9	99.8%
22	South Carolina	105.5	10.8	84.8%
23	Delaware	103.9	10.2	2.0%
24	Arkansas	100.9	9.0	37.4%
25	New Hampshire	100.5	8.9	-4.0%
26	**Michigan**	**99.5**	**8.5**	**89.9%**
27	North Dakota	98.7	8.2	161.3%
28	Virginia	98.6	8.2	-29.8%
29	Maryland	98.4	8.1	47.1%
30	Indiana	98.3	8.1	63.6%
31	New Mexico	97.8	7.9	-35.9%
32	Wisconsin	97.6	7.8	58.8%
33	Mississippi	96.1	7.3	55.6%
34	Oregon	96.1	7.3	20.9%
35	Nevada	95.5	7.0	194.8%
36	Kentucky	95.3	6.9	39.0%
37	Rhode Island	95.2	6.9	-27.7%
38	Vermont	95.2	6.9	-39.7%
39	Washington	94.2	6.5	-5.3%
40	South Dakota	93.1	6.1	220.0%
41	Idaho	89.3	4.7	721.3%
42	Maine	87.4	4.0	157.3%
43	Alabama	85.7	3.4	20.1%
44	Montana	84.4	2.9	784.4%
45	Nebraska	82.5	2.2	784.2%
46	Iowa	81.6	1.8	-50.0%
47	Hawaii	81.1	1.7	298.7%
48	Wyoming	79.8	1.2	100.0%
49	Alaska	78.3	0.6	100.0%
50	West Virginia	77.7	0.4	-65.8%

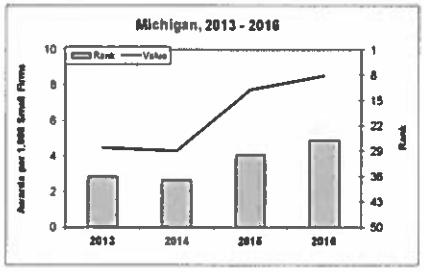
Three-year total of SBIC awards per 1,000 small firms, 2016

SBICs are private investment companies supported and regulated by the U.S. Small Business Administration. Their aim is to create investment pools of risk capital in local markets. One sign of entrepreneurial capital dynamics is the extent to which small businesses successfully access this program. The above table shows the awards given by SBICs over three years in relation to the number of firms with less than 500 employees in each state.

Source: U.S. Small Business Administration

Midwest Performance, 2016

State	3-Year Total per 1,000 Small Firms	Rank
Illinois	20.4	4
Ohio	10.9	21
Michigan	**8.5**	**26**
Indiana	8.1	30
Wisconsin	7.8	32



5-YEAR ESTABLISHMENT SURVIVAL RATE

Rank	State	Score	Survival Rate	Change, 2013-2016 (%)
	50-State Average		*49.8%*	*0.0%*
1	Minnesota	135.6	57.4%	4.4%
2	South Dakota	129.0	56.0%	5.1%
3	Massachusetts	127.5	55.7%	-4.6%
4	Iowa	126.1	55.4%	5.9%
5	Wisconsin	124.7	55.1%	-0.9%
6	Maine	122.8	54.7%	1.9%
7	Missouri	118.5	53.8%	2.1%
8	Ohio	117.1	53.5%	6.6%
9	California	116.6	53.4%	0.8%
9	Montana	116.6	53.4%	2.9%
11	Michigan	114.7	53.0%	0.4%
12	Kentucky	109.0	51.8%	3.2%
12	Utah	109.0	51.8%	6.6%
14	Hawaii	108.1	51.6%	-9.9%
15	Georgia	107.6	51.5%	3.8%
16	Texas	106.6	51.3%	-1.7%
17	Indiana	106.2	51.2%	-0.2%
17	Oregon	106.2	51.2%	6.2%
19	North Carolina	105.2	51.0%	1.6%
20	Illinois	104.3	50.8%	1.2%
21	Oklahoma	103.3	50.6%	2.4%
22	Alabama	102.8	50.5%	3.5%
22	Vermont	102.8	50.5%	-3.4%
24	Louisiana	100.5	50.0%	0.0%
25	Colorado	100.0	49.9%	5.1%
25	New York	100.0	49.9%	-2.2%
27	Connecticut	99.1	49.7%	6.4%
28	New Hampshire	98.6	49.6%	5.8%
29	Idaho	95.7	49.0%	7.0%
30	West Virginia	95.3	48.9%	0.2%
31	Kansas	94.8	48.8%	-0.2%
32	South Carolina	94.3	48.7%	5.6%
33	Alaska	93.4	48.5%	-1.4%
33	Florida	93.4	48.5%	6.8%
35	Tennessee	92.9	48.4%	3.4%
36	Maryland	92.4	48.3%	-0.2%
37	Arizona	91.9	48.2%	6.9%
37	Delaware	91.9	48.2%	-4.0%
39	Virginia	91.5	48.1%	0.0%
40	Rhode Island	90.5	47.9%	2.6%
41	Mississippi	90.0	47.8%	-1.8%
42	Wyoming	88.6	47.5%	-2.7%
43	Nevada	86.2	47.0%	-1.9%
44	New Mexico	85.3	46.8%	5.2%
45	New Jersey	83.9	46.5%	-0.9%
46	Pennsylvania	82.9	46.3%	-7.4%
47	Arkansas	78.6	45.4%	4.4%
48	Nebraska	64.9	42.5%	-20.9%
49	North Dakota	62.5	42.0%	-26.6%
50	Washington	26.4	34.4%	-28.2%

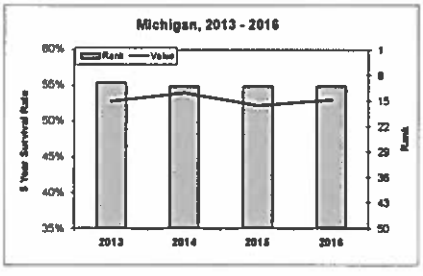
Five-year establishment survival rate, 2016

The long-term survival of a business reflects both the effective use of internal and external resources as well as a supportive business environment. On average, businesses that survive five years have a much higher chance of continuing for the long-haul. The above table shows the share of surviving establishment relative to five years ago.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Survival Rate	Rank
Wisconsin	55.1%	5
Ohio	53.5%	8
Michigan	**53.0%**	**11**
Indiana	51.2%	17
Illinois	50.8%	20



ENTREPRENEURIAL CLIMATE

The broader business climate and institutional environment provide the foundation upon which entrepreneurial activity grows. Elements of Entrepreneurial Climate include the general magnitude and effectiveness of investments in innovative activity, the availability of financial capital, and the general level of economic dynamism.

The Research and Innovation sub-index mainly measures investment in and returns to innovative activity, whereas the Financial and Institutional Capital sub-index takes a look at the actual cash flow as well as institutional support for small firms and startups. The General Business Growth sub-index captures the vitality and health of the economy that supports entrepreneurial dynamism.

Midwest Performance

	2016	2014	2012
Illinois	***	***	**
Ohio	***	***	***
Michigan	***	***	***
Wisconsin	**	**	**
Indiana	**	**	**

Rank	State	2016	2014	2012
1	Massachusetts	*****	*****	*****
2	California	*****	*****	*****
3	Utah	*****	****	****
4	New York	*****	****	***
5	Washington	****	****	****
6	Colorado	****	****	****
7	North Carolina	****	****	***
8	Maryland	****	***	***
9	Rhode Island	****	****	***
10	Oregon	****	***	***
11	Illinois	***	***	**
12	Virginia	***	***	**
13	New Hampshire	***	***	**
14	Alabama	***	***	**
15	Idaho	***	***	***
16	Ohio	***	***	***
17	Minnesota	***	***	***
18	Vermont	***	**	**
19	Georgia	***	***	**
20	Connecticut	***	***	*
21	Texas	***	***	****
22	Florida	***	**	*
23	Tennessee	***	**	**
24	**Michigan**	***	***	***
25	Pennsylvania	***	***	**
26	Delaware	***	**	*
27	Nevada	***	**	*
28	New Jersey	***	***	**
29	South Dakota	***	***	***
30	Arizona	***	***	**
31	Montana	**	**	***
32	Wisconsin	**	**	**
33	Hawaii	**	**	*
34	New Mexico	**	***	**
35	Iowa	**	***	**
36	Missouri	**	**	*
37	Indiana	**	**	**
38	Nebraska	**	**	**
39	South Carolina	**	**	*
40	Maine	**	*	*
41	Kentucky	**	*	*
42	Oklahoma	**	**	**
43	Kansas	**	**	*
44	Arkansas	**	**	*
45	Mississippi	**	*	*
46	West Virginia	**	**	*
47	North Dakota	**	***	****
48	Louisiana	*	*	*
49	Alaska	*	*	*
50	Wyoming	*	*	*

RESEARCH AND INNOVATION

Midwest Performance

	2016	2014	2012
Michigan	***	***	**
Illinois	***	***	**
Wisconsin	**	***	***
Ohio	**	*	**
Indiana	*	**	**

Rank	State	2016	2014	2012
1	Massachusetts	*****	*****	*****
2	Maryland	*****	*****	****
3	Utah	****	****	****
4	New York	****	***	***
5	New Mexico	****	***	****
6	Oregon	***	***	***
7	California	***	***	***
8	Rhode Island	***	***	***
9	Washington	***	***	****
10	Minnesota	***	***	***
11	New Hampshire	***	***	***
12	Colorado	***	***	***
13	**Michigan**	***	***	**
14	Illinois	***	***	**
15	West Virginia	***	****	*
16	Vermont	***	***	***
17	Pennsylvania	***	**	**
18	Alabama	***	**	***
19	New Jersey	**	**	**
20	Wisconsin	**	***	***
21	Connecticut	**	**	**
22	North Carolina	**	**	***
23	Arizona	**	**	**
24	Virginia	**	**	**
25	Nevada	**	**	*
26	Tennessee	**	**	**
27	Idaho	**	**	***
28	North Dakota	**	*	**
29	Iowa	**	**	**
30	Texas	**	*	*
31	Georgia	**	**	**
32	Montana	**	*	**
33	Ohio	**	*	**
34	Florida	**	*	*
35	Missouri	*	*	*
36	Indiana	*	**	**
37	Kansas	*	*	*
38	Delaware	*	*	**
39	Alaska	*	*	*
40	Hawaii	*	*	*
41	Nebraska	*	*	*
42	South Carolina	*	*	*
43	Mississippi	*	*	*
44	Maine	*	*	*
45	Kentucky	*	*	*
46	South Dakota	*	*	*
47	Oklahoma	*	*	*
48	Louisiana	*	*	*
49	Arkansas	*	*	*
50	Wyoming	*	**	**

UNIVERSITY RESEARCH AND DEVELOPMENT

Rank	State	Score	Spending per $100,000 GDP	Change, 2013-2016 (%)
	50-State Average		*$383*	
1	Maryland	186.6	$994	-2.0%
2	Rhode Island	160.5	$804	-11.9%
3	Massachusetts	153.0	$751	-6.3%
4	North Carolina	127.1	$563	-6.7%
5	Pennsylvania	125.1	$549	8.0%
6	**Michigan**	**118.8**	**$504**	**-4.4%**
7	New Hampshire	117.3	$492	-4.8%
8	Wisconsin	113.6	$466	-8.1%
9	Alabama	113.1	$462	4.4%
10	Connecticut	111.8	$453	2.8%
11	Iowa	110.0	$440	0.2%
12	Colorado	108.3	$427	-2.2%
13	North Dakota	107.8	$424	6.4%
14	Montana	107.6	$422	-1.9%
15	Mississippi	107.2	$419	3.4%
16	Georgia	105.9	$410	-5.1%
17	Nebraska	105.9	$410	-1.7%
18	Indiana	105.3	$406	-5.4%
19	New York	105.3	$406	-1.8%
20	New Mexico	104.6	$401	-9.4%
21	Vermont	102.8	$388	-8.4%
22	Arizona	101.7	$380	-3.4%
23	Hawaii	101.1	$376	-18.4%
24	Missouri	100.9	$374	-3.7%
25	Kansas	100.5	$371	-2.3%
26	Utah	99.5	$363	-29.7%
27	Ohio	97.6	$350	-8.8%
28	Washington	96.9	$345	-10.6%
29	California	96.1	$339	-9.8%
30	Alaska	95.1	$332	7.5%
31	Oregon	95.1	$332	-7.1%
32	Tennessee	94.7	$329	-8.2%
33	Texas	94.6	$329	4.7%
34	South Carolina	94.5	$327	-8.4%
35	Illinois	90.9	$302	-12.9%
36	Virginia	90.2	$297	-6.0%
37	Wyoming	89.6	$292	82.9%
38	Louisiana	89.0	$288	1.3%
39	Minnesota	88.4	$283	-4.3%
40	Kentucky	88.3	$283	-6.9%
41	Delaware	87.4	$277	-14.6%
42	West Virginia	87.0	$273	0.3%
43	Florida	86.9	$273	-0.3%
44	Oklahoma	86.4	$270	18.8%
45	Arkansas	83.2	$246	-4.5%
46	Idaho	80.5	$227	-3.8%
47	South Dakota	79.8	$221	-15.8%
48	New Jersey	77.0	$201	-8.8%
49	Maine	72.6	$169	-13.9%
50	Nevada	67.2	$131	9.3%

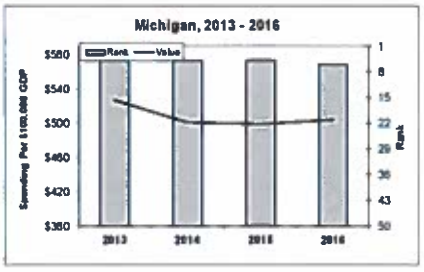
Research and development expenditures by universities per $100,000 gross domestic product, 2016

University or government-based R&D initiatives not only employ researchers but provide technology transfer, spin off companies, and give local businesses access to top talent and new knowledge. The above table shows the amount of research and development expenditures performed at universities per $100,000 of gross domestic product.

Source: National Science Foundation

Midwest Performance, 2016

State	Spending per $100,000 GDP	Rank
Michigan	**$504**	**6**
Wisconsin	$466	8
Indiana	$406	18
Ohio	$350	27
Illinois	$302	35



PATENTS PER INNOVATION WORKER

Rank	State	Score	Per 100,000 Workers	Change, 2013-2016 (%)
	50-State Average		*53.2*	*-4.4%*
1	California	151.3	150.6	1.8%
2	Washington	138.5	124.7	4.1%
3	Oregon	132.5	112.4	5.4%
4	Vermont	129.6	106.6	-22.2%
5	New Hampshire	125.5	98.1	5.6%
6	Massachusetts	125.1	97.3	-0.1%
7	**Michigan**	**123.8**	**94.6**	**7.3%**
8	Minnesota	120.8	88.6	-11.5%
9	Idaho	118.9	84.7	-31.1%
10	Connecticut	116.1	79.0	-0.2%
11	Colorado	112.1	70.8	-3.0%
12	New Jersey	111.9	70.4	-13.7%
13	New York	109.4	65.4	-5.1%
14	Arizona	108.6	63.8	7.8%
15	Utah	108.1	62.6	-11.1%
16	Wisconsin	107.4	61.3	-4.5%
17	Nevada	107.1	60.7	-21.8%
18	Texas	106.9	60.3	2.4%
19	North Carolina	105.9	58.3	-1.7%
20	Indiana	104.9	56.2	-4.1%
21	Rhode Island	104.5	55.4	-6.8%
22	Illinois	103.6	53.5	-7.9%
23	Ohio	102.4	51.0	-9.6%
24	Pennsylvania	101.8	49.9	-5.0%
25	Delaware	100.2	46.7	-31.9%
26	Florida	99.8	45.7	-5.3%
27	Kansas	99.5	45.2	-21.7%
28	Iowa	98.7	43.6	-10.0%
29	New Mexico	98.7	43.6	3.8%
30	South Carolina	98.2	42.5	4.0%
31	Georgia	97.1	40.4	-10.1%
32	Maryland	96.1	38.2	2.4%
33	Wyoming	95.2	36.5	-14.4%
34	Kentucky	93.6	33.1	18.4%
35	Montana	93.4	32.7	32.0%
36	Missouri	93.2	32.5	1.3%
37	South Dakota	92.5	31.0	7.0%
38	Virginia	91.8	29.5	5.3%
39	Tennessee	91.6	29.0	-1.3%
40	Nebraska	89.5	24.8	-8.3%
41	Oklahoma	89.1	24.0	-11.8%
42	Louisiana	88.9	23.6	15.6%
43	Alabama	88.1	21.9	-8.3%
44	Maine	87.3	20.3	-32.3%
45	Hawaii	87.1	20.0	13.1%
46	Arkansas	86.8	19.4	22.2%
47	North Dakota	86.5	18.7	-28.4%
48	Mississippi	84.0	13.7	-10.1%
49	Alaska	83.4	12.3	7.6%
50	West Virginia	83.3	12.3	-32.8%

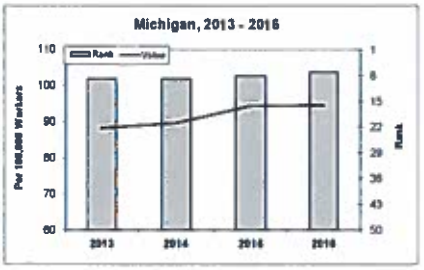
Number of patents per 100,000 innovation workers, 2016

Patent activity signals an inventive economic base, which is key to wealth and value creation in the innovation economy. The above table shows the number of patents awarded to individuals or companies in each state per 100,000 innovation workers as defined by the metrics Physical Sciences and Engineering Workers, Technology and Technician Workers, and Other Innovation Workers.

Source: U.S. Patent and Trademark Office

Midwest Performance, 2016

State	Per 100,000 Workers	Rank
Michigan	**94.6**	**7**
Wisconsin	61.3	16
Indiana	56.2	20
Illinois	53.5	22
Ohio	51.0	23



PATENTS PER R&D DOLLAR

Rank	State	Score	Patents per $1 mill. R&D	Change, 2013-2016 (%)
	50-State Average		*43*	*-0.9%*
1	Nevada	231.1	154.4	4.7%
2	Vermont	200.4	127.5	22.4%
3	South Dakota	125.9	62.3	30.5%
4	Minnesota	123.1	59.8	-5.9%
5	Colorado	123.1	59.8	9.0%
6	Florida	122.9	59.6	1.3%
7	New Mexico	122.2	59.1	16.0%
8	South Carolina	120.3	57.4	1.1%
9	Arkansas	111.2	49.4	29.2%
10	Oklahoma	110.6	48.9	-22.9%
11	Idaho	109.4	47.8	-35.2%
12	Texas	108.7	47.2	-1.2%
13	Oregon	108.3	46.8	12.0%
14	Louisiana	108.0	46.6	10.4%
15	Tennessee	107.1	45.8	1.3%
16	New York	106.6	45.4	-13.1%
17	Arizona	105.3	44.3	14.9%
18	New Hampshire	105.1	44.0	18.2%
19	Wisconsin	104.4	43.4	-1.6%
20	Maine	104.1	43.2	-15.4%
21	Georgia	103.6	42.7	-10.5%
22	Kentucky	102.5	41.8	23.6%
23	Washington	101.0	40.5	1.5%
24	Montana	100.7	40.2	-10.0%
25	Utah	100.4	40.0	4.3%
26	Wyoming	99.6	39.2	-70.7%
27	Illinois	98.8	38.6	12.4%
28	California	98.4	38.2	-4.3%
29	Virginia	97.3	37.3	8.2%
30	Ohio	97.0	37.0	-9.9%
31	Kansas	94.9	35.1	-19.6%
32	Nebraska	93.9	34.3	8.6%
33	Hawaii	93.7	34.1	33.3%
34	Rhode Island	93.6	34.0	-12.9%
35	Michigan	92.9	33.4	7.7%
36	North Carolina	92.5	33.0	3.9%
37	New Jersey	91.1	31.8	-7.9%
38	Pennsylvania	89.1	30.0	-2.2%
39	Indiana	88.9	29.9	8.0%
40	Iowa	88.4	29.4	-17.7%
41	Massachusetts	88.3	29.3	-9.2%
42	Mississippi	84.6	26.1	-7.1%
43	Connecticut	84.2	25.8	-1.3%
44	West Virginia	83.6	25.2	-14.0%
45	Alaska	82.5	24.2	4.5%
46	North Dakota	82.2	24.0	-16.6%
47	Maryland	81.1	23.1	0.6%
48	Alabama	79.5	21.7	-8.7%
49	Missouri	76.8	19.3	22.3%
50	Delaware	68.3	11.8	-37.7%

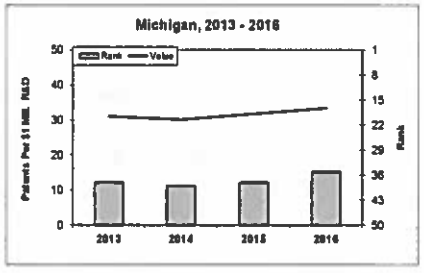
Number of patents per $1 million research and development investment, 2016

Although patents issued relate to the level of research and innovation in a region, the value derived from the innovations is also determined by the effectiveness at obtaining these patents. The above table shows the number of patents issued in the most recent year per $1 million of total research and development investment in each state.

Source: U.S. Patent and Trademark Office

Midwest Performance, 2016

State	Patents per $1 mill. R&D	Rank
Wisconsin	43.4	19
Illinois	38.6	27
Ohio	37.0	30
Michigan	**33.4**	**35**
Indiana	29.9	39



UNIVERSITY LICENSES TO SMALL BUSINESSES

Rank	State	Score	Licenses per 100,000 Firms	Change, 2013-2016 (%)
	50-State Average			*184*
1	North Dakota	197.3	992	-12.2%
2	Oregon	161.7	677	10.6%
3	West Virginia	137.0	459	-25.9%
4	New Hampshire	131.5	411	178.9%
5	Iowa	126.6	367	10.3%
6	Maryland	125.7	359	5.6%
7	Utah	120.5	313	-41.7%
8	Washington	119.6	305	24.1%
9	Minnesota	118.0	291	0.6%
10	Pennsylvania	117.8	289	-11.7%
11	Arizona	117.1	282	28.8%
12	Georgia	115.4	268	-25.3%
13	Montana	114.9	263	-19.0%
14	Michigan	114.2	257	28.0%
15	Massachusetts	114.0	255	-49.9%
16	Tennessee	111.4	232	-3.0%
17	North Carolina	109.8	219	-20.8%
18	Florida	106.5	189	33.0%
19	Nebraska	106.2	186	-46.8%
20	New York	104.8	174	-18.8%
21	Ohio	102.3	152	-11.7%
22	Arkansas	101.6	146	-40.3%
23	Kansas	101.6	146	70.4%
24	Colorado	100.0	132	-23.3%
25	Wisconsin	100.0	131	-7.9%
26	Texas	98.1	115	-25.5%
27	Maine	97.0	105	30.2%
28	New Jersey	96.5	100	-20.9%
29	Illinois	95.6	93	-40.5%
30	Missouri	95.3	90	-43.9%
31	Virginia	94.2	80	-29.2%
32	Louisiana	93.4	73	-36.7%
33	Alabama	92.8	68	-55.6%
34	Idaho	92.7	67	-66.9%
35	Indiana	92.5	66	-71.1%
36	Mississippi	92.3	63	-14.8%
37	Rhode Island	92.0	61	-46.3%
38	Hawaii	91.2	54	-28.2%
39	Kentucky	90.7	50	49.0%
40	California	90.4	47	-49.1%
41	Delaware	90.1	44	-51.0%
42	New Mexico	89.9	42	-90.0%
43	South Dakota	89.4	38	-21.3%
44	Oklahoma	88.5	30	-54.0%
45	South Carolina	88.1	26	-66.3%
46	Connecticut	87.4	20	-46.1%
47	Vermont	86.4	12	-89.4%
48	Nevada	85.8	6	-7.0%
(n/a)	Alaska	(n/a)	(n/a)	(n/a)
(n/a)	Wyoming	(n/a)	(n/a)	(n/a)

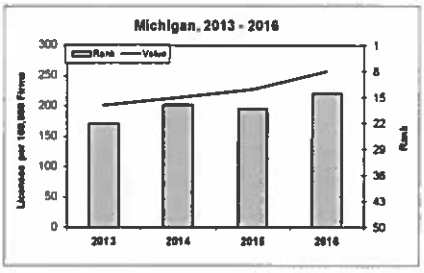
Average number of license and option relationships with startups and small businesses per 100,000 firms, 2016

Academic knowledge that is primarily funded with tax dollars in the form of grants is converted back into more money and economic growth when the successful research is licensed to firms for commercialization. The above table gives the three-year average number of license and option relationships per 100,000 firms with less than 500 employees.

Source: Association of University Technology Managers

Midwest Performance, 2016

State	Licenses per 100,000 Firms	Rank
Michigan	**257.3**	**14**
Ohio	151.6	21
Wisconsin	131.3	25
Illinois	92.9	29
Indiana	65.5	35



NSF PROPOSAL FUNDING RATE

Rank	State	Score	Funding Rate	Change, 2013-2016 (%)
	50-State Average		*23%*	*11.8%*
1	Rhode Island	147.2	38%	18.8%
2	Alaska	125.2	31%	14.8%
2	Oregon	125.2	31%	29.2%
4	Wisconsin	118.9	29%	11.5%
5	California	115.7	28%	7.7%
5	Hawaii	115.7	28%	47.4%
5	Maryland	115.7	28%	27.3%
5	Minnesota	115.7	28%	3.7%
5	Montana	115.7	28%	21.7%
5	Washington	115.7	28%	12.0%
11	Colorado	112.6	27%	12.5%
11	Delaware	112.6	27%	12.5%
13	Massachusetts	109.4	26%	4.0%
13	New Hampshire	109.4	26%	13.0%
15	Connecticut	106.3	25%	8.7%
15	Illinois	106.3	25%	4.2%
15	Maine	106.3	25%	0.0%
15	New Jersey	106.3	25%	13.6%
15	Pennsylvania	106.3	25%	4.2%
20	Georgia	103.1	24%	4.3%
20	New Mexico	103.1	24%	20.0%
20	New York	103.1	24%	4.3%
20	Tennessee	103.1	24%	9.1%
24	Indiana	100.0	23%	27.8%
24	Iowa	100.0	23%	15.0%
24	**Michigan**	**100.0**	**23%**	**9.5%**
24	North Carolina	100.0	23%	4.5%
28	Arizona	96.9	22%	0.0%
28	Utah	96.9	22%	-8.3%
28	Virginia	96.9	22%	4.8%
31	Kentucky	93.7	21%	40.0%
31	Missouri	93.7	21%	5.0%
31	Ohio	93.7	21%	10.5%
34	Idaho	90.6	20%	5.3%
34	Louisiana	90.6	20%	0.0%
34	Oklahoma	90.6	20%	33.3%
34	Texas	90.6	20%	11.1%
38	Nebraska	87.4	19%	0.0%
39	Arkansas	84.3	18%	0.0%
39	Florida	84.3	18%	12.5%
39	Kansas	84.3	18%	5.9%
39	Mississippi	84.3	18%	63.6%
39	South Carolina	84.3	18%	-5.3%
39	Vermont	84.3	18%	-25.0%
45	Alabama	81.1	17%	13.3%
45	North Dakota	81.1	17%	41.7%
45	West Virginia	81.1	17%	21.4%
48	Nevada	78.0	16%	6.7%
48	South Dakota	78.0	16%	-5.9%
48	Wyoming	78.0	16%	0.0%

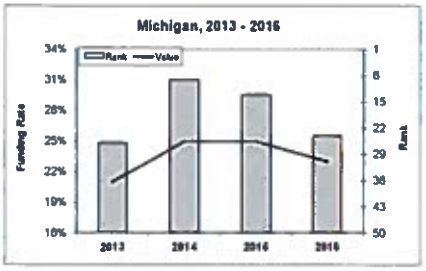
Share of National Science Foundation proposals funded, 2016

The NSF is the premier source of research grant funding in the U.S. Grant topics closely correlate with Michigan's technical core competencies and industrial strengths (i.e., Adv. Manufacturing, Materials & Electronics). NSF funding indicates strong academic and research institutions and a state's interest and capacity to support technology-related business development. The above table shows the rate of NSF proposals funded in each state.

Source: National Science Foundation

Midwest Performance, 2016

State	Funding Rate	Rank
Wisconsin	0.29	4
Illinois	0.25	15
Indiana	0.23	24
Michigan	**0.23**	**24**
Ohio	0.21	31



UNIVERSITY ROYALTY/LICENSE INCOME

Rank	State	Score	Royalties per $1 mill. GDP	Change, 2013-2016 (%)
	50-State Average		*$287.1*	*24.5%*
1	Massachusetts	235.0	$1,476.2	-23.8%
2	West Virginia	229.4	$1,419.9	2.4%
3	New York	227.8	$1,404.5	-1.3%
4	Illinois	189.6	$1,025.1	5.7%
5	Utah	188.4	$1,012.4	6.3%
6	New Jersey	169.7	$826.7	5.8%
7	Minnesota	152.1	$651.5	7.4%
8	Pennsylvania	129.3	$425.5	10.6%
9	California	125.1	$383.6	-44.1%
10	Wisconsin	124.0	$372.3	-47.7%
11	**Michigan**	**116.7**	**$299.6**	**117.9%**
12	Texas	115.6	$289.1	44.0%
13	North Carolina	115.2	$284.7	-18.9%
14	Missouri	114.6	$279.1	92.4%
15	Maryland	113.6	$269.7	58.8%
16	Kansas	112.4	$257.6	31.4%
17	Washington	111.3	$246.5	-47.9%
18	Tennessee	111.2	$245.1	20.1%
19	Oregon	109.4	$227.7	6.9%
20	Ohio	104.5	$179.1	9.7%
21	Florida	103.9	$172.5	24.0%
22	South Dakota	102.1	$155.2	4.9%
23	Nebraska	101.5	$148.6	-57.0%
24	North Dakota	100.2	$136.1	5.8%
25	Mississippi	99.8	$132.1	976.5%
26	Alabama	99.0	$124.3	-13.3%
27	Indiana	98.4	$117.9	-16.1%
28	Louisiana	98.1	$115.5	-44.9%
29	Georgia	97.8	$112.5	-36.5%
30	Iowa	96.4	$98.3	-66.3%
31	Kentucky	95.5	$89.8	87.2%
32	Maine	95.5	$89.5	0.5%
33	Rhode Island	95.2	$86.3	8.4%
34	Colorado	94.5	$79.4	-62.0%
35	Arizona	94.2	$76.8	156.6%
36	New Hampshire	93.6	$70.4	-82.2%
37	Oklahoma	93.5	$69.0	26.6%
38	Vermont	92.2	$56.7	34.0%
39	Virginia	92.0	$55.1	-6.0%
40	Arkansas	91.8	$52.5	19.9%
41	New Mexico	91.4	$48.1	-41.4%
42	Idaho	90.4	$38.2	55.2%
43	Montana	88.8	$23.1	-22.3%
44	South Carolina	88.6	$20.9	-61.4%
45	Connecticut	87.9	$13.8	21.6%
46	Hawaii	87.5	$9.6	-7.3%
47	Delaware	87.5	$9.4	-46.3%
48	Nevada	87.0	$4.5	82.6%
(n/a)	Alaska	(n/a)	(n/a)	(n/a)
(n/a)	Wyoming	(n/a)	(n/a)	(n/a)

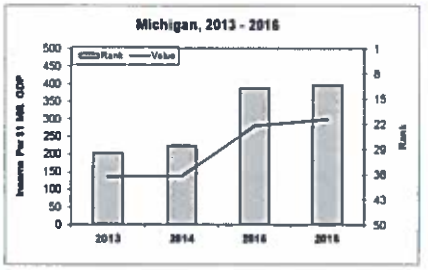
Average gross royalty and license income per $1 million gross domestic product, 2016

Research universities can be themselves entrepreneurial by capturing the value added from proprietary discoveries. The percent of a universities annual budget that is derived from royalty and licensing income is a key measure of its successful technology transfer and links to entrepreneurial businesses and impact on the local economy. The above table shows the three year average gross income per $1 million of gross domestic product.

Source: Association of University Technology Managers

Midwest Performance, 2016

State	Royalties per $1 mill. GDP	Rank
Illinois	$1,025.1	4
Wisconsin	$372.3	10
Michigan	**$299.6**	**11**
Ohio	$179.1	20
Indiana	$117.9	27



INDUSTRY RESEARCH AND DEVELOPMENT

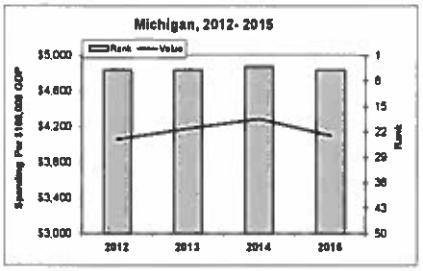
Rank	State	Score	Spending per $100,000 GDP	Change, 2012-2015 (%)
	50-State Average		*$1,644*	
1	Massachusetts	143.5	$4,972	9.6%
2	California	143.3	$4,956	12.7%
3	Washington	136.9	$4,424	1.1%
4	Delaware	135.6	$4,322	-3.2%
5	Michigan	132.9	$4,098	1.0%
6	Connecticut	129.0	$3,777	10.4%
7	Oregon	123.3	$3,308	11.4%
8	New Hampshire	119.2	$2,969	-6.0%
9	New Jersey	117.1	$2,794	(n/a)
10	Idaho	116.5	$2,743	26.3%
11	Utah	114.2	$2,556	31.8%
12	Missouri	111.6	$2,342	-22.0%
13	Minnesota	111.3	$2,311	-2.4%
14	Arizona	109.8	$2,194	0.1%
15	Indiana	108.0	$2,043	-8.3%
16	North Carolina	107.5	$1,999	19.6%
17	Illinois	105.2	$1,815	-10.9%
18	Maryland	104.8	$1,776	15.5%
19	Wisconsin	104.4	$1,746	1.1%
20	Ohio	103.4	$1,666	4.2%
21	Kansas	103.3	$1,651	-3.6%
22	Iowa	103.2	$1,650	31.1%
23	Pennsylvania	102.9	$1,623	-0.6%
24	Colorado	102.5	$1,585	-8.2%
25	Rhode Island	102.1	$1,557	50.2%
26	New York	97.9	$1,207	18.3%
27	Texas	97.6	$1,186	0.5%
28	Virginia	97.1	$1,145	-14.1%
29	Georgia	96.1	$1,057	3.4%
30	Vermont	95.0	$966	-50.2%
31	Alabama	94.6	$939	12.3%
32	Kentucky	92.7	$780	8.8%
33	South Carolina	92.5	$761	-31.6%
34	Florida	92.3	$744	-5.4%
35	New Mexico	91.7	$698	7.9%
36	Maine	90.6	$606	-0.7%
37	Montana	90.3	$585	99.7%
38	Nebraska	90.3	$582	-10.7%
39	Tennessee	90.1	$562	-4.7%
40	Wyoming	89.6	$526	506.8%
41	Oklahoma	88.3	$420	33.8%
42	North Dakota	88.3	$420	-10.4%
43	South Dakota	87.3	$332	12.4%
44	West Virginia	87.1	$321	-37.4%
45	Nevada	87.0	$308	-46.4%
46	Hawaii	86.8	$296	-11.6%
47	Arkansas	86.8	$292	-9.7%
48	Mississippi	86.2	$247	-24.3%
49	Louisiana	85.5	$187	10.6%
50	Alaska	85.1	$156	102.7%

Industry research and development expenditures per $100,000 GDP, 2015

The fruits of local industry R&D investments often become evident only after many years, but they are essential to the long-term competitiveness and provide spillover effects to smaller firms that might not have the resources to conduct their own research. Industry R&D is also an indicator of the prevalence of scientists and researchers in the state. The above table shows total R&D performed by the industrial sector per $100,000 of GDP.
Source: National Science Foundation

Midwest Performance, 2015

State	Spending per $100,000 GDP	Rank
Michigan	**$4,098**	**5**
Indiana	$2,043	15
Illinois	$1,815	17
Wisconsin	$1,746	19
Ohio	$1,666	20



FEDERALLY FUNDED RESEARCH AND DEVELOPMENT

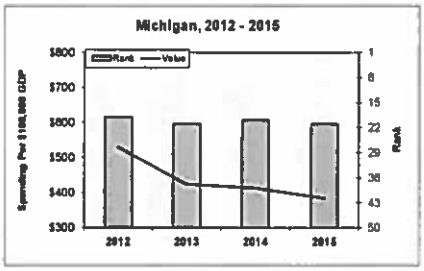
Rank	State	Score	Spending per $100,000 GDP	Change, 2012-2015 (%)
	50-State Average		*$611.6*	*-15.8%*
1	Maryland	250.0	$4,584.7	-2.3%
2	New Mexico	250.0	$3,795.8	1.3%
3	Alabama	235.9	$2,272.9	-18.1%
4	Virginia	185.7	$1,556.3	-15.6%
5	Massachusetts	164.1	$1,248.6	-13.7%
6	Colorado	154.9	$1,117.6	-18.6%
7	Rhode Island	141.6	$926.6	-15.2%
8	Connecticut	140.2	$906.5	-2.7%
9	Idaho	133.6	$812.6	5.6%
10	Utah	131.0	$775.3	2.1%
11	Tennessee	127.9	$732.1	-3.5%
12	California	119.8	$615.8	-27.2%
13	Arizona	116.2	$565.0	-37.8%
14	Washington	113.8	$530.2	-25.2%
15	Pennsylvania	113.3	$522.8	-10.5%
16	New Hampshire	109.1	$463.1	-36.8%
17	Mississippi	109.0	$462.1	-13.7%
18	Missouri	107.5	$440.2	4.2%
19	Ohio	106.9	$431.9	-30.8%
20	Alaska	104.3	$394.4	51.0%
21	Michigan	103.6	$384.1	-27.5%
22	North Carolina	103.4	$381.9	-12.9%
23	Hawaii	103.3	$379.9	-28.0%
24	Texas	100.6	$342.0	-12.5%
25	Montana	100.2	$336.4	-25.1%
26	Florida	99.8	$330.2	7.1%
27	Iowa	99.5	$325.8	-15.9%
28	West Virginia	99.2	$322.2	-13.2%
29	Illinois	99.0	$319.6	-5.3%
30	New York	99.0	$318.6	-12.3%
31	New Jersey	96.8	$287.4	-31.7%
32	Nevada	96.4	$282.2	-26.5%
33	Vermont	95.7	$271.7	-25.9%
34	Oregon	94.6	$256.2	-20.2%
35	Minnesota	94.1	$249.0	-24.1%
36	Oklahoma	93.6	$242.1	-6.2%
37	Maine	93.5	$240.9	-48.9%
38	Georgia	93.3	$237.5	-8.0%
39	Wisconsin	92.9	$232.0	-13.9%
40	South Carolina	92.2	$222.2	-30.2%
41	Indiana	90.8	$201.8	-27.8%
42	Nebraska	90.0	$191.1	-25.6%
43	Delaware	87.7	$157.3	-12.3%
44	South Dakota	87.4	$154.1	5.0%
45	Kentucky	87.4	$153.5	-11.8%
46	North Dakota	86.9	$146.8	-12.5%
47	Wyoming	86.0	$134.2	-28.6%
48	Kansas	85.7	$129.4	-21.2%
49	Louisiana	84.1	$106.0	-18.5%
50	Arkansas	82.9	$88.8	-47.2%

Federal research and development funding per $100,000 GDP, 2015

Over 70 percent of U.S. Patents are based on publicly funded research. Federal funds can provide opportunities for innovation where the private or academic sector support is lacking or where a public benefit is at stake. The level of federal research grants to a state is a strong indication of its ability to achieve robust entrepreneurial dynamism. The above table shows total federal R&D funding per $100,000 of gross domestic product.
Source: National Science Foundation

Midwest Performance, 2015

State	Spending per $100,000 GDP	Rank
Ohio	$431.9	19
Michigan	**$384.1**	**21**
Illinois	$319.6	29
Wisconsin	$232.0	39
Indiana	$201.8	41



ENTRPRENEURIAL PROGRAMS

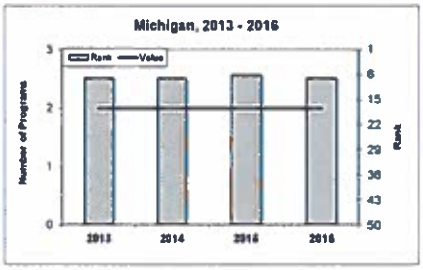
Rank	State	Score	Number of Programs	Change, 2013-2016 (Abs.)
	50-State Average		*1*	*0*
1	New York	(n/a)	6	0
1	Texas	(n/a)	6	1
3	Massachusetts	(n/a)	5	1
4	Illinois	(n/a)	4	-1
4	Utah	(n/a)	4	1
6	North Carolina	(n/a)	3	1
6	Oklahoma	(n/a)	3	1
6	Pennsylvania	(n/a)	3	0
9	California	(n/a)	2	-1
9	**Michigan**	**(n/a)**	**2**	**0**
9	Missouri	(n/a)	2	-3
9	Ohio	(n/a)	2	0
13	Florida	(n/a)	1	0
13	Indiana	(n/a)	1	1
13	Iowa	(n/a)	1	1
13	Kansas	(n/a)	1	1
13	Maryland	(n/a)	1	0
13	Virginia	(n/a)	1	0
19	Alabama	(n/a)	0	0
19	Alaska	(n/a)	0	0
19	Arizona	(n/a)	0	-2
19	Arkansas	(n/a)	0	0
19	Colorado	(n/a)	0	0
19	Connecticut	(n/a)	0	0
19	Delaware	(n/a)	0	0
19	Georgia	(n/a)	0	0
19	Hawaii	(n/a)	0	0
19	Idaho	(n/a)	0	0
19	Kentucky	(n/a)	0	-1
19	Louisiana	(n/a)	0	0
19	Maine	(n/a)	0	0
19	Minnesota	(n/a)	0	0
19	Mississippi	(n/a)	0	0
19	Montana	(n/a)	0	0
19	Nebraska	(n/a)	0	0
19	Nevada	(n/a)	0	0
19	New Hampshire	(n/a)	0	0
19	New Jersey	(n/a)	0	0
19	New Mexico	(n/a)	0	0
19	North Dakota	(n/a)	0	0
19	Oregon	(n/a)	0	0
19	Rhode Island	(n/a)	0	0
19	South Carolina	(n/a)	0	0
19	South Dakota	(n/a)	0	0
19	Tennessee	(n/a)	0	0
19	Vermont	(n/a)	0	0
19	Washington	(n/a)	0	-2
19	West Virginia	(n/a)	0	0
19	Wisconsin	(n/a)	0	0
19	Wyoming	(n/a)	0	0

Top 50 entrepreneurial programs or curricula, 2016

A dynamic innovation economy does not only need workers with scientific and technical skills, but leaders and managers. Universities and colleges have seen the increasing need to provide these future entrepreneurs with the right knowledge to survive in today's economy. The above table shows the number of top 50 programs according to EntrePoint's Top Entrepreneurship Colleges. * *Not included in subdriver/driver calculations*
Source: Entrepreneur Magazine

Midwest Performance, 2016

State	Number of Programs	Rank
Illinois	4	4
Michigan	**2**	**9**
Ohio	2	9
Indiana	1	13
Wisconsin	0	19



FINANCIAL AND INSTITUTIONAL CAPITAL

Midwest Performance

	2016	2014	2012
Ohio	***	***	***
Illinois	**	**	**
Michigan	*	*	***
Wisconsin	*	**	**
Indiana	*	*	**

Rank	State	2016	2014	2012
1	Massachusetts	*****	*****	*****
2	Utah	*****	*****	****
3	California	*****	*****	*****
4	North Carolina	****	****	***
5	Rhode Island	****	****	****
6	New York	****	**	**
7	Colorado	***	***	*****
8	Virginia	***	***	***
9	Alabama	***	***	***
10	Delaware	***	***	**
11	South Dakota	***	****	***
12	Ohio	***	***	***
13	Connecticut	***	***	**
14	New Hampshire	***	***	**
15	Washington	***	***	***
16	Georgia	**	***	**
17	Maryland	**	**	***
18	New Mexico	**	**	**
19	Pennsylvania	**	**	**
20	Texas	**	**	***
21	Illinois	**	**	**
22	Montana	**	**	**
23	Nevada	**	*	*
24	Tennessee	**	**	***
25	Oregon	**	**	**
26	Idaho	**	*	*
27	Arizona	**	**	**
28	Florida	**	**	*
29	Minnesota	**	**	**
30	New Jersey	**	**	**
31	Missouri	**	*	*
32	**Michigan**	*	*	***
33	Oklahoma	*	*	**
34	Nebraska	*	**	*
35	Vermont	*	**	*
36	Mississippi	*	*	*
37	Kentucky	*	*	*
38	South Carolina	*	*	*
39	Hawaii	*	*	*
40	Kansas	*	*	*
41	Wisconsin	*	**	**
42	Indiana	*	*	**
43	Louisiana	*	*	*
44	North Dakota	*	**	*
45	Maine	*	*	*
46	Iowa	*	*	*
47	Arkansas	*	*	*
48	Wyoming	*	*	*
49	West Virginia	*	*	*
50	Alaska	*	*	*

SEED/EARLY STAGE VENTURE CAPITAL

Rank	State	Score	Financing per $1 mill. GDP	Change, 2013-2016 (%)
	50-State Average		*$370*	*1294.8%*
2	California	*250.0*	$3,539	-12.9%
1	Massachusetts	*250.0*	$2,726	-5.8%
3	New York	188.3	$1,243	34.7%
4	Washington	175.2	$1,082	-19.6%
5	Utah	163.0	$931	-27.1%
6	Colorado	145.8	$718	7.7%
7	Connecticut	134.7	$581	42.1%
8	North Carolina	133.4	$565	118.6%
9	Maryland	132.4	$552	-42.0%
10	Virginia	128.9	$510	-9.3%
11	Missouri	126.6	$481	138.5%
12	Illinois	125.7	$470	70.2%
13	Oregon	121.7	$420	69.1%
14	Minnesota	121.3	$415	34.5%
15	Montana	121.2	$414	60830.7%
16	Nevada	118.0	$375	1234.4%
17	Nebraska	115.3	$341	204.2%
18	Rhode Island	112.2	$303	73.5%
19	Texas	111.7	$297	93.3%
20	Alabama	110.1	$277	988.6%
21	Pennsylvania	106.7	$235	-6.0%
22	Georgia	104.0	$201	9.4%
23	Ohio	102.1	$178	31.4%
24	Delaware	101.3	$169	634.3%
25	Vermont	100.8	$162	-40.9%
26	Arizona	99.2	$142	-43.2%
27	Florida	99.1	$141	85.2%
28	Indiana	98.2	$130	344.5%
29	New Mexico	97.8	$126	44.2%
30	**Michigan**	**96.9**	**$114**	**-21.3%**
31	New Jersey	96.4	$108	77.0%
32	Tennessee	96.2	$105	-46.8%
33	Wisconsin	94.2	$80	22.9%
34	South Carolina	93.7	$74	11.7%
35	Hawaii	93.3	$70	100.0%
36	Maine	93.0	$66	-6.1%
37	Kansas	92.7	$62	-74.8%
38	Louisiana	90.4	$33	162.8%
39	Iowa	90.2	$31	-72.8%
40	Kentucky	90.1	$30	-58.7%
41	Oklahoma	90.0	$29	-36.0%
42	New Hampshire	88.3	$7	-99.2%
43	Alaska	87.7	$0	0.0%
43	Arkansas	87.7	$0	-100.0%
43	Idaho	87.7	$0	0.0%
43	Mississippi	87.7	$0	0.0%
43	North Dakota	87.7	$0	0.0%
43	South Dakota	87.7	$0	0.0%
43	West Virginia	87.7	$0	0.0%
43	Wyoming	87.7	$0	0.0%

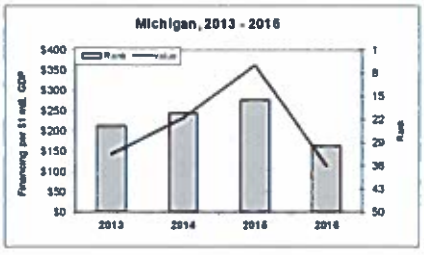
Seed and early stage venture capital financing per $1 mill. of gross domestic product, 2016

Venture capital is focused on high-risk, high-return investments. As an indicator of how new discoveries quickly find their way into innovations and prototypes, attention has turned to seed and start-up financing. The above table shows the total value of seed/startup and early stage venture capital funding for in-state projects per $100,000 of private GDP.

Source: PriceWaterhouseCoopers

Midwest Performance, 2016

State	Financing per $1 mill. GDP	Rank
Illinois	$470	12
Ohio	$178	23
Indiana	$130	28
Michigan	**$114**	**30**
Wisconsin	$80	33



EXPANSION/LATER STAGE VENTURE CAPITAL

Rank	State	Score	Financing per $1 mill. GDP	Change, 2013-2016 (%)
	50-State Average		*$918*	*85.7%*
1	California	250.0	$11,383	71.1%
2	Massachusetts	250.0	$9,303	42.7%
3	New York	250.0	$4,319	101.6%
4	Utah	237.6	$2,863	6.1%
5	Virginia	178.1	$1,724	93.1%
6	Washington	177.9	$1,721	14.2%
7	Colorado	174.2	$1,649	0.8%
8	Georgia	154.1	$1,264	87.6%
9	Florida	150.2	$1,191	124.6%
10	Illinois	139.2	$979	96.9%
11	New Jersey	136.8	$933	25.9%
12	New Hampshire	125.9	$725	-2.9%
13	North Carolina	122.9	$668	-13.0%
14	Arizona	122.9	$667	-18.6%
15	Minnesota	122.0	$651	-8.9%
16	Texas	121.5	$641	-12.3%
17	Pennsylvania	120.0	$613	-5.5%
18	Oregon	117.9	$573	-23.7%
19	Tennessee	116.5	$546	91.6%
20	Kentucky	115.5	$526	3946.1%
21	Nevada	111.2	$444	127.9%
22	**Michigan**	**110.7**	**$434**	**135.6%**
23	Missouri	105.1	$328	-76.5%
24	Maryland	104.0	$307	-83.6%
25	Ohio	101.1	$252	-51.7%
26	Wisconsin	98.9	$208	298.2%
27	Connecticut	96.2	$157	-61.6%
28	Arkansas	95.5	$143	-82.9%
29	Delaware	94.6	$126	-95.7%
30	Louisiana	94.5	$125	224.1%
31	Indiana	93.7	$110	106.4%
32	Montana	93.4	$103	100.0%
33	Kansas	92.7	$91	-69.7%
34	New Mexico	92.4	$85	-26.4%
35	Iowa	89.3	$25	-77.3%
36	South Carolina	88.3	$6	-99.3%
37	Alabama	88.0	$0	-100.0%
37	Alaska	88.0	$0	0.0%
37	Hawaii	88.0	$0	0.0%
37	Idaho	88.0	$0	-100.0%
37	Maine	88.0	$0	-100.0%
37	Mississippi	88.0	$0	0.0%
37	Nebraska	88.0	$0	0.0%
37	North Dakota	88.0	$0	-100.0%
37	Oklahoma	88.0	$0	0.0%
37	Rhode Island	88.0	$0	-100.0%
37	South Dakota	88.0	$0	-100.0%
37	Vermont	88.0	$0	0.0%
37	West Virginia	88.0	$0	0.0%
37	Wyoming	88.0	$0	0.0%

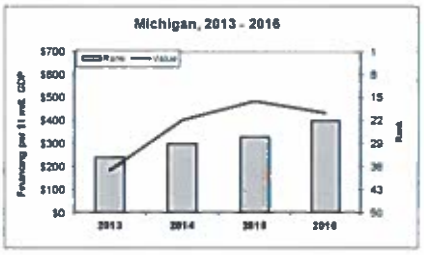
Expansion/Later stage venture capital financing per $1mill of private gross domestic product, 2016

Only about 3,000 U.S. small businesses per year receive venture capital, and funding focuses largely on two sectors: information technology and health care. States with small business growth other than in these sectors tend to score relatively low on this metric. The above table shows the total value of expansion and later-stage venture capital funding for in-state projects per $1mill. of private GDP.

Source: PriceWaterhouseCoopers

Midwest Performance, 2016

State	Financing per $1 mill. GDP	Rank
Illinois	$979	10
Michigan	**$434**	**22**
Ohio	$252	25
Wisconsin	$208	26
Indiana	$110	31



IPO FINANCING

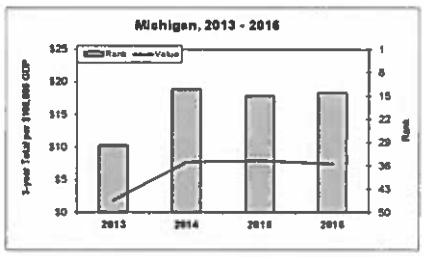
Rank	State	Score	3-year total per $100,000 GDP	Change, 2013-2016 (%)
	50-State Average		*$6.8*	*62.5%*
1	Rhode Island	250.0	$60.6	100.0%
2	Idaho	196.3	$33.1	601.7%
3	Connecticut	175.0	$26.6	755.7%
4	Nevada	164.1	$23.3	1030.2%
5	Colorado	140.5	$16.1	2.5%
6	Massachusetts	132.6	$13.7	64.3%
7	Texas	124.5	$11.3	-31.8%
8	Pennsylvania	124.4	$11.2	150.9%
9	Kansas	124.1	$11.2	52.1%
10	New York	118.5	$9.4	101.6%
11	Hawaii	116.6	$8.9	100.0%
12	California	114.2	$8.1	-52.3%
13	Oklahoma	112.7	$7.7	64.0%
14	**Michigan**	**111.9**	**$7.4**	**326.1%**
15	Tennessee	111.2	$7.2	-58.8%
16	Kentucky	110.6	$7.0	100.0%
17	Maryland	110.5	$7.0	16.8%
18	South Dakota	109.6	$6.7	5.0%
19	New Jersey	107.2	$6.0	-53.8%
20	North Carolina	105.9	$5.6	-39.7%
21	Utah	105.5	$5.5	29.8%
22	Vermont	104.9	$5.3	100.0%
23	Illinois	104.2	$5.1	7.5%
24	Wisconsin	101.0	$4.1	-5.3%
25	Georgia	100.6	$4.0	-1.7%
26	New Hampshire	99.4	$3.6	42.9%
27	Ohio	98.7	$3.4	95.1%
28	Virginia	98.0	$3.2	-58.3%
29	Arizona	97.5	$3.1	-61.8%
30	Florida	96.7	$2.8	-46.6%
31	Nebraska	95.2	$2.4	-48.3%
32	North Dakota	94.6	$2.2	100.0%
33	Washington	93.7	$1.9	-6.2%
34	Missouri	92.9	$1.7	-9.6%
35	New Mexico	91.7	$1.3	100.0%
36	Alabama	91.2	$1.1	100.0%
37	Iowa	90.7	$1.0	25.7%
38	Indiana	88.1	$0.2	-97.0%
39	Louisiana	88.0	$0.2	-85.0%
40	Minnesota	87.9	$0.2	-90.5%
41	Alaska	87.4	$0.0	0.0%
41	Arkansas	87.4	$0.0	0.0%
41	Delaware	87.4	$0.0	0.0%
41	Maine	87.4	$0.0	0.0%
41	Mississippi	87.4	$0.0	0.0%
41	Montana	87.4	$0.0	0.0%
41	Oregon	87.4	$0.0	-100.0%
41	South Carolina	87.4	$0.0	-100.0%
41	West Virginia	87.4	$0.0	0.0%
41	Wyoming	87.4	$0.0	0.0%

Three-year total of initial public offerings per $100,000 gross domestic product, 2016

An initial public offering (IPO) occurs when a firm decides to sell stocks to the general public. Companies that go public tend to have established a good performance track record and therefore reflect successful new and/or improved products or processes. Although IPO numbers tend to be small, they provide a good indication of business growth. The above table shows IPOs accumulated over three years as a share of the state's most recent GDP. *Source: Renaissance Capital*

Midwest Performance, 2016

State	3-Year Total per $100,000 GDP	Rank
Michigan	$7.4	14
Illinois	$5.1	23
Wisconsin	$4.1	24
Ohio	$3.4	27
Indiana	$0.2	38



SBIC FINANCING

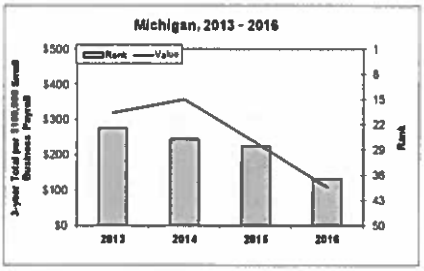
Rank	State	Score	Per $100,000 Small Business Payroll	Change, 2013-2016 (%)
	50-State Average		*$183*	*169.6%*
1	Utah	157.3	$595	11.4%
2	Vermont	144.8	$498	36.3%
3	North Carolina	138.2	$447	-22.8%
4	South Dakota	134.8	$420	59.7%
5	Connecticut	125.3	$346	-35.2%
6	Georgia	125.2	$345	-45.9%
7	New Hampshire	123.4	$331	253.3%
8	Tennessee	121.9	$320	-31.2%
9	Minnesota	121.5	$317	-30.4%
10	Massachusetts	118.3	$292	-59.1%
11	Colorado	116.1	$275	-69.5%
12	South Carolina	115.7	$272	-4.0%
13	Texas	114.8	$265	-46.4%
14	Florida	113.6	$256	-43.7%
15	New York	111.9	$243	-47.7%
16	Missouri	110.2	$229	-39.3%
17	California	109.4	$223	-49.2%
18	Pennsylvania	109.2	$222	-46.7%
19	Illinois	108.7	$218	-54.5%
20	New Jersey	105.6	$194	-64.8%
21	Oregon	103.9	$180	-32.5%
22	Mississippi	101.6	$162	847.9%
23	Arizona	101.5	$162	-49.2%
24	Nevada	101.0	$158	-24.7%
25	Idaho	100.1	$151	6728.4%
26	Washington	99.9	$149	-21.0%
27	Louisiana	99.8	$148	-58.4%
28	Alabama	99.3	$144	-58.2%
29	Oklahoma	98.4	$138	-38.6%
30	Nebraska	98.2	$136	111.8%
31	Virginia	97.6	$131	-48.8%
32	Ohio	97.6	$131	-55.6%
33	Wisconsin	97.5	$131	-64.5%
34	Indiana	96.0	$119	-46.6%
35	Delaware	95.6	$116	-44.8%
36	Rhode Island	95.1	$112	-85.2%
37	**Michigan**	**94.6**	**$108**	**-66.8%**
38	Iowa	93.2	$97	-48.0%
39	Kansas	92.9	$94	-67.7%
40	Maryland	88.7	$62	-77.9%
41	Montana	88.3	$59	2379.9%
42	Kentucky	88.3	$59	-81.9%
43	Maine	86.0	$41	-83.8%
44	New Mexico	84.5	$29	-83.3%
45	Hawaii	83.0	$17	-33.5%
46	Arkansas	82.9	$17	-89.7%
47	Alaska	80.7	$0	100.0%
48	North Dakota	80.7	$0	-100.0%
49	Wyoming	80.7	$0	100.0%
50	West Virginia	80.7	$0	-100.0%

Three-year total of SBIC financing per $100,000 of small business payroll, 2016

Small Business Investment Companies (SBIC) are private investment companies supported and regulated by the U.S. Small Business Administration. Their aim is to create investment pools of risk capital in local markets. One sign of entrepreneurial capital dynamics is the SBIC's level of financing. The above table shows SBIC funding over three years in each state relative to the annual payroll of firms with < 500 employees. *Source: U.S. Small Business Association*

Midwest Performance, 2016

State	Per $100,000 Small Business Payroll	Rank
Illinois	$218	19
Ohio	$131	32
Wisconsin	$131	33
Indiana	$119	34
Michigan	$108	37



SBIR FINANCING

Rank	State	Score	Per $100,000 small business payroll	Change, 2013-2016 (%)
	50-State Average		*$197.3*	*-13.2%*
1	Massachusetts	191.0	$805.3	-16.8%
2	New Hampshire	186.6	$772.5	8.6%
3	New Mexico	160.4	$577.4	-6.3%
4	Colorado	157.2	$553.2	5.6%
5	Maryland	153.1	$522.9	0.7%
6	Virginia	143.4	$450.1	-11.8%
7	Alabama	133.7	$377.6	-0.8%
8	California	129.3	$345.1	-12.3%
9	Montana	124.9	$312.5	18.5%
10	Delaware	124.5	$309.1	15.8%
11	Oregon	115.8	$244.5	-29.2%
12	Ohio	115.7	$243.5	-11.5%
13	Vermont	115.1	$239.6	-3.2%
14	Utah	114.4	$234.3	-8.9%
15	Rhode Island	112.9	$223.1	-10.2%
16	Pennsylvania	112.4	$219.3	-9.0%
17	Arizona	112.4	$219.0	-19.5%
18	Hawaii	111.8	$214.4	-8.3%
19	North Carolina	111.6	$212.8	-16.4%
20	Connecticut	111.4	$211.5	5.2%
21	Washington	106.9	$177.8	-23.7%
22	**Michigan**	**106.4**	**$174.0**	**-9.3%**
23	Minnesota	101.0	$134.4	-13.6%
24	Kentucky	100.9	$133.1	8.7%
25	New Jersey	100.8	$132.4	-16.7%
26	New York	99.2	$120.8	-20.1%
27	Wisconsin	98.4	$114.5	-31.2%
28	Florida	97.9	$110.9	-14.5%
29	Indiana	97.8	$110.4	-12.7%
30	Arkansas	97.7	$109.8	-22.2%
31	Texas	97.6	$108.9	-12.0%
32	South Carolina	96.7	$101.7	40.5%
33	Georgia	96.4	$100.0	-21.1%
34	Illinois	95.6	$93.9	-12.5%
35	Iowa	94.7	$87.4	74.7%
36	Wyoming	94.2	$83.4	-24.0%
37	Missouri	94.0	$82.0	6.0%
38	Kansas	93.9	$80.8	31.6%
39	Tennessee	93.7	$79.4	-26.6%
40	Nevada	91.8	$65.2	-32.4%
41	South Dakota	91.6	$64.2	31.8%
42	Maine	90.8	$58.3	-52.5%
43	Oklahoma	90.6	$56.3	-38.3%
44	Idaho	89.8	$50.9	-67.3%
45	Nebraska	88.5	$41.2	-57.1%
46	West Virginia	87.2	$31.4	-59.9%
47	Alaska	86.1	$23.1	-51.5%
48	Louisiana	85.6	$19.3	-40.5%
49	North Dakota	85.3	$17.3	-72.4%
50	Mississippi	85.1	$15.2	-13.5%

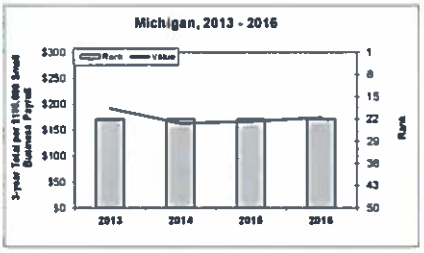
Three-year total of SBIR financing per $100,000 of gross domestic product, 2016

The federal Small Business Innovation Research program provides grants to small firms to conduct commercially viable R&D of breakthrough technology innovations, products, and processes. The above table gives the total value of SBIR funding accumulated over three years in each state proportional to the annual payroll of firms with less than 500 employees.

Source: U.S. Small Business Administration

Midwest Performance, 2016

State	Per $100,000 Small Business Payroll	Rank
Ohio	$243.5	12
Michigan	**$174.0**	**22**
Wisconsin	$114.5	27
Indiana	$110.4	29
Illinois	$93.9	34



STTR FINANCING

Rank	State	Score	Per $100,000 small business payroll	Change, 2013-2016 (%)
	50-State Average		*$28*	*7%*
1	New Mexico	184.3	$117	43%
2	Massachusetts	167.4	$97	6%
3	New Hampshire	148.1	$75	49%
4	Alabama	145.4	$72	3%
5	Virginia	139.1	$64	31%
6	Utah	132.7	$57	74%
7	Maryland	130.8	$55	-10%
8	Oregon	130.2	$54	13%
9	Delaware	124.9	$48	33%
10	Arizona	122.7	$45	52%
11	Montana	120.0	$42	-16%
12	Connecticut	117.7	$40	33%
13	Colorado	117.6	$39	-35%
14	California	117.5	$39	5%
15	North Carolina	113.9	$35	7%
16	Ohio	113.3	$34	46%
17	South Carolina	109.9	$30	91%
18	Pennsylvania	108.5	$29	45%
19	Nebraska	107.3	$27	163%
20	Wyoming	105.6	$25	38%
21	Georgia	104.7	$24	2%
22	Kentucky	103.5	$23	-56%
23	Washington	102.8	$22	-31%
24	Wisconsin	101.3	$21	-9%
25	Minnesota	100.1	$19	-10%
26	New York	99.9	$19	28%
27	Illinois	99.4	$18	-18%
28	New Jersey	99.1	$18	40%
29	**Michigan**	**98.9**	**$18**	**-33%**
30	Indiana	98.6	$17	43%
31	Florida	95.5	$14	-18%
32	Nevada	94.9	$13	205%
33	Texas	94.7	$13	-27%
34	Rhode Island	94.1	$12	-47%
35	North Dakota	93.5	$11	31%
36	Oklahoma	93.5	$11	-48%
37	South Dakota	92.5	$10	100%
38	Tennessee	92.4	$10	-54%
39	Arkansas	92.2	$10	-66%
40	West Virginia	91.7	$9	-16%
41	Kansas	90.6	$8	-61%
42	Iowa	89.6	$7	-47%
43	Maine	89.2	$6	-34%
44	Missouri	88.1	$5	-46%
45	Hawaii	88.0	$5	-73%
46	Idaho	87.4	$4	-75%
47	Louisiana	86.4	$3	86%
48	Vermont	85.8	$2	-82%
49	Alaska	85.4	$2	100%
50	Mississippi	84.8	$1	-90%

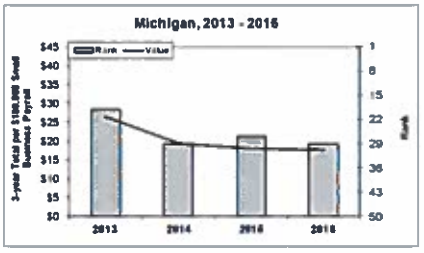
Three-year total of STTR financing per $100,000 of small business payroll, 2016

The federal Small Business Technology Transfer program provide grants to small firms to conduct commercially viable R&D of breakthrough technology innovations, products, and processes in collaboration with research universities and colleges. The table gives the total value of STTR funding accumulated over three years relative a state's annual payroll of firms with less than 500 employees.

Source: U.S. Small Business Administration

Midwest Performance, 2016

State	Per $100,000 Small Business Payroll	Rank
Ohio	$34.4	16
Wisconsin	$20.5	24
Illinois	$18.3	27
Michigan	**$17.7**	**29**
Indiana	$17.4	30



BANK COMMERCIAL AND INDUSTRIAL LENDING

Rank	State	Score	Lending per $1,000 GDP	Change, 2013-2016 (%)
	50-State Average		*$198.1*	*1.2%*
1	Delaware	250.0	$1,640.6	-7.4%
1	North Carolina	250.0	$378.2	-3.1%
1	Ohio	250.0	$403.5	-2.7%
1	Rhode Island	250.0	$385.3	-1.2%
1	South Dakota	250.0	$4,501.9	-3.2%
1	Utah	250.0	$683.0	-6.1%
7	Alabama	203.3	$264.5	5.8%
8	Virginia	134.3	$114.4	9.7%
9	Mississippi	131.8	$109.0	62.1%
10	Georgia	129.2	$103.2	-4.1%
11	Oklahoma	120.0	$83.3	4.5%
12	Illinois	114.0	$70.2	1.7%
13	Hawaii	113.3	$68.5	-7.5%
14	Nebraska	110.9	$63.3	1.6%
15	North Dakota	110.8	$63.2	-7.9%
16	Missouri	110.2	$61.7	6.1%
17	Montana	107.5	$56.0	0.5%
18	Connecticut	104.6	$49.6	3.6%
19	Arkansas	103.4	$47.1	4.0%
20	Iowa	103.0	$46.2	-2.5%
21	Texas	102.5	$45.2	4.3%
22	New York	102.2	$44.5	-2.7%
23	Wisconsin	102.2	$44.4	1.8%
24	Kansas	101.9	$43.9	0.8%
25	Louisiana	101.1	$42.1	-15.0%
26	West Virginia	98.9	$37.2	3.7%
27	Tennessee	98.0	$35.4	-6.6%
28	Pennsylvania	97.4	$34.0	-1.0%
29	California	96.5	$32.0	-5.1%
30	Maine	94.8	$28.2	0.4%
31	Indiana	94.4	$27.4	-1.1%
32	Minnesota	93.4	$25.3	-1.4%
33	New Mexico	92.5	$23.2	7.4%
34	Massachusetts	92.0	$22.3	8.5%
35	Florida	92.0	$22.2	2.2%
36	Kentucky	91.7	$21.5	-3.6%
37	Nevada	90.7	$19.4	-3.2%
38	Wyoming	90.0	$17.9	11.4%
39	Oregon	89.1	$16.0	11.0%
40	Vermont	88.7	$14.9	-6.7%
41	Washington	88.1	$13.6	-12.7%
42	Alaska	87.8	$13.2	25.4%
43	Michigan	87.8	$13.1	-5.1%
44	South Carolina	87.1	$11.5	-8.4%
45	New Jersey	87.1	$11.5	-3.2%
46	Arizona	86.9	$11.0	28.1%
47	New Hampshire	86.7	$10.8	-7.1%
48	Idaho	86.6	$10.4	-9.4%
49	Colorado	86.1	$9.4	-2.6%
50	Maryland	85.8	$8.8	-3.6%

Total bank lending to commercial and industrial customers per $1,000 gross domestic product, 2016

Commercial and industrial lending by banks forms the backbone of debt financing to businesses of various sizes and needs. Although the above data is reported by bank headquarters, therefore states with fewer bank head offices will not perform as well, a factor worth taking into account. The adjacent table shows the total commercial and industrial lending per $1,000 of GDP. *Source: Federal Deposit Insurance Corporation*

PRIVATE LENDING TO SMALL BUSINESSES

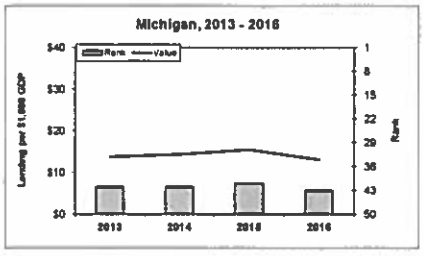
Rank	State	Score	Lending per 1,000 Firms	Change, 2013-2016 (%)
	50-State Average		*$44,035*	*-9.0%*
1	Mississippi	141.2	$65,476	-9.9%
2	North Carolina	139.2	$64,357	-4.6%
3	Alabama	131.6	$60,150	-10.5%
4	Tennessee	129.4	$58,875	-0.1%
5	Maine	125.1	$56,472	-2.6%
6	Louisiana	124.9	$56,385	-2.9%
7	South Dakota	123.6	$55,671	-63.8%
8	Montana	119.4	$53,290	-42.6%
9	North Dakota	117.8	$52,395	-43.9%
10	South Carolina	116.7	$51,828	-11.2%
11	Texas	116.1	$51,499	0.4%
12	Oklahoma	116.0	$51,442	-20.9%
13	Georgia	115.1	$50,915	-0.6%
14	Idaho	112.6	$49,507	-31.1%
15	Virginia	108.6	$47,310	2.7%
16	Michigan	107.6	$46,745	-2.5%
17	Alaska	107.4	$46,608	-14.4%
18	Pennsylvania	106.8	$46,296	-10.5%
19	West Virginia	106.8	$46,291	-3.8%
20	Indiana	106.2	$45,922	-23.1%
21	Nebraska	105.9	$45,786	-53.8%
22	Delaware	105.8	$45,708	21.5%
23	Kentucky	105.3	$45,461	1.6%
24	Colorado	103.3	$44,307	1.9%
25	Missouri	100.2	$42,602	-32.1%
26	Connecticut	99.8	$42,369	17.5%
27	Arizona	99.2	$42,038	13.5%
28	California	99.1	$41,989	10.4%
29	Ohio	98.6	$41,721	-2.3%
30	Hawaii	96.2	$40,345	-22.4%
31	Washington	95.6	$40,035	-4.9%
32	Wyoming	95.4	$39,928	-20.9%
33	New Jersey	95.1	$39,740	7.4%
34	Maryland	94.5	$39,435	13.2%
35	Oregon	93.2	$38,662	-13.5%
36	Iowa	92.2	$38,144	-38.7%
37	New Hampshire	90.7	$37,271	17.1%
38	Nevada	90.2	$37,015	8.6%
39	Massachusetts	89.4	$36,555	9.4%
40	Florida	89.0	$36,356	25.1%
41	Illinois	88.8	$36,228	-19.6%
42	Kansas	85.8	$34,533	-27.7%
43	Utah	85.6	$34,423	-4.0%
44	Minnesota	84.3	$33,729	-26.7%
45	New Mexico	82.8	$32,899	0.3%
46	Arkansas	82.7	$32,827	-9.0%
47	Rhode Island	82.7	$32,802	23.4%
48	Wisconsin	79.9	$31,239	-42.5%
49	Vermont	79.7	$31,138	(n/a)
50	New York	75.9	$29,052	3.8%

Private loans to small businesses per 1,000 firms, 2016

While public programs are helpful, the bulk of small business lending for startup and operation comes from private capital markets. Banks and private credit institutions play a particularly important role to finance businesses with less than 500 employees. The above table shows the total value of private loans to small businesses in each state in relation to the total number of firms. *Source: U.S. Small Business Administration*

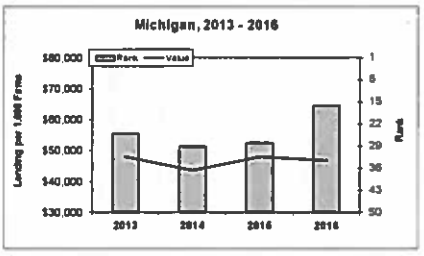
Midwest Performance, 2016

State	Lending per $1,000 GDP	Rank
Ohio	$403.5	4
Illinois	$70.2	12
Wisconsin	$44.4	23
Indiana	$27.4	31
Michigan	$13.1	43



Midwest Performance, 2016

State	Lending per 1,000 Firms	Rank
Michigan	$46,745	16
Indiana	$45,922	20
Ohio	$41,721	29
Illinois	$36,228	41
Wisconsin	$31,239	48



BUSINESS INCUBATORS

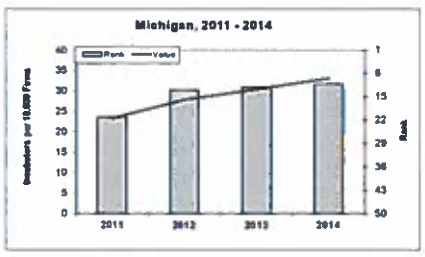
Rank	State	Score	Incubators per $10,000 firms	Change, 2011-2014 (%)
	50-State Average		27	-2.7%
1	Oklahoma	180.5	69	20.9%
2	Wisconsin	163.6	60	-5.5%
3	Mississippi	144.2	49	44.5%
4	Idaho	135.8	44	40.4%
5	New Mexico	132.8	43	22.5%
6	Louisiana	131.3	42	-11.5%
7	West Virginia	131.2	42	54.8%
8	Massachusetts	124.6	38	-9.9%
9	Hawaii	120.7	36	-2.2%
10	Missouri	117.5	34	-34.4%
11	**Michigan**	**115.3**	**33**	**3.3%**
12	Maryland	112.7	32	34.1%
13	Alabama	109.5	30	38.6%
14	New Hampshire	108.8	29	-3.6%
15	Kentucky	108.7	29	-7.9%
16	North Carolina	106.4	28	65.7%
17	South Dakota	105.9	28	-1.8%
18	Maine	104.7	27	39.5%
19	Virginia	104.4	27	13.7%
20	Oregon	102.9	26	15.3%
21	Kansas	102.2	26	-10.5%
22	North Dakota	101.8	26	-39.6%
23	Iowa	101.6	26	-35.9%
24	Ohio	101.0	25	10.3%
25	Arizona	100.2	25	-3.8%
26	South Carolina	99.8	24	19.9%
27	Pennsylvania	99.7	24	10.9%
28	Colorado	98.4	24	13.1%
29	New York	96.5	23	-35.8%
30	Washington	96.0	22	-0.8%
31	Montana	95.9	22	-33.5%
32	Vermont	95.3	22	-16.4%
33	Tennessee	95.0	22	-1.2%
34	Indiana	93.7	21	-31.8%
35	Delaware	93.4	21	-1.6%
36	Utah	92.6	20	-16.0%
37	Connecticut	91.0	20	-33.2%
38	Nebraska	90.0	19	22.5%
39	Minnesota	89.6	19	-24.9%
40	Illinois	89.2	19	-24.0%
41	Arkansas	87.9	18	-3.9%
42	Georgia	86.7	17	95.4%
43	California	86.5	17	-2.7%
44	Wyoming	86.1	17	-45.4%
45	Texas	84.7	16	-53.3%
46	Florida	84.3	16	37.4%
47	Nevada	78.6	13	-37.6%
48	Rhode Island	78.3	12	-47.3%
49	Alaska	77.4	12	-61.0%
50	New Jersey	76.3	11	-100.0%

Business incubators per 10,000 firms, 2014

A business incubator is an enterprise whose mission is to help build promising fledgling companies into successful businesses. Often sponsored by government or nonprofit agencies, the facilities and services of business incubators give entrepreneurs a head start on the way to being profitable, thereby helping to build the local economy. The above table shows the number of incubators per 10,000 firms in each state.
Source: National Business Incubation Association

Midwest Performance, 2014

State	Incubators per 10,000 Firms	Rank
Wisconsin	60	2
Michigan	**33**	**11**
Ohio	25	24
Indiana	21	34
Illinois	19	40



GENERAL BUSINESS GROWTH

Midwest Performance

	2016	2014	2012
Illinois	****	****	***
Michigan	****	****	***
Ohio	***	****	***
Indiana	***	****	**
Wisconsin	***	***	**

Rank	State	2016	2014	2012
1	California	*****	*****	***
2	New York	*****	*****	****
3	Washington	*****	*****	***
4	Florida	*****	****	**
5	Idaho	*****	*****	****
6	Oregon	*****	****	***
7	Colorado	****	****	**
8	Illinois	****	****	***
9	Vermont	****	**	**
10	Texas	****	*****	****
11	Tennessee	****	****	**
12	Hawaii	****	****	**
13	North Carolina	****	****	**
14	Georgia	****	****	**
15	**Michigan**	****	****	***
16	Iowa	****	****	***
17	Minnesota	****	****	***
18	New Jersey	****	****	*
19	Nevada	****	***	**
20	Maine	****	***	**
21	Arizona	***	****	**
22	Ohio	***	****	***
23	Utah	***	**	**
24	Massachusetts	***	****	**
25	South Dakota	***	****	****
26	South Carolina	***	***	*
27	Indiana	***	****	**
28	Virginia	***	***	**
29	Delaware	***	***	*
30	Wisconsin	***	***	**
31	Pennsylvania	***	****	**
32	Arkansas	***	****	**
33	Nebraska	***	***	***
34	Maryland	***	***	*
35	New Hampshire	***	***	*
36	Missouri	***	***	*
37	Montana	***	****	****
38	Connecticut	***	***	*
39	Alabama	***	***	**
40	Kentucky	***	***	**
41	Oklahoma	**	*****	***
42	Rhode Island	**	**	*
43	Kansas	**	***	**
44	Mississippi	**	**	**
45	North Dakota	**	*****	*****
46	Louisiana	*	**	**
47	West Virginia	*	**	**
48	New Mexico	*	**	*
49	Alaska	*	**	**
50	Wyoming	*	*	**

GROSS DOMESTIC PRODUCT GROWTH

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs.)
	50-State Average		*3.1%*	*-0.4%*
1	Utah	120.9	5.8%	1.5%
2	California	119.9	5.7%	1.5%
3	Washington	118.8	5.5%	1.5%
4	Delaware	117.2	5.4%	3.3%
5	Georgia	117.1	5.4%	2.1%
6	Florida	115.9	5.2%	2.6%
7	Oregon	115.6	5.2%	4.2%
8	South Carolina	113.2	5.0%	1.5%
9	Tennessee	112.1	4.8%	0.3%
10	North Carolina	110.5	4.7%	1.6%
11	Massachusetts	109.8	4.6%	1.4%
12	Iowa	108.9	4.5%	-0.1%
13	**Michigan**	**108.9**	**4.5%**	**0.8%**
14	Nevada	108.9	4.5%	2.8%
15	Hawaii	107.0	4.3%	1.3%
16	Arizona	105.9	4.2%	0.9%
17	New York	105.0	4.1%	0.7%
18	Maryland	104.7	4.1%	1.4%
19	New Hampshire	104.6	4.0%	1.8%
20	Colorado	104.3	4.0%	-0.2%
21	Idaho	103.8	4.0%	0.7%
22	Indiana	101.6	3.7%	0.4%
23	Minnesota	101.3	3.7%	-0.3%
24	Wisconsin	100.4	3.6%	0.0%
25	Maine	100.2	3.6%	2.4%
26	Ohio	99.8	3.5%	-0.7%
27	Illinois	97.6	3.3%	-0.1%
28	Rhode Island	97.6	3.3%	1.4%
29	Nebraska	96.9	3.2%	-1.8%
30	Virginia	96.1	3.1%	0.9%
31	Pennsylvania	94.2	3.0%	-0.5%
32	Kentucky	92.6	2.8%	-0.2%
33	South Dakota	92.4	2.8%	-2.6%
34	Missouri	92.1	2.7%	0.2%
35	Vermont	92.0	2.7%	0.2%
36	New Jersey	91.9	2.7%	-0.1%
37	Alabama	91.0	2.6%	-0.3%
38	Connecticut	90.5	2.6%	1.7%
39	Montana	87.7	2.3%	-1.8%
40	Arkansas	85.0	2.0%	-1.6%
41	Kansas	81.7	1.6%	-2.1%
42	Mississippi	81.2	1.6%	-1.0%
43	Texas	79.2	1.4%	-5.9%
44	New Mexico	76.0	1.0%	-0.8%
45	West Virginia	69.7	0.4%	-2.0%
46	Louisiana	69.7	0.4%	0.1%
47	North Dakota	59.4	-0.7%	-15.9%
48	Oklahoma	59.4	-0.7%	-8.2%
49	Wyoming	45.7	-2.2%	-3.8%
50	Alaska	13.9	-5.5%	-9.0%

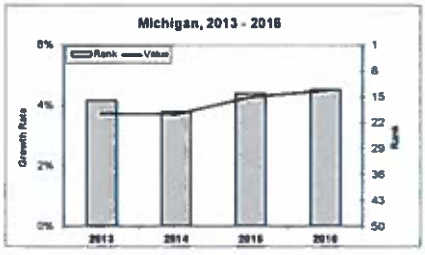
Annual growth in nominal gross domestic product, 2016, three-year average.

Ultimately, economic prosperity hinges on economic growth, and economic growth reflects the health of the overall economic system. Recent performance can often be a predictor of near-term trends. The above table shows the average of the last three year's of annual growth in each state's nominal gross domestic product.

Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2016

State	Growth Rate	Rank
Michigan	**4.5%**	**13**
Indiana	3.7%	22
Wisconsin	3.6%	24
Ohio	3.5%	26
Illinois	3.3%	27



MANUFACTURING CAPITAL INVESTMENT GROWTH

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs.)
	50-State Average		*3.5%*	*-6.4%*
1	Louisiana	139.6	26.3%	16.3%
2	Alaska	136.1	24.3%	36.7%
3	Montana	132.3	22.2%	-16.0%
4	Wyoming	122.6	16.5%	12.7%
5	Idaho	116.4	13.0%	-16.8%
6	Iowa	115.4	12.4%	1.6%
7	Delaware	115.2	12.3%	-15.5%
8	Florida	114.8	12.1%	10.5%
9	Pennsylvania	112.2	10.6%	5.0%
10	Oklahoma	110.4	9.5%	-0.4%
11	New Jersey	110.0	9.2%	8.8%
12	Alabama	108.9	8.6%	6.4%
13	Virginia	108.6	8.4%	7.1%
14	Ohio	108.5	8.4%	-2.3%
15	Connecticut	108.4	8.4%	4.5%
16	West Virginia	108.4	8.3%	-0.2%
17	Rhode Island	107.0	7.5%	5.4%
18	Texas	106.3	7.1%	1.1%
19	Arkansas	105.6	6.7%	3.8%
20	Hawaii	105.6	6.7%	-4.8%
21	Colorado	104.7	6.2%	0.4%
22	South Dakota	104.3	6.0%	-3.3%
23	Kentucky	100.6	3.9%	-15.4%
24	Maine	100.4	3.7%	-4.4%
25	Arizona	100.1	3.6%	-34.7%
26	Maryland	99.9	3.4%	19.8%
27	Massachusetts	99.5	3.2%	-1.2%
28	Nebraska	99.2	3.0%	2.0%
29	Mississippi	97.0	1.8%	10.3%
30	Minnesota	95.9	1.1%	-2.6%
31	North Dakota	95.8	1.1%	-7.9%
32	Tennessee	95.5	0.9%	-9.4%
33	Illinois	95.1	0.7%	1.8%
34	North Carolina	94.1	0.1%	-9.7%
35	Utah	93.8	-0.1%	6.5%
36	Vermont	93.4	-0.3%	-10.8%
37	Washington	88.0	-3.4%	-0.5%
38	Oregon	87.4	-3.8%	-70.7%
39	Nevada	87.2	-3.9%	-4.8%
40	Wisconsin	87.0	-4.0%	-16.7%
41	New Hampshire	86.4	-4.4%	-14.1%
42	South Carolina	85.8	-4.7%	-22.3%
43	California	85.7	-4.8%	-11.2%
44	Missouri	83.2	-6.2%	-25.8%
45	Georgia	82.7	-6.5%	-14.0%
46	**Michigan**	**78.4**	**-9.0%**	**-18.4%**
47	Kansas	77.8	-9.3%	-30.5%
48	New Mexico	71.1	-13.2%	7.5%
49	New York	69.4	-14.1%	-48.6%
50	Indiana	66.5	-15.8%	-53.6%

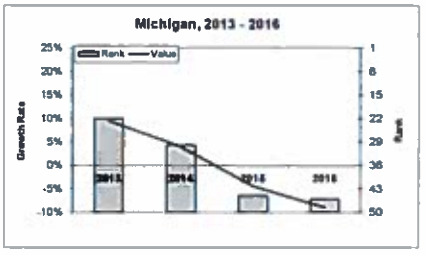
Growth in nominal capital expenditures per production employee, 2016, three-year average.

Manufacturing firms' investment in new capital equipment often indicates innovations and increased efficiency and productivity. The above table shows the annual growth in nominal capital expenditures in manufacturing per production employee, averaged over three years.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	Growth Rate	Rank
Ohio	8.4%	14
Illinois	0.7%	33
Wisconsin	-4.0%	40
Michigan	**-9.0%**	**46**
Indiana	-15.8%	50



FOREIGN BUSINESS EMPLOYMENT GROWTH

Rank	State	Score	Growth Rate	Change, 2012-2015 (Abs.)
	50-State Average		*3.8%*	*-1.7%*
1	Florida	140.0	18.4%	16.7%
2	Tennessee	129.7	14.4%	13.2%
3	Arizona	127.6	13.6%	11.3%
4	Oregon	125.8	12.8%	11.2%
5	Mississippi	123.0	11.7%	-15.9%
6	New Jersey	122.4	11.5%	12.0%
7	Maryland	121.7	11.2%	11.8%
8	Colorado	119.0	10.2%	11.3%
9	Indiana	118.1	9.8%	3.9%
10	Illinois	117.0	9.4%	7.4%
11	New York	115.2	8.7%	11.4%
12	Michigan	112.9	7.8%	2.8%
13	Kentucky	112.0	7.4%	8.5%
14	Utah	111.0	7.0%	2.3%
15	Vermont	108.4	6.0%	1.3%
16	Maine	107.8	5.8%	-4.0%
17	Idaho	107.6	5.7%	-4.7%
18	Texas	105.8	5.0%	4.1%
19	California	104.4	4.4%	3.3%
20	Washington	103.4	4.0%	3.3%
21	Nevada	102.8	3.8%	2.6%
22	Connecticut	102.4	3.6%	3.3%
23	Missouri	102.4	3.6%	2.7%
24	Minnesota	102.1	3.5%	-1.7%
25	Alabama	101.7	3.4%	5.0%
26	Wisconsin	98.3	2.0%	4.5%
27	Arkansas	97.9	1.9%	-5.6%
28	West Virginia	97.5	1.7%	-14.0%
29	Virginia	97.0	1.5%	2.6%
30	Georgia	96.6	1.3%	2.9%
31	New Hampshire	96.1	1.2%	0.5%
32	North Carolina	96.1	1.2%	0.9%
33	Ohio	95.5	0.9%	-1.3%
34	Iowa	93.5	0.1%	-8.1%
35	Oklahoma	92.9	-0.1%	-9.7%
36	Nebraska	92.0	-0.5%	-7.6%
37	Pennsylvania	92.0	-0.5%	-3.5%
38	Montana	92.0	-0.5%	-32.5%
39	Hawaii	91.9	-0.5%	-11.4%
40	Alaska	90.5	-1.0%	-4.9%
41	South Carolina	88.1	-2.0%	-2.7%
42	Massachusetts	87.1	-2.4%	-2.3%
43	North Dakota	84.1	-3.6%	-0.1%
44	South Dakota	82.3	-4.3%	-20.3%
45	Wyoming	79.5	-5.4%	-24.0%
46	Delaware	75.8	-6.8%	-0.7%
47	Rhode Island	73.5	-7.7%	-14.8%
(n/a)	Louisiana	(n/a)	(n/a)	-15.4%
(n/a)	New Mexico	(n/a)	(n/a)	-17.5%
(n/a)	Kansas	(n/a)	(n/a)	-22.0%

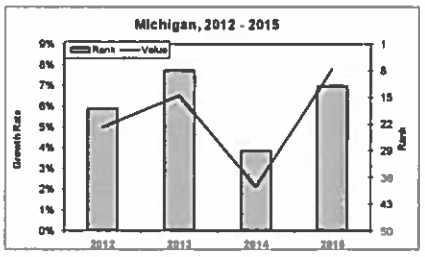
Growth in employment in foreign-owned firms as a percentage of total employment, 2015

As the world's economy becomes increasingly interdependent, the impact is not just increased trade. Large multinational firms locate production facilities across the globe. Foreign investment can be an important source of well-paying jobs. The above table gives a measurement of the year-to-year growth in the percentage of workers in each state who work for bank and non-bank, foreign-majority-owned companies.

Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2015

State	Growth Rate	Rank
Indiana	9.8%	9
Illinois	9.4%	10
Michigan	**7.8%**	**12**
Wisconsin	2.0%	26
Ohio	0.9%	33



EXPORT INTENSITY GROWTH

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs.)
	50-State Average		*-5.0%*	*-7.9%*
1	Alaska	164.7	2.4%	-3.8%
2	Kansas	127.6	-1.8%	-1.9%
3	Missouri	126.9	-1.9%	-5.9%
4	North Dakota	125.1	-2.1%	2.8%
5	Arkansas	119.1	-2.8%	-7.7%
6	New York	116.1	-3.2%	-5.5%
7	Colorado	115.6	-3.2%	-4.5%
8	Florida	114.7	-3.3%	-7.6%
9	Hawaii	114.5	-3.3%	-7.9%
10	New Jersey	112.6	-3.6%	-4.7%
11	Oklahoma	112.3	-3.6%	-5.3%
12	Arizona	111.3	-3.7%	-7.6%
13	Nevada	111.0	-3.7%	-10.0%
14	Washington	109.4	-3.9%	-10.4%
15	California	109.0	-4.0%	-7.5%
16	Massachusetts	108.5	-4.0%	-6.1%
17	South Carolina	108.4	-4.0%	-6.3%
18	Vermont	105.8	-4.3%	-1.9%
19	Oregon	104.4	-4.5%	1.9%
20	Louisiana	104.2	-4.5%	-7.9%
21	Mississippi	102.6	-4.7%	-9.4%
22	Virginia	102.2	-4.7%	-7.3%
23	Indiana	102.1	-4.8%	-6.8%
24	Rhode Island	101.0	-4.9%	-7.7%
25	New Mexico	100.1	-5.0%	-8.5%
26	**Michigan**	**99.9**	**-5.0%**	**-6.4%**
27	Georgia	98.4	-5.2%	-9.7%
28	North Carolina	98.4	-5.2%	-8.4%
29	Ohio	97.4	-5.3%	-9.1%
30	Wisconsin	97.2	-5.3%	-8.0%
31	Maryland	96.7	-5.4%	-7.8%
32	New Hampshire	95.7	-5.5%	-8.8%
33	Delaware	95.6	-5.5%	-7.2%
34	Connecticut	95.5	-5.5%	-9.9%
35	Tennessee	94.6	-5.6%	-11.0%
36	Alabama	94.0	-5.7%	-12.5%
37	Maine	92.7	-5.8%	-6.7%
38	Minnesota	92.1	-5.9%	-9.4%
39	Nebraska	91.2	-6.0%	-11.3%
40	Illinois	90.2	-6.1%	-8.9%
41	Idaho	88.0	-6.4%	-9.9%
42	Pennsylvania	88.0	-6.4%	-10.9%
43	Kentucky	87.5	-6.4%	-10.7%
44	Texas	84.9	-6.7%	-12.5%
45	Montana	76.8	-7.7%	-10.0%
46	Wyoming	71.8	-8.2%	-13.5%
47	South Dakota	69.8	-8.5%	-12.2%
48	Utah	69.2	-8.5%	-3.9%
49	West Virginia	64.7	-9.1%	-14.6%
50	Iowa	60.4	-9.6%	-11.9%

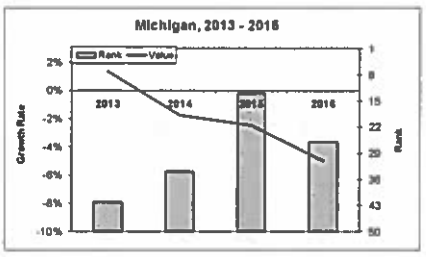
Growth in export value as a percentage of gross domestic product, 2016, three-year average

Healthy trade is a hallmark of the global economy. States with a manufacturing base that can produce for global demand are well positioned for sustained growth. The above table shows the average over the last three years in the one-year growth rate in the share of each state's gross domestic product that is accounted for by merchandise export income.

Source: Brookings Institution

Midwest Performance, 2016

State	Growth Rate	Rank
Indiana	-4.8%	23
Michigan	**-5.0%**	**26**
Ohio	-5.3%	29
Wisconsin	-5.3%	30
Illinois	-6.1%	40



EXPORT-RELATED JOBS

Rank	State	Score	Share of Total Private Jobs	Change, 2013-2016 (%)
	50-State Average		2.6%	
1	Hawaii	176.7	6.1%	-6.3%
2	Washington	137.2	4.3%	-7.3%
3	New York	128.2	3.8%	-6.4%
4	Oregon	124.4	3.7%	-9.5%
5	Nevada	122.7	3.6%	-9.5%
6	Indiana	122.5	3.6%	-9.0%
7	California	121.6	3.5%	-4.9%
8	Nebraska	121.2	3.5%	-12.2%
9	Massachusetts	119.7	3.4%	-8.7%
10	Illinois	114.9	3.2%	-12.1%
11	Delaware	112.5	3.1%	-5.0%
12	Connecticut	110.7	3.0%	-13.5%
13	North Carolina	109.1	2.9%	-10.2%
14	Iowa	109.0	2.9%	-22.7%
15	Florida	108.8	2.9%	-7.5%
16	**Michigan**	**107.9**	**2.9%**	**-7.4%**
17	Kansas	106.6	2.8%	-6.4%
18	New Jersey	106.0	2.8%	-5.9%
19	Wisconsin	104.7	2.7%	-11.1%
20	Texas	104.6	2.7%	-11.0%
21	Georgia	103.8	2.7%	-9.7%
22	Minnesota	102.2	2.6%	-15.1%
23	North Dakota	100.9	2.5%	-12.2%
24	South Dakota	100.5	2.5%	-28.5%
25	South Carolina	100.1	2.5%	-8.1%
26	Ohio	99.9	2.5%	-11.1%
27	New Hampshire	99.5	2.5%	-11.3%
28	Tennessee	97.2	2.4%	-8.9%
29	Arizona	97.1	2.3%	-6.0%
30	Missouri	96.8	2.3%	-3.0%
31	Arkansas	96.4	2.3%	-4.9%
32	Alabama	95.4	2.3%	-10.4%
33	Pennsylvania	95.4	2.3%	-13.1%
34	Virginia	94.7	2.2%	-8.4%
35	Utah	93.9	2.2%	-14.0%
36	Maryland	93.6	2.2%	-9.0%
37	Colorado	93.4	2.2%	-9.4%
38	Kentucky	93.4	2.2%	-14.7%
39	Louisiana	91.4	2.1%	-12.3%
40	Idaho	90.6	2.0%	-13.2%
41	Mississippi	88.5	1.9%	-11.1%
42	Rhode Island	86.2	1.8%	-10.9%
43	West Virginia	84.3	1.7%	-17.2%
44	Oklahoma	83.2	1.7%	-15.7%
45	Wyoming	83.1	1.7%	-26.6%
46	Vermont	81.7	1.6%	-7.5%
47	Alaska	80.1	1.5%	-11.6%
48	New Mexico	77.5	1.4%	-12.0%
49	Maine	76.9	1.4%	-8.9%
50	Montana	75.9	1.3%	-20.3%

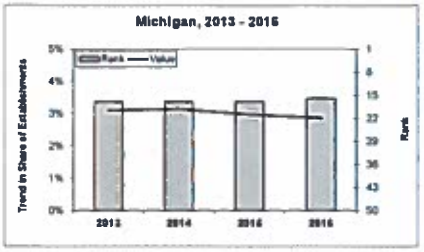
Percent of private industry jobs that are export related, 2016

International business activity exposes the state to the woes of exchange rate fluctuations, but it can also be a substantial contributor to a state's workforce. The above table shows the percent of private industry jobs that are related to the export of manufactured products and services.

Source: U.S. International Trade Administration

Midwest Performance, 2016

State	Share of Total Private Jobs	Rank
Indiana	3.6%	6
Illinois	3.2%	10
Michigan	**2.9%**	**16**
Wisconsin	2.7%	19
Ohio	2.5%	26



LARGE BUSINESS PAYROLL GROWTH

Rank	State	Score	Growth Rate	Change, 2012-2015 (Abs.)
	50-State Average		3.3%	-0.6%
1	California	128.8	5.6%	1.9%
2	Utah	124.1	5.2%	1.0%
3	Florida	123.6	5.2%	3.2%
4	Washington	123.0	5.1%	1.4%
5	South Carolina	122.7	5.1%	2.3%
6	Colorado	120.3	4.9%	1.6%
7	Georgia	119.3	4.9%	2.1%
8	Delaware	117.5	4.7%	2.9%
9	North Carolina	115.6	4.6%	2.2%
10	Iowa	113.8	4.5%	-0.4%
11	Tennessee	113.0	4.4%	0.3%
12	Nebraska	111.4	4.3%	-1.2%
13	Idaho	111.3	4.3%	1.7%
14	**Michigan**	**110.9**	**4.3%**	**-0.4%**
15	Massachusetts	108.2	4.1%	0.1%
16	Hawaii	108.2	4.1%	0.6%
17	Nevada	107.9	4.1%	2.6%
18	New York	105.8	3.9%	-0.3%
19	Minnesota	105.5	3.9%	-0.4%
20	Texas	105.0	3.8%	-3.4%
21	Indiana	104.6	3.8%	-0.8%
22	Wisconsin	104.3	3.8%	0.2%
23	New Hampshire	103.9	3.8%	1.3%
24	Ohio	101.6	3.6%	-1.1%
25	Pennsylvania	100.6	3.5%	0.0%
26	Oregon	99.4	3.5%	0.5%
27	Arizona	99.3	3.4%	0.5%
28	Alabama	98.6	3.4%	0.3%
29	Maryland	97.3	3.3%	-0.1%
30	Rhode Island	97.2	3.3%	1.0%
31	Missouri	97.1	3.3%	1.2%
32	South Dakota	96.2	3.2%	-2.3%
33	Oklahoma	94.3	3.1%	-3.6%
34	New Jersey	93.2	3.0%	0.8%
35	Illinois	93.1	3.0%	-0.7%
36	Arkansas	93.1	3.0%	-0.7%
37	Virginia	92.5	3.0%	0.3%
38	Maine	92.0	2.9%	1.5%
39	Kentucky	89.2	2.7%	-1.5%
40	Montana	88.9	2.7%	-2.8%
41	North Dakota	87.6	2.6%	-14.9%
42	Vermont	86.0	2.5%	-0.9%
43	Kansas	84.5	2.4%	-2.0%
44	Connecticut	81.8	2.2%	1.4%
45	Mississippi	73.5	1.6%	-1.1%
46	New Mexico	66.2	1.1%	-1.8%
47	West Virginia	64.9	1.0%	-2.6%
48	Louisiana	50.1	-0.1%	-4.7%
49	Wyoming	41.1	-0.7%	-3.5%
50	Alaska	-9.2	-4.3%	-10.8%

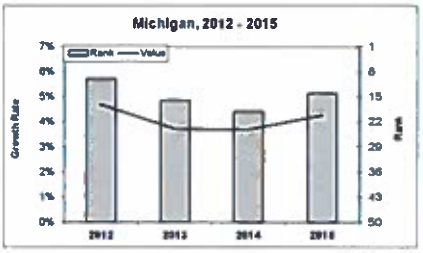
Growth in total nominal payroll of firms with 500 or more employees, 2015, three-year average.

While new businesses are key to sustained growth, older, established large firms tend to pay high wages and offer strong benefits packages. Further, large businesses are invariably the customers of small businesses. As they grow, so does the whole local/regional economy. The above table shows annual growth in the total payroll of firms with 500 or more employees, averaged over three years.

Source: U.S. Census Bureau

Midwest Performance, 2015

State	Growth Rate	Rank
Michigan	**4.3%**	**14**
Indiana	3.8%	21
Wisconsin	3.8%	22
Ohio	3.6%	24
Illinois	3.0%	35



BUILDING PERMITS GROWTH

Rank	State	Score	Growth Rate	Change, 2013-2016 (Abs.)
	50-State Average		*5.7%*	*-9.6%*
1	New York	136.4	20.3%	2.1%
2	Nevada	122.9	15.4%	-5.3%
3	Illinois	120.4	14.5%	6.1%
4	Alaska	118.8	13.9%	9.6%
5	Tennessee	117.5	13.4%	-0.9%
6	Idaho	116.6	13.0%	-14.4%
7	Kentucky	114.6	12.3%	7.9%
8	Georgia	111.6	11.2%	-17.1%
9	Utah	111.5	11.2%	-7.3%
10	Wisconsin	111.3	11.1%	1.8%
11	Arizona	110.8	10.9%	-17.0%
12	New Hampshire	110.6	10.8%	8.6%
13	Missouri	110.5	10.8%	-2.7%
14	Colorado	110.4	10.8%	-23.0%
15	Rhode Island	108.2	9.9%	7.9%
16	Iowa	106.9	9.5%	-3.5%
17	Florida	106.1	9.2%	-21.2%
18	**Michigan**	**105.5**	**9.0%**	**-11.9%**
19	Washington	105.0	8.8%	-7.5%
20	Oregon	103.7	8.3%	-20.7%
21	Alabama	103.4	8.2%	6.3%
22	South Carolina	102.5	7.8%	-12.1%
23	California	101.9	7.6%	-14.8%
24	Vermont	100.6	7.1%	2.5%
25	Arkansas	100.2	7.0%	4.6%
26	Minnesota	99.8	6.8%	-18.7%
27	Kansas	98.2	6.3%	-11.0%
28	Maine	96.1	5.5%	0.7%
29	Hawaii	96.1	5.5%	0.5%
30	Delaware	95.8	5.4%	-11.1%
31	North Carolina	94.2	4.8%	-10.9%
32	Ohio	93.4	4.5%	-9.2%
33	New Jersey	91.8	3.9%	-18.6%
34	Massachusetts	91.5	3.8%	-15.4%
35	Pennsylvania	89.0	2.9%	-2.6%
36	South Dakota	86.4	1.9%	-21.7%
37	Texas	86.3	1.9%	-16.2%
38	Nebraska	84.5	1.2%	-10.9%
39	Connecticut	84.1	1.1%	-13.4%
40	Indiana	84.0	1.0%	-10.5%
41	Louisiana	83.6	0.9%	-6.0%
42	Montana	82.2	0.4%	-36.8%
43	Mississippi	82.0	0.3%	-8.8%
44	West Virginia	80.1	-0.4%	-4.3%
45	Virginia	78.2	-1.1%	-15.0%
46	New Mexico	76.1	-1.9%	-6.5%
47	Maryland	75.9	-2.0%	-15.5%
48	Oklahoma	70.7	-3.9%	-22.3%
49	Wyoming	56.6	-9.0%	-8.2%
50	North Dakota	15.7	-24.2%	-64.5%

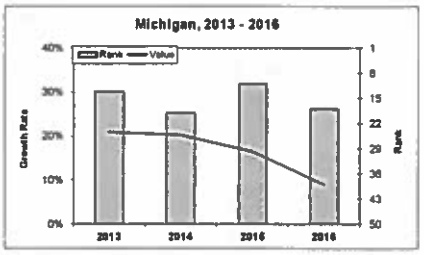
Growth in number of new privately owned housing units per 100,000 residents, 2016, three-year average.

Building permits are seen as an early indicator for the health of the housing market, a sector that tends to be one of the first to respond to fluctuations in the economy. The construction of new privately owned housing is a good indicator of general confidence in the market. The above table shows the three-year average in the annual growth in the number of permits for new privately owned housing units per 100,000 residents in a state.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	Growth Rate	Rank
Illinois	14.5%	3
Wisconsin	11.1%	10
Michigan	**9.0%**	**18**
Ohio	4.5%	32
Indiana	1.0%	40



FORTUNE 500 HEADQUARTERS

Rank	State	Score	Number of firms	Change, 2013-2016 (Abs.)
	50-State Average		*10*	*0*
1	California	250.0	53	0
1	New York	250.0	54	0
3	Texas	244.6	50	-3
4	Illinois	200.6	36	3
5	Ohio	166.0	25	0
6	Virginia	159.7	23	1
7	New Jersey	153.5	21	0
7	Pennsylvania	153.5	21	0
9	Connecticut	144.0	18	3
9	Minnesota	144.0	18	0
11	Florida	140.9	17	1
11	Georgia	140.9	17	0
11	**Michigan**	**140.9**	**17**	**-3**
14	Massachusetts	128.3	13	1
15	North Carolina	125.2	12	-1
16	Tennessee	122.0	11	1
17	Colorado	118.9	10	1
17	Missouri	118.9	10	0
17	Washington	118.9	10	1
20	Wisconsin	115.7	9	-1
21	Indiana	109.4	7	0
22	Arkansas	106.3	6	-1
23	Oklahoma	103.1	5	1
24	Arizona	100.0	4	-1
24	Maryland	100.0	4	0
24	Nebraska	100.0	4	-1
24	Rhode Island	100.0	4	1
28	Iowa	96.9	3	1
28	Kentucky	96.9	3	-2
30	Delaware	93.7	2	0
30	Idaho	93.7	2	1
30	Kansas	93.7	2	1
30	Louisiana	93.7	2	0
30	Nevada	93.7	2	-2
30	Oregon	93.7	2	0
36	Alabama	90.6	1	0
37	Alaska	87.4	0	0
37	Hawaii	87.4	0	0
37	Maine	87.4	0	0
37	Mississippi	87.4	0	0
37	Montana	87.4	0	0
37	New Hampshire	87.4	0	0
37	New Mexico	87.4	0	0
37	North Dakota	87.4	0	0
37	South Carolina	87.4	0	-1
37	South Dakota	87.4	0	0
37	Utah	87.4	0	-1
37	Vermont	87.4	0	0
37	West Virginia	87.4	0	0
37	Wyoming	87.4	0	0

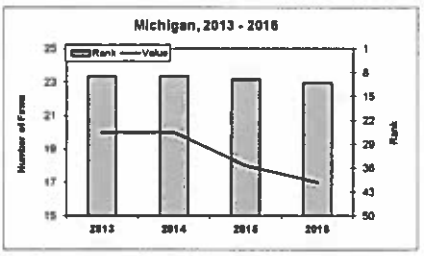
Total number of Fortune 500 headquarters, 2016

At the top of the large-firm pyramid are the Fortune 500 corporations, who typically employ large numbers of well-educated, well-compensated workers. They often provide business for large numbers of local suppliers. They also tend to be philanthropic stewards for their local communities. The above table shows the total number of Fortune 500 companies that were headquartered in each state.

Source: Fortune Magazine

Midwest Performance, 2016

State	Number of firms	Rank
Illinois	36	4
Ohio	25	5
Michigan	**17**	**11**
Wisconsin	9	20
Indiana	7	21



PRIVATE BUSINESS PROFIT GROWTH

Rank	State	Score	Growth Rate	Change, 2012-2015 (Abs.)
	50-State Average		*0.9%*	*-2.7%*
1	Iowa	125.4	4.4%	-1.7%
2	Wisconsin	123.6	4.1%	-0.3%
3	Tennessee	118.5	3.5%	0.8%
4	Nebraska	116.6	3.3%	-4.5%
5	**Michigan**	**116.0**	**3.2%**	**-4.2%**
6	South Carolina	115.7	3.2%	2.1%
7	Indiana	114.8	3.1%	-1.9%
8	Delaware	114.3	3.0%	2.9%
9	Pennsylvania	113.3	2.9%	-0.2%
10	North Carolina	113.3	2.9%	2.1%
11	Washington	112.7	2.8%	0.7%
12	West Virginia	109.1	2.4%	-0.2%
13	Georgia	108.9	2.4%	0.9%
14	Arkansas	108.7	2.4%	-1.2%
15	California	107.0	2.2%	0.7%
16	Florida	106.6	2.1%	2.2%
17	Utah	106.5	2.1%	-1.0%
18	Ohio	105.5	2.0%	-4.1%
19	Minnesota	104.6	1.9%	-2.7%
20	Oklahoma	104.3	1.9%	-6.2%
21	New Hampshire	103.9	1.8%	-0.8%
22	Hawaii	103.9	1.8%	-0.4%
23	New York	103.3	1.7%	-1.7%
24	Missouri	102.3	1.6%	-0.4%
25	Maryland	100.8	1.4%	-1.3%
26	Illinois	99.2	1.3%	-2.9%
27	Colorado	99.0	1.2%	-1.0%
28	Virginia	98.4	1.2%	-1.3%
29	Kentucky	97.7	1.1%	-3.3%
30	Maine	97.5	1.1%	0.5%
31	New Jersey	97.5	1.0%	-0.4%
32	Rhode Island	96.8	1.0%	0.0%
33	South Dakota	93.9	0.6%	-5.1%
34	Idaho	93.4	0.6%	-3.1%
35	Connecticut	92.4	0.4%	3.0%
36	Arizona	92.0	0.4%	-1.8%
37	Montana	91.8	0.4%	-6.3%
38	Alabama	90.8	0.3%	-5.5%
39	Massachusetts	90.4	0.2%	-2.9%
40	Vermont	89.4	0.1%	-3.0%
41	Nevada	83.7	-0.6%	-2.6%
42	Kansas	82.9	-0.7%	-6.7%
43	Texas	81.8	-0.8%	-8.5%
44	Mississippi	80.3	-1.0%	-3.5%
45	Oregon	78.2	-1.2%	-2.9%
46	New Mexico	77.6	-1.3%	-5.2%
47	Wyoming	55.9	-3.9%	-5.3%
48	North Dakota	52.2	-4.3%	-20.7%
49	Louisiana	43.5	-5.3%	-11.0%
50	Alaska	-6.5	-11.3%	-15.2%

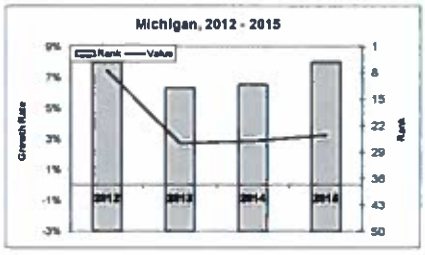
Growth in private industry gross operating surplus per worker, 2015, three-year average.

Gross operating surplus per employee is a good proxy for private sector profitability. It includes business income of private domestic enterprises; net interest & miscellaneous payments; business net current transfer payments; capital consumption allowances; consumption of fixed capital; current surplus/deficit of government enterprises. The above table shows the three-year average of the annual growth rate per worker.

Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2015

State	Growth Rate	Rank
Wisconsin	4.1%	2
Michigan	**3.2%**	**5**
Indiana	3.1%	7
Ohio	2.0%	18
Illinois	1.3%	26



RENEWABLE ENERGY

Rank	State	Score	Share in Total Generation	Change, 2013-2016 (%)
	50-State Average		*20.6%*	*20.8%*
1	Vermont	250.0	99.7%	238.0%
2	Idaho	219.2	78.2%	2.1%
3	Washington	218.0	77.5%	1.7%
4	South Dakota	211.9	73.9%	10.7%
5	Oregon	207.4	71.3%	2.4%
6	Maine	195.9	64.7%	7.5%
7	Montana	160.1	44.1%	7.0%
8	California	152.9	39.9%	34.7%
9	Iowa	151.4	39.1%	34.3%
10	Kansas	135.4	29.8%	52.1%
11	Alaska	134.9	29.5%	17.5%
12	Oklahoma	134.4	29.3%	57.5%
13	North Dakota	129.9	26.7%	26.5%
14	New York	126.6	24.7%	9.0%
15	Colorado	122.0	22.1%	33.7%
16	Minnesota	121.7	21.9%	8.4%
17	Nevada	121.5	21.8%	24.6%
18	New Hampshire	113.1	16.9%	7.3%
19	Hawaii	108.8	14.5%	23.1%
20	New Mexico	107.6	13.8%	83.7%
21	Texas	107.1	13.5%	53.0%
22	Nebraska	106.3	13.0%	61.4%
23	Wyoming	103.7	11.5%	17.3%
24	Arizona	102.4	10.7%	40.9%
25	Tennessee	100.8	9.9%	-42.0%
26	Wisconsin	99.2	8.9%	13.6%
27	Massachusetts	98.6	8.6%	15.7%
28	Utah	98.3	8.4%	148.7%
29	Arkansas	98.0	8.2%	16.5%
30	North Carolina	97.5	8.0%	1.6%
31	**Michigan**	**97.3**	**7.8%**	**18.9%**
32	Alabama	96.3	7.3%	-30.6%
33	Maryland	96.2	7.2%	-3.3%
34	Georgia	95.2	6.6%	6.0%
35	Illinois	94.2	6.0%	17.7%
36	Virginia	94.2	6.0%	11.5%
37	Indiana	93.9	5.9%	51.9%
38	Kentucky	92.3	4.9%	22.7%
39	South Carolina	92.0	4.8%	-16.0%
40	West Virginia	90.7	4.0%	-2.0%
41	Pennsylvania	90.4	3.9%	5.9%
42	Rhode Island	90.3	3.8%	312.9%
43	Louisiana	90.2	3.7%	-1.2%
44	Missouri	89.4	3.3%	25.6%
45	Connecticut	89.0	3.1%	3.4%
46	Mississippi	87.9	2.4%	-11.6%
47	New Jersey	87.9	2.4%	5.2%
48	Ohio	87.4	2.1%	14.3%
49	Florida	87.4	2.1%	-4.2%
50	Delaware	86.2	1.4%	3.8%

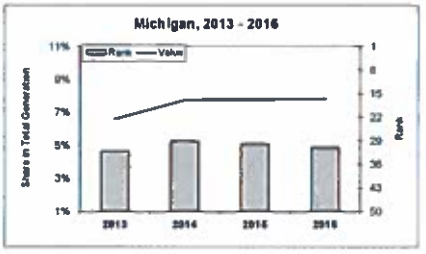
Renewable energy net generation per 1,000 MwH of total net electricity generation, 2016

With the continuing depletion of natural energy resources and increasing environmental concerns, investments in renewable energy have to be a part of every state, region and country's long-term economic strategy. The above table shows the share of renewable energy resources in the total net electric-power generation in each state.

Source: U.S. Energy Information Administration

Midwest Performance, 2016

State	Share in Total Generation	Rank
Wisconsin	8.9%	26
Michigan	**7.8%**	**31**
Illinois	6.0%	35
Indiana	5.9%	37
Ohio	2.1%	48



GREEN INDUSTRIES

Rank	State	Score	Share of All Establ.	Change, 2013-2016 (%)
	50-State Average		*7.0%*	*2.0%*
1	Colorado	138.5	9.4%	6.0%
2	Idaho	132.1	9.0%	1.4%
3	Utah	131.9	9.0%	8.6%
4	Vermont	129.8	8.9%	-0.5%
5	North Carolina	125.4	8.6%	3.3%
6	Florida	122.5	8.4%	0.4%
7	Maryland	121.7	8.4%	1.4%
8	North Dakota	118.3	8.1%	4.6%
9	Oregon	117.8	8.1%	2.4%
10	Illinois	112.6	7.8%	1.3%
11	Texas	112.3	7.7%	1.2%
12	South Carolina	112.2	7.7%	4.9%
13	Montana	111.9	7.7%	2.9%
14	Maine	108.3	7.5%	1.1%
15	Alabama	106.9	7.4%	4.1%
16	Arkansas	106.7	7.4%	4.5%
17	Arizona	106.1	7.3%	-9.0%
18	New Hampshire	105.6	7.3%	-0.8%
19	Indiana	105.4	7.3%	2.4%
20	Louisiana	104.2	7.2%	1.7%
21	South Dakota	104.0	7.2%	9.4%
22	Georgia	102.1	7.1%	3.5%
23	Kansas	101.3	7.0%	2.8%
24	New Mexico	100.7	7.0%	-2.7%
25	Mississippi	100.2	7.0%	-0.5%
26	Wyoming	99.8	6.9%	-1.2%
27	Virginia	99.5	6.9%	-4.3%
28	Tennessee	97.6	6.8%	3.9%
29	Minnesota	97.5	6.8%	1.7%
30	Massachusetts	97.2	6.8%	-1.6%
31	Delaware	97.0	6.8%	1.7%
32	Washington	94.5	6.6%	23.4%
33	**Michigan**	**94.4**	**6.6%**	**-2.2%**
34	Ohio	94.1	6.6%	1.0%
35	Nevada	93.8	6.6%	0.1%
36	Rhode Island	90.7	6.4%	5.3%
37	New Jersey	90.3	6.3%	-2.5%
38	Nebraska	90.3	6.3%	6.4%
39	Pennsylvania	88.9	6.2%	2.1%
40	Hawaii	88.3	6.2%	2.4%
41	Connecticut	88.0	6.2%	-2.4%
42	Alaska	87.6	6.1%	1.7%
43	Iowa	87.5	6.1%	4.9%
44	Oklahoma	87.0	6.1%	2.0%
45	Kentucky	83.9	5.9%	1.6%
46	West Virginia	79.8	5.6%	6.1%
47	California	78.5	5.6%	-7.1%
48	Wisconsin	78.1	5.5%	-0.3%
49	Missouri	74.9	5.3%	0.4%
50	New York	74.0	5.3%	0.6%

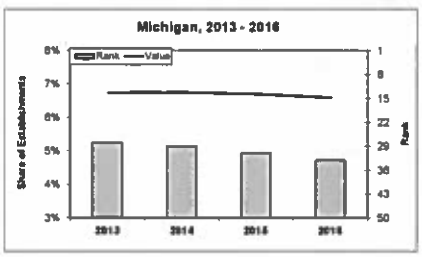
Share of establishments in green-related industries, 2016

The green economy is expected to be one of the next strong growth sectors nationwide and globally. The higher the price of fossil fuels the more attractive alternative technologies become. This metric focuses on businesses engaged primarily in creating green technology, see Appendix for more detail. The table above shows such green industries as a share of all industries, measured by number of establishments.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Share of Establishments	Rank
Illinois	7.8%	10
Indiana	7.3%	19
Michigan	**6.6%**	**33**
Ohio	6.6%	34
Wisconsin	5.5%	48



EDUCATION

Information, knowledge, and ideas are critical assets for success in the innovation economy. Having a strong human capital base is a necessary, but not sufficient condition for success. States, or even countries, may be endowed with a well-educated population, but lack some other necessary conditions, such as a free enterprise system that cultivates creativity and entrepreneurship. Nevertheless, those states and countries performing well in the innovation economy present strong scores in human capital assets. Those falling short in economic progress but possessing abundant human capital can use this attribute to their advantage. For example, countries such as Ireland, Australia, and India are capitalizing on respective strong human capital assets as means to economic progress.

Comprised of sub-drivers K-12 Education and Postsecondary Education, the Education Driver seeks to measure the human capital base of a state.

Midwest Performance

	2016	2014	2012
Indiana	*****	****	****
Wisconsin	****	****	****
Ohio	****	****	***
Illinois	***	***	***
Michigan	***	***	***

Rank	State	2016	2014	2012
1	Massachusetts	*****	*****	*****
2	Rhode Island	*****	*****	*****
3	Delaware	*****	****	****
4	Indiana	*****	****	****
5	Colorado	****	****	*****
6	Connecticut	****	****	****
7	Pennsylvania	****	****	****
8	New Hampshire	****	*****	****
9	Wisconsin	****	****	****
10	New York	****	***	****
11	Maryland	****	*****	*****
12	Ohio	****	****	***
13	Washington	****	****	***
14	North Carolina	****	****	****
15	Maine	****	****	****
16	Virginia	***	****	****
17	North Dakota	***	****	*****
18	Iowa	***	****	****
19	Montana	***	****	****
20	New Jersey	***	****	***
21	Vermont	***	****	***
22	Utah	***	***	***
23	Georgia	***	***	***
24	Minnesota	***	****	****
25	California	***	***	*
26	Missouri	***	****	***
27	Illinois	***	***	***
28	Nebraska	***	****	****
29	Kansas	***	***	***
30	Arizona	***	***	****
31	**Michigan**	***	***	***
32	South Dakota	**	***	***
33	Hawaii	**	**	***
34	Texas	**	***	***
35	South Carolina	**	***	***
36	Alabama	**	***	**
37	Kentucky	**	***	**
38	Wyoming	**	***	***
39	Florida	**	***	***
40	Tennessee	**	**	**
41	Oregon	**	***	**
42	Idaho	**	***	**
43	Louisiana	*	*	*
44	Arkansas	*	***	**
45	Nevada	**	*	*
46	Arkansas	**	**	**
47	West Virginia	**	**	**
48	New Mexico	**	*	**
49	Louisiana	**	*	*
50	Mississippi	*	*	*

K-12 EDUCATION

Midwest Performance

	2016	2014	2012
Wisconsin	****	****	****
Indiana	****	****	***
Ohio	***	****	***
Illinois	***	***	***
Michigan	***	**	**

Rank	State	2016	2014	2012
1	Massachusetts	*****	*****	*****
2	New Hampshire	*****	*****	*****
3	Connecticut	*****	*****	*****
4	Vermont	*****	*****	*****
5	New Jersey	*****	*****	*****
6	Virginia	****	****	****
7	Maryland	****	*****	*****
8	Wisconsin	****	****	****
9	Minnesota	****	****	****
10	Pennsylvania	****	****	****
11	Kansas	****	***	***
12	Maine	****	****	****
13	Indiana	****	****	***
14	Iowa	****	****	***
15	Colorado	***	***	***
16	Washington	***	****	****
17	Ohio	***	****	***
18	Nebraska	***	***	***
19	Rhode Island	***	***	***
20	New York	***	***	****
21	Montana	***	***	***
22	Missouri	***	***	***
23	Delaware	***	****	***
24	Kentucky	***	***	***
25	North Carolina	***	***	***
26	North Dakota	***	***	***
27	Utah	***	***	***
28	Illinois	***	***	***
29	South Dakota	***	***	***
30	Texas	***	***	***
31	**Michigan**	***	**	**
32	Florida	***	***	***
33	Tennessee	***	**	**
34	Oregon	**	**	**
35	Wyoming	**	**	***
36	Idaho	**	***	***
37	Georgia	**	**	**
38	California	**	***	***
39	Hawaii	**	**	***
40	Arkansas	**	***	**
41	West Virginia	**	**	**
42	South Carolina	**	**	**
43	Arizona	**	**	**
44	Alaska	**	**	**
45	Alabama	**	**	*
46	Nevada	*	*	**
47	Oklahoma	*	**	**
48	Louisiana	*	*	*
49	Mississippi	*	*	*
50	New Mexico	*	*	*

ADVANCED PLACEMENT SCORE

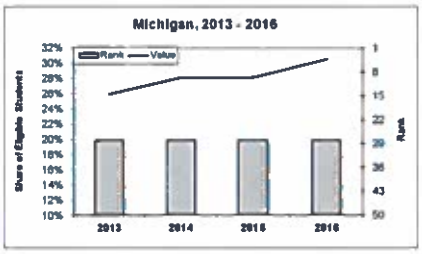
Rank	State	Score	Share of Eligible Students	Change, 2013-2016 (%)
	50-State Average		*12.7%*	*34.1%*
1	Maryland	135.2	69.2%	11.4%
2	Connecticut	126.6	60.2%	19.8%
3	Massachusetts	125.4	59.0%	20.3%
4	Virginia	125.0	58.5%	11.6%
5	Illinois	119.7	52.9%	26.6%
6	New Jersey	119.4	52.6%	22.3%
7	Florida	119.2	52.3%	10.1%
8	New York	115.4	48.4%	8.4%
9	California	114.2	47.1%	12.3%
10	Georgia	113.7	46.6%	22.1%
11	Vermont	110.5	43.2%	13.9%
12	Texas	108.7	41.3%	28.9%
13	Colorado	108.6	41.2%	19.3%
14	Delaware	108.2	40.8%	16.5%
15	Wisconsin	107.5	40.1%	28.9%
16	Washington	106.5	39.0%	34.3%
17	Rhode Island	106.3	38.8%	31.7%
18	North Carolina	106.0	38.4%	14.4%
19	Pennsylvania	103.7	36.1%	32.4%
20	Minnesota	103.5	35.9%	15.5%
21	Ohio	103.1	35.4%	20.8%
22	Hawaii	103.1	35.4%	29.8%
23	Maine	102.3	34.6%	9.4%
24	Utah	101.4	33.7%	14.7%
25	Kentucky	100.3	32.4%	9.0%
26	New Hampshire	99.7	31.9%	21.9%
27	South Carolina	99.3	31.4%	16.4%
28	**Michigan**	**98.5**	**30.5%**	**17.9%**
29	Nevada	97.9	29.9%	33.1%
30	Indiana	97.8	29.8%	26.2%
31	Arizona	94.5	26.4%	32.6%
32	Arkansas	94.0	25.8%	15.0%
33	Tennessee	93.0	24.8%	23.9%
34	Oregon	92.0	23.7%	23.7%
35	Idaho	91.6	23.3%	41.7%
36	Missouri	90.3	22.0%	27.2%
37	Alabama	90.2	21.8%	29.6%
38	Oklahoma	87.1	18.6%	6.1%
39	West Virginia	87.1	18.5%	39.6%
40	South Dakota	87.0	18.5%	15.4%
41	Alaska	86.9	18.3%	23.9%
42	Kansas	86.8	18.2%	28.6%
43	Nebraska	86.3	17.8%	21.8%
44	Iowa	86.3	17.7%	11.1%
45	Montana	86.1	17.5%	12.5%
46	New Mexico	84.6	16.0%	13.7%
47	Louisiana	84.4	15.7%	51.4%
48	North Dakota	83.1	14.3%	38.4%
49	Wyoming	81.9	13.0%	26.9%
50	Mississippi	78.0	9.0%	61.6%

Passing AP test scores per eligible student, 2016

The Advanced Placement (AP) exams assess students' mastery over college-level subject matter in a wide variety of subjects. A score of three or higher out of five typically allows a student to earn college credit in that subject. The AP program allows high school students to take and earn credits on multiple subject tests. The above table shows the number of AP tests completed with "passing" scores (3+) per student in 11th and 12th grade. It should be noted that a relatively small share of students take AP tests. *Source: The College Board*

Midwest Performance, 2016

State	Share of Eligible Students	Rank
Illinois	52.9%	5
Wisconsin	40.1%	15
Ohio	35.4%	21
Michigan	**30.5%**	**28**
Indiana	29.8%	30



PUBLIC HIGH SCHOOL GRADUATION RATE

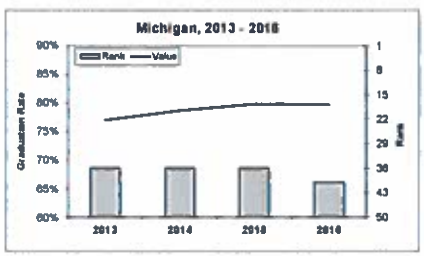
Rank	State	Score	Graduation Rate	Change, 2013-2016 (%)
	50-State Average		*84.0%*	*3.3%*
1	Iowa	119.5	91.3%	1.8%
2	New Jersey	115.4	90.1%	3.0%
3	West Virginia	114.4	89.8%	10.3%
4	Nebraska	112.7	89.3%	0.9%
5	Texas	112.1	89.1%	1.3%
6	Missouri	111.7	89.0%	3.9%
7	Kentucky	110.4	88.6%	2.9%
8	Tennessee	110.1	88.5%	2.5%
9	New Hampshire	109.1	88.2%	1.0%
9	Wisconsin	109.1	88.2%	0.2%
11	Vermont	107.4	87.7%	1.3%
12	Maryland	107.0	87.6%	3.1%
13	Massachusetts	106.7	87.5%	2.9%
13	North Dakota	106.7	87.5%	0.0%
15	Connecticut	106.4	87.4%	2.2%
16	Alabama	105.4	87.1%	8.9%
17	Arkansas	105.0	87.0%	2.5%
17	Maine	105.0	87.0%	0.7%
19	Indiana	104.4	86.8%	-0.2%
20	Virginia	104.0	86.7%	2.6%
21	Pennsylvania	102.0	86.1%	0.1%
22	North Carolina	101.3	85.9%	4.1%
23	Kansas	100.7	85.7%	0.0%
24	Montana	100.3	85.6%	1.4%
25	Delaware	100.0	85.5%	6.3%
25	Illinois	100.0	85.5%	2.8%
27	Utah	99.0	85.2%	2.7%
28	South Dakota	94.6	83.9%	1.5%
29	Ohio	93.3	83.5%	1.7%
30	California	91.6	83.0%	3.2%
31	Rhode Island	90.9	82.8%	3.9%
32	Hawaii	90.6	82.7%	0.4%
33	South Carolina	90.3	82.6%	6.4%
34	Mississippi	89.3	82.3%	9.0%
35	Minnesota	88.9	82.2%	3.0%
36	Oklahoma	86.9	81.6%	-3.8%
37	Florida	83.9	80.7%	6.7%
38	New York	82.9	80.4%	4.7%
39	Wyoming	81.6	80.0%	3.9%
40	Idaho	80.5	79.7%	(n/a)
40	**Michigan**	**80.5**	**79.7%**	**3.5%**
40	Washington	80.5	79.7%	4.3%
43	Arizona	79.9	79.5%	6.1%
44	Georgia	79.5	79.4%	10.7%
45	Colorado	77.9	78.9%	2.6%
46	Louisiana	76.9	78.6%	6.9%
47	Alaska	68.5	76.1%	6.0%
48	Oregon	64.1	74.8%	8.9%
49	Nevada	60.1	73.6%	4.1%
5000.0%	New Mexico	5136.7%	71.0%	1.0%

Public high school graduation rate, 2016

The number of students who stay in school and successfully receive their high school diploma within four years is an important indicator of performance for a state's K-12 education system. High school completion is a vital credential for finding and retaining employment. It is also an important prerequisite for postsecondary schooling, which provides the additional education needed to thrive in today's innovation and technology-based economy. See Appendix for the methodology of this metric. *Source: National Center for Education Statistics*

Midwest Performance, 2016

State	Graduation Rate	Rank
Wisconsin	88.2%	9
Indiana	86.8%	19
Illinois	85.5%	25
Ohio	83.5%	29
Michigan	**79.7%**	**40**



SAT PERFORMANCE

Rank	State	Score	Actual Less Predicted Score	Change, 2013-2016 (Abs.)
	50-State Average		0 5	*(n a)*
1	Minnesota	124.0	58 4	(n/a)
2	Massachusetts	124.0	58 4	(n/a)
3	Wisconsin	122.2	54 4	(n/a)
4	Vermont	121 4	52 7	(n/a)
5	Virginia	118.0	45 0	(n/a)
6	Colorado	117 4	43 7	(n/a)
7	Kansas	116.4	41 5	(n/a)
8	Missouri	113 3	34 4	(n/a)
9	Montana	112.7	33 1	(n/a)
10	Oregon	110 6	28 5	(n/a)
11	Kentucky	110 6	28 5	(n/a)
12	Tennessee	108.3	23.2	(n/a)
13	Hawaii	106.4	18 9	(n/a)
14	Washington	105 6	17 1	(n/a)
15	Arizona	105.3	16 5	(n/a)
16	Nebraska	105.3	16 4	(n/a)
17	New Hampshire	105 0	15 8	(n/a)
18	Indiana	104.8	15 3	(n/a)
19	Pennsylvania	104 2	14 0	(n/a)
20	Iowa	103 6	12 6	(n/a)
21	Rhode Island	102 3	9 7	(n/a)
22	North Carolina	101 8	8 6	(n/a)
23	Nevada	101 7	8 4	(n/a)
24	Connecticut	101 1	6 9	(n/a)
25	Maryland	100.7	6.2	(n/a)
26	New Jersey	99.3	3.0	(n/a)
27	Utah	98.6	1.4	(n/a)
28	Ohio	96.6	-3.1	(n/a)
29	New York	96.5	-3.4	(n/a)
30	Alaska	95.1	-6.4	(n/a)
31	North Dakota	95.1	-6.4	(n/a)
32	Wyoming	95.0	-6.6	(n/a)
33	South Carolina	94 7	-7 3	(n/a)
34	Georgia	93 3	-10 5	(n/a)
35	California	92 1	-13 1	(n/a)
36	New Mexico	89 4	-19 3	(n/a)
37	Mississippi	88 9	-20 4	(n/a)
38	Louisiana	88 8	-20 5	(n/a)
39	South Dakota	88 8	-20 6	(n/a)
40	Maine	86 9	-24 8	(n/a)
41	Florida	86 0	-26 9	(n/a)
42	Arkansas	85 2	-28 6	(n/a)
43	Michigan	85.0	-29.1	(n/a)
44	Idaho	83 3	-32 9	(n/a)
45	Delaware	81 0	-38 1	(n/a)
46	Texas	80 3	-39 6	(n/a)
47	Alabama	80 3	-39 8	(n/a)
48	Illinois	73 8	-54 2	(n/a)
49	West Virginia	72 5	-57 1	(n/a)
50	Oklahoma	36.8	-137.3	(n/a)

Average SAT score relative to predicted score, 2016

The Scholastic Assessment Test (SAT) is the standardized test most frequently taken by high school seniors and gauges their likely success in college. In states where fewer students take the SAT, those who do choose to take it are more likely to be students who would score well. To correct for this bias, all 50 states' average SAT scores are compared to a score predicted by a participation-based formula. A positive score implies better-than-predicted performance. 2016 started with a new test system.

Source: The College Board

Midwest Performance, 2016

State	Actual less Predicted Score	Rank
Wisconsin	54 4	3
Indiana	15 3	18
Ohio	-3 1	28
Michigan	**-29.1**	**43**
Illinois	-54 2	48

ACT SCORE

Rank	State	Score	Actual Less Predicted Score	Change, 2013-2016 (Abs.)
	50-State Average		*-2 48*	*-1 19*
1	New Hampshire	126 9	2.06	0.76
2	Massachusetts	126.3	1.95	0.33
3	Connecticut	125.0	1.73	0.21
4	Maine	119.1	0.73	-0.26
5	New York	118.4	0.61	-0.26
6	Delaware	117.8	0.50	0.16
6	Michigan	117.8	0.50	3.40
8	Rhode Island	117.1	0.39	0.26
9	New Jersey	116.5	0.28	-0.17
10	Virginia	115.8	0.16	0.15
11	Pennsylvania	115.2	0 05	-0.07
12	Maryland	114.5	-0.06	0.24
12	Vermont	114.5	-0.06	-0.51
14	California	109 3	-0 96	-0 55
15	Indiana	107 9	-1 19	-0 24
16	Idaho	106 0	-1 53	-1 01
17	Ohio	104 0	-1 86	-1 02
18	Iowa	103 3	-1 98	-1 46
18	Washington	103 3	-1 98	-2 21
20	Oregon	102 7	-2 09	-0 93
20	South Dakota	102 7	-2 09	-1 36
22	Kansas	102 0	-2 21	-1 36
23	Minnesota	100 7	-2 43	-2 88
24	Georgia	100 0	-2 55	-0 52
24	Illinois	100 0	-2 55	-0 41
24	Nebraska	100 0	-2 55	-1 38
27	Colorado	96 0	-3 23	-0 88
28	Texas	95 3	-3 34	-1 53
29	Wisconsin	94 0	-3 57	-3 06
30	Missouri	93 3	-3 69	-2 63
30	West Virginia	93 3	-3 69	-1 55
32	Montana	92.7	-3.80	-2.42
32	North Dakota	92.7	-3.80	-1.56
32	Utah	92.7	-3.80	-1.77
35	Wyoming	92.0	-3.92	-0.91
36	Kentucky	90.7	-4.15	-0.93
37	Alaska	89.3	-4.38	-2.78
37	Florida	89.3	-4.38	-1.16
37	Tennessee	89.3	-4.38	-1.05
40	Arizona	88.6	-4.49	-1.27
40	New Mexico	88.6	-4.49	-1.60
42	Louisiana	87.3	-4.72	-1.39
43	Arkansas	86.6	-4.84	-2.27
43	Oklahoma	86.6	-4.84	-2.92
45	Alabama	85.3	-5.07	-2.72
46	North Carolina	84.6	-5.18	-0.98
47	Hawaii	83.9	-5.30	-2.62
48	South Carolina	81.9	-5.65	-3.29
49	Mississippi	81.2	-5.76	-1.78
50	Nevada	75.8	-6.69	-5.32

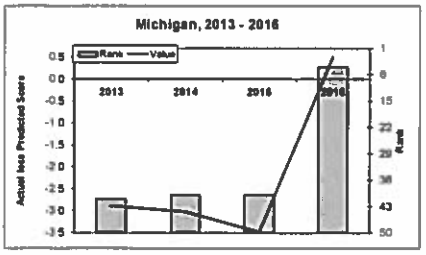
Average ACT score relative to predicted score, 2016

Like the SAT, the American College Test (ACT) is a widely-accepted standardized college entrance exam. The ACT is common in many states where SAT participation is low, so it is important to consider it in the same way that the SAT is considered and correct for any participation bias. This metric corrects for the bias by comparing the states' mean scores to a score predicted by a participation-based formula. A positive score implies performance above the predicted.

Source: ACT

Midwest Performance, 2016

State	Actual less Predicted Score	Rank
Michigan	**0.50**	**6**
Indiana	-1 19	15
Ohio	-1 86	17
Illinois	-2 55	24
Wisconsin	-3 57	29



NAEP MATHEMATICS

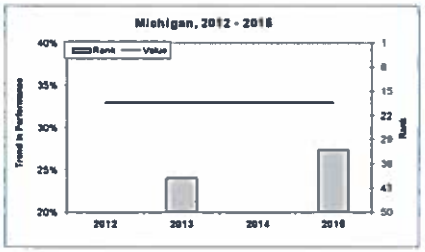
Rank	State	Score	% "Proficient" or Above	Change, 2011-2015 (Abs.)
	50-State Average			*32.9%*
1	New Hampshire	133.7	48.7%	3.2%
2	Massachusetts	124.0	44.3%	2.0%
3	Minnesota	122.8	43.7%	2.8%
4	New Jersey	119.8	42.4%	2.6%
5	Kansas	119.6	42.3%	1.5%
6	Vermont	116.7	41.0%	2.2%
7	Washington	116.1	40.7%	4.2%
8	Wisconsin	114.2	39.9%	1.5%
9	South Dakota	113.5	39.6%	-2.6%
10	Pennsylvania	111.9	38.8%	0.2%
11	Connecticut	111.2	38.5%	-1.9%
12	Colorado	109.1	37.6%	3.4%
13	Ohio	108.7	37.4%	3.6%
14	Indiana	107.8	37.0%	6.0%
15	North Dakota	106.5	36.4%	0.3%
16	Montana	106.0	36.2%	-2.2%
17	Maine	105.5	36.0%	3.5%
18	Iowa	105.3	35.8%	4.2%
19	Wyoming	105.1	35.8%	5.3%
20	Virginia	104.0	35.3%	3.2%
21	North Carolina	103.5	35.0%	1.3%
22	Maryland	100.6	33.7%	0.0%
23	Alaska	100.3	33.6%	-0.6%
24	Nebraska	100.2	33.5%	3.6%
25	Texas	100.1	33.5%	2.5%
26	Utah	99.9	33.4%	2.1%
27	Florida	98.8	32.9%	1.2%
28	Delaware	98.1	32.6%	3.4%
29	Idaho	98.0	32.6%	-1.4%
30	Illinois	97.9	32.5%	2.3%
31	Oregon	97.4	32.3%	0.3%
32	**Michigan**	**96.1**	**31.7%**	**0.7%**
33	Missouri	95.1	31.2%	-2.3%
34	New York	94.8	31.1%	-1.0%
35	Rhode Island	92.5	30.1%	5.7%
36	South Carolina	87.4	27.8%	1.0%
37	Hawaii	86.9	27.6%	8.2%
38	Kentucky	86.0	27.2%	3.7%
39	Georgia	85.6	27.0%	3.9%
40	Oklahoma	85.5	26.9%	2.2%
41	Arkansas	84.6	26.5%	2.0%
42	Nevada	83.3	25.9%	2.7%
43	Arizona	83.0	25.8%	6.6%
44	Tennessee	82.5	25.6%	7.4%
45	West Virginia	81.3	25.0%	5.9%
46	California	77.9	23.5%	3.6%
47	Alabama	70.5	20.1%	2.8%
48	New Mexico	70.5	20.1%	3.6%
49	Louisiana	69.6	19.7%	2.1%
50	Mississippi	64.7	17.5%	5.2%

Percent of 4th and 8th graders scored "proficient" and above in mathematics, 2015

The National Assessment of Educational Progress (NAEP) is an achievement testing program in a variety of subjects administered intermittently to the nation's 4th, 8th, and 12th graders by the U.S. Department of Education. NAEP scores reflect the achievement of students of all social, economic, and educational backgrounds. The above table shows fourth- and eight-graders' average of rates of proficiency on the NAEP Math Assessment. *Source: National Center for Education Statistics*

Midwest Performance, 2015

State	% "Proficient" or Above	Rank
Wisconsin	39.9%	8
Ohio	37.4%	13
Indiana	37.0%	14
Illinois	32.5%	30
Michigan	**31.7%**	**32**



NAEP READING

Rank	State	Score	% "Proficient" or Above	Change, 2011-2015 (Abs.)
	50-State Average			*31.5%*
1	Massachusetts	132.2	43.2%	-4.8%
2	Connecticut	126.8	41.4%	-2.1%
3	Vermont	124.4	40.6%	-1.9%
4	New Hampshire	123.6	40.3%	-1.2%
5	New Jersey	121.2	39.6%	-4.9%
6	Pennsylvania	111.8	36.4%	-3.1%
7	Minnesota	111.7	36.4%	-0.6%
8	Montana	110.6	36.0%	-3.0%
9	Maine	110.1	35.9%	0.4%
10	Virginia	109.3	35.6%	-1.9%
11	Colorado	108.2	35.2%	-4.3%
12	North Dakota	107.8	35.1%	0.1%
13	Iowa	107.8	35.1%	2.1%
14	Kansas	106.8	34.8%	-0.7%
15	Nebraska	106.7	34.7%	-0.8%
16	Ohio	105.9	34.5%	-1.0%
17	Wisconsin	105.0	34.2%	-0.3%
18	Washington	104.4	34.0%	-1.5%
19	Wyoming	103.8	33.8%	-2.2%
20	Indiana	103.4	33.6%	1.1%
21	Maryland	101.9	33.1%	-8.4%
22	South Dakota	101.3	32.9%	-0.1%
23	New York	101.0	32.8%	-2.2%
24	Rhode Island	100.7	32.7%	-1.3%
25	Utah	100.1	32.5%	-1.5%
26	Missouri	99.9	32.5%	-2.0%
27	Illinois	99.8	32.4%	-1.1%
28	Idaho	99.8	32.4%	-1.1%
29	Kentucky	97.7	31.7%	-3.8%
30	Delaware	96.6	31.4%	-3.1%
31	North Carolina	95.7	31.1%	-1.4%
32	Oregon	93.2	30.2%	-1.3%
33	Florida	92.6	30.0%	-2.5%
34	**Michigan**	**92.0**	**29.8%**	**-1.7%**
35	Georgia	87.0	28.2%	-1.8%
36	Oklahoma	86.9	28.1%	1.1%
37	Texas	86.4	28.0%	0.5%
38	Alaska	85.4	27.7%	-0.8%
39	West Virginia	84.5	27.3%	1.8%
40	Arkansas	84.3	27.3%	-1.7%
41	Tennessee	83.8	27.1%	0.6%
42	South Carolina	79.2	25.6%	-1.9%
43	Alabama	78.8	25.4%	-3.1%
44	Arizona	74.9	24.2%	-2.8%
45	Nevada	72.3	23.3%	-2.2%
46	Hawaii	70.6	22.7%	-3.8%
47	California	69.0	22.2%	-2.3%
48	New Mexico	66.5	21.4%	-0.1%
49	Louisiana	62.2	19.9%	-2.6%
50	Mississippi	59.6	19.1%	-2.4%

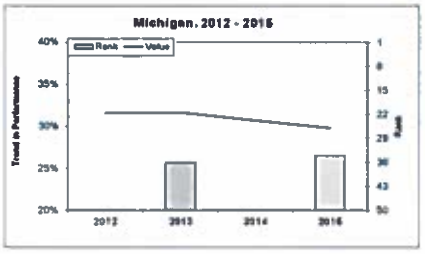
Percent of 4th and 8th graders scored "proficient" and above in reading, 2015

The National Assessment of Educational Progress (NAEP) testing program's unselective nature makes it a highly desirable metric for comparing achievement and studying educational progress. The above table shows averages of the percentages of fourth- and eighth-grade students who scored at least "proficient" on the NAEP Reading Assessments.

Source: National Center for Education Statistics

Midwest Performance, 2015

State	% "Proficient" or Above	Rank
Ohio	34.5%	16
Wisconsin	34.2%	17
Indiana	33.6%	20
Illinois	32.4%	27
Michigan	**29.8%**	**34**



POSTSECONDARY EDUCATION

Midwest Performance

	2016	2014	2012
Indiana	****	***	****
Ohio	***	***	***
Wisconsin	***	***	***
Illinois	**	*	**
Michigan	**	***	****

Rank	State	2016	2014	2012
1	Rhode Island	*****	*****	*****
2	Delaware	*****	***	***
3	Indiana	****	***	****
4	Colorado	****	***	*****
5	New York	****	**	***
6	Massachusetts	****	****	****
7	North Carolina	***	***	****
8	Pennsylvania	***	****	****
9	Ohio	***	***	***
10	North Dakota	***	****	*****
11	Georgia	***	**	***
12	Wisconsin	***	***	***
13	California	***	***	*
14	Arizona	***	***	****
15	Washington	***	***	**
16	Maryland	***	****	****
17	Montana	***	****	****
18	Alabama	***	***	***
19	Maine	***	***	****
20	Utah	***	**	**
21	Connecticut	***	***	***
22	Iowa	***	****	****
23	Hawaii	***	**	**
24	South Carolina	**	***	***
25	New Hampshire	**	***	***
26	Illinois	**	*	**
27	Louisiana	**	**	*
28	**Michigan**	**	***	****
29	Missouri	**	***	**
30	Nebraska	**	***	***
31	Virginia	**	**	***
32	South Dakota	**	**	***
33	Wyoming	**	***	***
34	Nevada	**	***	*
35	Texas	**	**	***
36	Oregon	**	**	**
37	Tennessee	*	**	**
38	Florida	*	**	**
39	Minnesota	*	**	***
40	Idaho	*	**	**
41	Kansas	*	**	***
42	New Mexico	*	**	**
43	Kentucky	*	**	**
44	Alaska	*	***	**
45	Oklahoma	*	***	***
46	Arkansas	*	**	**
47	New Jersey	*	**	**
48	Mississippi	*	*	***
49	Vermont	*	**	**
50	West Virginia	*	*	***

4Y+ TECH CREDENTIALS

Rank	State	Score	Percent of BA degrees and above	Change, 2012-2015 (%)
	50-State Average		*18.5%*	*11.4%*
1	Maryland	144.7	25.9%	16.2%
2	Wyoming	132.7	23.9%	4.3%
3	Washington	125.9	22.7%	25.7%
4	Montana	123.5	22.3%	8.9%
5	Colorado	118.7	21.5%	7.3%
6	**Michigan**	**116.7**	**21.2%**	**7.9%**
7	Pennsylvania	116.5	21.1%	14.9%
8	New Jersey	116.5	21.1%	11.3%
9	Alaska	114.7	20.9%	7.6%
10	South Dakota	112.2	20.4%	3.7%
11	Wisconsin	111.0	20.2%	12.2%
12	North Dakota	110.3	20.1%	4.6%
13	Indiana	109.9	20.0%	13.4%
14	Massachusetts	109.3	19.9%	14.9%
15	Texas	108.8	19.8%	12.8%
16	Georgia	108.5	19.8%	13.0%
17	North Carolina	108.2	19.8%	10.1%
18	Idaho	108.2	19.8%	14.1%
19	California	107.7	19.7%	10.9%
20	New Mexico	106.7	19.5%	6.5%
21	South Carolina	104.2	19.1%	16.2%
22	Maine	103.3	18.9%	5.3%
23	Ohio	100.5	18.5%	14.4%
24	Utah	100.5	18.5%	9.9%
25	Delaware	100.1	18.4%	23.7%
26	Oklahoma	99.9	18.4%	6.8%
27	Louisiana	99.8	18.3%	11.0%
28	New York	99.8	18.3%	17.2%
29	Connecticut	99.2	18.2%	11.2%
30	Alabama	99.0	18.2%	12.4%
31	Virginia	97.6	18.0%	5.5%
32	Vermont	96.9	17.9%	9.6%
33	Illinois	94.6	17.5%	13.2%
34	Kansas	93.5	17.3%	5.9%
35	Rhode Island	92.6	17.2%	5.6%
36	Missouri	92.5	17.1%	32.3%
37	Florida	92.0	17.0%	13.7%
38	Nevada	90.4	16.8%	18.5%
39	Mississippi	90.2	16.7%	8.0%
40	Oregon	88.4	16.4%	2.6%
41	Iowa	86.9	16.2%	8.5%
42	Hawaii	86.6	16.1%	30.5%
43	Arkansas	81.1	15.2%	4.2%
44	Nebraska	79.8	15.0%	13.6%
45	New Hampshire	79.4	14.9%	3.8%
46	Tennessee	79.0	14.9%	9.8%
47	Arizona	78.5	14.8%	10.6%
48	Minnesota	77.2	14.6%	4.8%
49	West Virginia	75.6	14.3%	10.8%
50	Kentucky	73.9	14.0%	8.3%

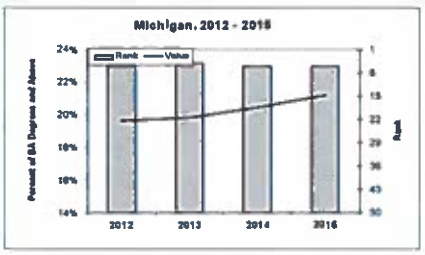
Percent of bachelor's and above degrees/certificates earned in technology-related fields, 2015

A highly-skilled workforce is only as useful as it is able to match the skills required by the innovation economy, the ability to create or invent new products and processes. The above table provides the percent of students with a bachelor's, graduate degree, first professional degree or related certificates who graduated in a field relevant to tech-based economic development. See Appendix for more detail.

Source: National Center for Education Statistics

Midwest Performance, 2015

State	% of BA+ Degrees & Certificates	Rank
Michigan	**21.2%**	**6**
Wisconsin	20.2%	11
Indiana	20.0%	13
Ohio	18.5%	23
Illinois	17.5%	33



PRE-BA TECH CREDENTIALS

Rank	State	Score	% of AS Degrees and Equivalent	Change, 2012-2015 (%)
	50-State Average		*21.7%*	*5.6%*
1	Wyoming	164.3	43.8%	15.0%
2	Louisiana	142.9	36.2%	6.9%
3	Kentucky	125.5	30.0%	16.6%
4	North Dakota	123.9	29.4%	-0.6%
5	Georgia	123.1	29.1%	-1.7%
6	South Dakota	122.9	29.1%	-5.9%
7	Nevada	122.0	28.7%	65.0%
8	Illinois	120.5	28.2%	12.4%
9	Alabama	118.9	27.6%	18.3%
10	Colorado	116.9	26.9%	18.6%
11	Nebraska	115.8	26.5%	4.6%
12	Wisconsin	112.4	25.3%	13.0%
13	Washington	110.4	24.6%	9.5%
14	Oklahoma	109.9	24.4%	0.8%
15	Maine	109.6	24.3%	14.8%
16	South Carolina	109.6	24.3%	2.1%
17	Texas	105.7	22.9%	9.7%
18	Tennessee	105.4	22.8%	1.7%
19	Pennsylvania	105.2	22.7%	-5.4%
20	Montana	104.8	22.6%	-5.8%
21	Arkansas	102.9	21.9%	2.4%
22	Ohio	102.6	21.8%	-3.2%
23	Idaho	102.6	21.8%	14.8%
24	Arizona	102.1	21.6%	0.5%
25	North Carolina	100.2	20.9%	-1.5%
26	West Virginia	99.8	20.8%	3.6%
27	Mississippi	99.8	20.8%	28.8%
28	Virginia	99.7	20.8%	0.8%
29	California	97.8	20.1%	11.1%
30	**Michigan**	**97.5**	**20.0%**	**-9.1%**
31	Indiana	97.2	19.9%	-16.1%
32	Oregon	96.9	19.8%	14.4%
33	Missouri	95.8	19.4%	-5.8%
34	New Hampshire	95.1	19.2%	3.5%
35	Alaska	95.0	19.1%	20.9%
36	Iowa	94.3	18.8%	14.4%
37	Delaware	93.5	18.6%	24.4%
38	Minnesota	93.2	18.5%	2.0%
39	Rhode Island	92.8	18.3%	-20.1%
40	Kansas	90.2	17.4%	10.7%
41	New Mexico	89.6	17.2%	-14.1%
42	Massachusetts	89.4	17.1%	2.0%
43	Maryland	85.6	15.7%	-3.2%
44	Connecticut	81.5	14.3%	9.9%
45	Florida	78.6	13.3%	15.3%
46	Utah	78.5	13.2%	9.5%
47	Hawaii	77.9	13.0%	-21.4%
48	New York	77.3	12.8%	9.4%
49	New Jersey	74.9	11.9%	3.3%
50	Vermont	66.8	9.0%	-18.9%

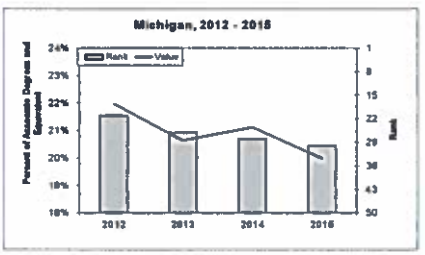
Percent of less than four year degrees and certificates earned in technology-related fields, 2015

Technology support occupations such as technicians that require an Associate degree or less are predicted to experience exceptional employment growth at relatively high wages all over the U.S., making the process of innovation and technological progress more efficient. The above table shows the percent less than four years pre- baccalaureate /vocational awards and certificates in technology related fields. See Appendix.

Source: National Center for Education Statistics

Midwest Performance, 2015

State	% of <4Y Degrees & Certificates	Rank
Illinois	28.2%	8
Wisconsin	25.3%	12
Ohio	21.8%	22
Michigan	**20.0%**	**30**
Indiana	19.9%	31



4Y KNOWLEDGE DEGREES EX. TECH FIELDS

Rank	State	Score	Percent of All Degrees	Change, 2012-2015 (%)
	50-State Average		*18.6%*	*-3.1%*
1	New Hampshire	156.3	29.8%	14.4%
2	Delaware	131.2	24.7%	-7.6%
3	Rhode Island	124.8	23.4%	-3.4%
4	Nebraska	122.9	23.0%	-4.6%
5	Indiana	121.5	22.7%	-8.1%
6	Utah	120.2	22.5%	6.6%
7	Arizona	117.1	21.8%	-21.3%
8	Massachusetts	116.8	21.8%	-1.5%
9	Alabama	116.1	21.6%	1.4%
10	New York	113.1	21.0%	-4.0%
11	Missouri	112.7	20.9%	-6.7%
12	South Carolina	111.8	20.7%	-4.1%
13	Maryland	111.6	20.7%	-5.4%
14	Oklahoma	109.5	20.3%	0.8%
15	Connecticut	108.6	20.1%	-1.1%
16	Colorado	108.0	20.0%	0.7%
17	Pennsylvania	107.7	19.9%	2.0%
18	Michigan	107.6	19.9%	-6.9%
19	Wisconsin	107.3	19.8%	0.1%
20	Georgia	106.9	19.7%	-0.6%
21	North Dakota	105.6	19.5%	-6.2%
22	Ohio	104.0	19.1%	-6.8%
23	Illinois	102.3	18.8%	-15.5%
24	Florida	101.1	18.6%	10.2%
25	Iowa	101.0	18.5%	-10.6%
26	New Jersey	99.0	18.1%	-2.7%
27	Minnesota	98.7	18.1%	-5.2%
28	West Virginia	97.8	17.9%	-2.3%
29	Texas	96.9	17.7%	-0.8%
30	Hawaii	96.6	17.6%	-6.6%
31	Kansas	95.8	17.5%	-2.6%
32	Virginia	95.6	17.4%	1.4%
33	South Dakota	93.8	17.1%	-1.8%
34	North Carolina	93.1	16.9%	-0.9%
35	Alaska	92.0	16.7%	2.7%
36	Idaho	91.6	16.6%	-5.9%
37	California	91.3	16.5%	3.8%
38	Montana	90.7	16.4%	0.2%
39	Tennessee	90.7	16.4%	5.3%
40	Nevada	88.1	15.9%	-15.2%
41	Kentucky	86.9	15.6%	-12.0%
42	Vermont	86.9	15.6%	-0.6%
43	Mississippi	86.2	15.5%	-9.7%
44	Maine	85.8	15.4%	0.8%
45	Washington	84.8	15.2%	-2.0%
46	Oregon	83.6	15.0%	-0.8%
47	Louisiana	81.5	14.5%	-6.9%
48	Arkansas	79.9	14.2%	-3.8%
49	New Mexico	78.3	13.9%	-8.2%
50	Wyoming	54.6	9.0%	-1.6%

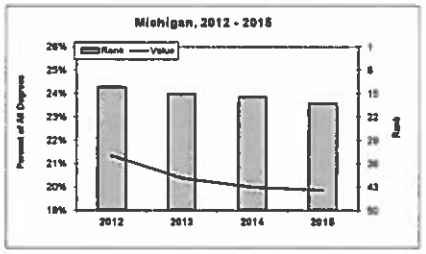
Percent of degrees earned in quasi-science and quasi-technical fields, 2015

Many more general educational programs directly or indirectly contribute to the innovation economy such as management, economics, science teachers, etc. The above table shows these other innovation economy degrees as a percent of all degrees. A full description of fields chosen is given in the Methodology section of the Appendix.

Source: National Center for Education Statistics

Midwest Performance, 2015

State	Percent of All Degrees	Rank
Indiana	22.7%	5
Michigan	19.9%	18
Wisconsin	19.8%	19
Ohio	19.1%	22
Illinois	18.8%	23



COLLEGE MIGRATION

Rank	State	Score	Net Student Inflow	Change, 2010-2014 (Abs.)
	50-State Average		*2,066*	*421*
1	Arizona	153.2	20,541	3,396
2	Pennsylvania	142.5	16,959	-2,322
3	Iowa	129.4	12,539	-1,134
4	West Virginia	120.1	9,396	2,093
5	Massachusetts	119.2	9,089	729
6	Alabama	118.5	8,861	1,525
7	Indiana	118.1	8,727	421
8	New York	113.4	7,130	2,812
9	Utah	113.1	7,048	706
10	Virginia	110.6	6,213	-316
11	Florida	110.6	6,196	-4,227
12	Rhode Island	110.4	6,144	490
13	South Carolina	109.4	5,815	1,323
14	Kansas	109.3	5,754	3,412
15	Oklahoma	107.1	5,037	1,298
16	Ohio	105.9	4,611	3,228
17	Oregon	105.4	4,462	923
18	North Carolina	105.2	4,375	172
19	Missouri	104.9	4,285	876
20	California	104.5	4,157	4,891
21	New Hampshire	102.4	3,438	3,113
22	Kentucky	102.2	3,360	1,166
23	Vermont	100.5	2,808	168
24	North Dakota	100.5	2,803	482
25	Arkansas	100.1	2,664	515
26	Wisconsin	99.9	2,603	1,265
27	Mississippi	99.7	2,535	1,541
28	Delaware	97.2	1,683	622
29	South Dakota	96.2	1,353	-36
30	Montana	96.0	1,282	471
31	Nebraska	95.3	1,062	507
32	Idaho	95.2	1,016	722
33	Tennessee	95.0	962	567
34	Louisiana	94.8	889	-530
35	Wyoming	94.4	764	-344
36	Maine	93.9	570	1,076
37	Colorado	93.9	564	-2,534
38	Michigan	93.6	484	2,302
39	New Mexico	92.5	96	-870
40	Alaska	89.2	-996	394
41	Hawaii	87.7	-1,514	-203
42	Nevada	86.1	-2,035	167
43	Washington	82.6	-3,231	914
44	Minnesota	78.8	-4,513	-2,005
45	Georgia	76.9	-5,152	-5,049
46	Connecticut	76.6	-5,249	458
47	Texas	68.0	-8,155	214
48	Maryland	67.2	-8,422	876
49	Illinois	42.8	-16,623	-5,651
50	New Jersey	5.8	-29,101	443

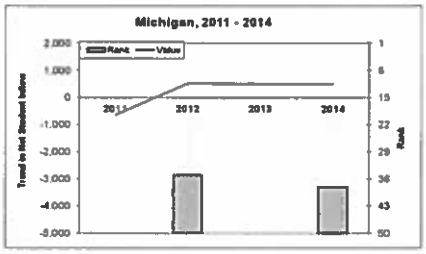
Net in-migration of first-time freshmen, 2014

A net student inflow into a state to attend college signals a perception of quality of a state's higher education institutions and helps reduce pressure on the tax rolls and keep in-state tuition increases in-line. The above table, based on Fall enrollments and updates every two years, shows the difference between the number of students who migrated into a state's schools and those who migrated out over one year. States with positive figures were net receivers of students.

Source: National Center for Education Statistics

Midwest Performance, 2014

State	Net Student Inflow	Rank
Indiana	8,727	7
Ohio	4,611	16
Wisconsin	2,603	26
Michigan	484	38
Illinois	-16,623	49



U.S. NEWS TOP UNDERGRADUATE PROGRAMS

Rank	State	Score	Ranked Colleges	Change, 2013-2016 (%)
	50-State Average		6	*0.2%*
1	Rhode Island	192.1	33	-16.67%
2	Maine	138.7	17	4.17%
3	North Dakota	133.4	15	0.00%
4	Iowa	131.8	15	4.07%
5	Colorado	130.0	14	1.88%
6	Montana	129.0	14	4.11%
7	Indiana	124.4	12	0.31%
8	Massachusetts	122.1	11	0.64%
9	Connecticut	119.1	11	1.22%
9	Hawaii	119.1	11	0.53%
11	North Carolina	116.5	10	1.33%
12	Vermont	115.9	10	4.76%
13	Delaware	112.0	8	-0.76%
14	New York	109.5	8	-0.03%
15	**Michigan**	**109.1**	7	**0.07%**
16	New Jersey	108.2	7	-0.43%
17	Washington	108.0	7	-1.27%
18	Maryland	106.7	7	0.00%
18	South Carolina	106.7	7	2.72%
20	Minnesota	103.1	6	-1.11%
21	Virginia	102.9	5	0.63%
22	Oregon	102.2	5	3.54%
23	Pennsylvania	102.1	5	-0.62%
24	Ohio	101.1	5	0.27%
25	Nebraska	101.0	5	0.00%
26	California	99.0	4	-0.95%
27	South Dakota	98.7	4	0.00%
28	Alabama	98.0	4	-0.05%
29	Missouri	95.9	3	0.20%
30	Oklahoma	95.2	3	1.38%
31	Tennessee	94.5	3	-0.92%
32	Illinois	94.3	3	-0.05%
33	Texas	94.2	3	2.00E-02
34	Utah	94.0	3	0.02%
35	Mississippi	93.4	3	2.50%
35	New Mexico	93.4	3	0.00%
37	West Virginia	93.2	2	0.17%
38	Wisconsin	93.1	2	1.23%
39	Georgia	92.9	2	-0.62%
40	Arkansas	91.8	2	-1.92%
41	Florida	91.0	2	-0.79%
42	Louisiana	90.3	2	0.09%
43	Kentucky	89.7	1	-1.41%
44	Alaska	85.3	0	0.00%
44	Arizona	85.3	0	0.00%
44	Idaho	85.3	0	0.00%
44	Kansas	85.3	0	0.00%
44	Nevada	85.3	0	0.00%
44	New Hampshire	85.3	0	0.00%
44	Wyoming	85.3	0	0.00%

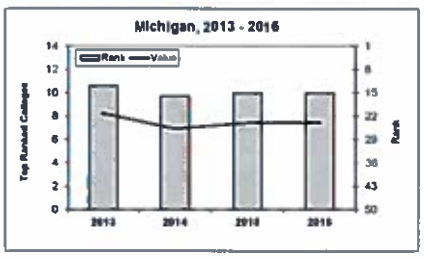
Number of undergraduate programs ranked in top 20 percent in U.S. News Graduate School Report per 100 educational institutions, 2016

No uniform "exit exams" exist through which to compare students' post-graduate knowledge and assess the quality of higher education institutions. *U.S. News and World Report* magazine publishes one of the more popular guides on U.S. Colleges. The above table gives the number of undergraduate programs in each state ranked in the top 20 percent both at the national and regional level.

Source: U.S. News and World Report Magazine

Midwest Performance, 2016

State	Top Colleges per 100 Institutions	Rank
Indiana	12	7
Michigan	7	15
Ohio	5	24
Illinois	3	32
Wisconsin	2	38



U.S. NEWS TOP GRADUATE PROGRAMS

Rank	State	Score	Ranked Graduate Programs	Change, 2013-2016 (%)
	50-State Average		30	*35.3%*
1	Rhode Island	154.3	108	-7.4%
2	Maryland	135.6	80	1.2%
2	Massachusetts	135.6	80	19.0%
4	Connecticut	131.5	74	24.3%
5	Indiana	122.1	60	8.8%
6	Utah	118.1	54	49.5%
7	**Michigan**	**116.8**	52	**23.2%**
8	New Jersey	115.4	50	11.7%
9	Illinois	114.8	49	6.4%
10	New York	113.4	47	3.8%
11	North Carolina	112.7	46	7.6%
11	Wisconsin	112.7	46	23.2%
13	Colorado	110.7	43	44.0%
14	Washington	110.1	42	6.3%
15	California	109.4	41	-0.3%
16	Arizona	108.7	40	-8.6%
17	Minnesota	107.4	38	35.5%
17	Pennsylvania	107.4	38	8.8%
19	Iowa	106.7	37	3.3%
19	Texas	106.7	37	24.1%
21	Oregon	104.0	33	59.5%
22	Virginia	103.4	32	1.9%
23	Georgia	102.0	30	20.9%
23	Missouri	102.0	30	33.9%
25	Tennessee	101.3	29	30.5%
26	Delaware	98.7	25	0.0%
26	Ohio	98.7	25	36.2%
28	Kansas	97.3	23	51.8%
29	Nebraska	96.6	22	32.0%
29	New Hampshire	96.6	22	14.4%
31	Alabama	96.0	21	61.0%
32	Florida	94.0	18	20.9%
32	Kentucky	94.0	18	215.0%
34	North Dakota	92.0	15	100.0%
34	South Carolina	92.0	15	250.0%
36	New Mexico	90.6	13	20.3%
37	Hawaii	89.3	11	15.5%
37	Louisiana	89.3	11	40.8%
37	Oklahoma	89.3	11	123.7%
40	Vermont	88.6	10	100.0%
41	Arkansas	85.9	6	56.0%
42	Mississippi	85.2	5	95.0%
43	West Virginia	83.2	2	100.0%
44	Alaska	81.9	0	0.0%
44	Idaho	81.9	0	0.0%
44	Maine	81.9	0	0.0%
44	Montana	81.9	0	0.0%
44	Nevada	81.9	0	0.0%
44	South Dakota	81.9	0	0.0%
44	Wyoming	81.9	0	0.0%

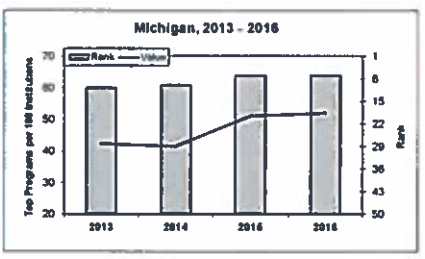
Number of graduate programs ranked in top categories in U.S. News Graduate School Report per 100 educational institutions, 2016

Judging the quality of graduate institutions and their programs is just as problematic as attempting to gauge the quality of undergraduate programs. The above table shows the count of graduate and first-professional schools that were ranked top-tier relative to the number of postsecondary educational institutions.

Source: U.S. News and World Report Magazine

Midwest Performance, 2016

State	Top Programs per 100 Institutions	Rank
Indiana	60	5
Michigan	52	7
Illinois	49	9
Wisconsin	46	11
Ohio	25	26



TWO-YEAR COLLEGE TUITION GROWTH

Rank	State	Score	Growth Rate Differential	Change, 2013-2016 (Abs.)
	50-State Average		*0.5%*	*-1.6%*
1	Georgia	147.8	-11.0%	20.3%
2	Delaware	134.2	-7.8%	7.1%
3	New York	123.7	-5.4%	2.8%
4	Colorado	121.9	-5.0%	2.8%
5	Hawaii	120.4	-4.6%	5.5%
6	Ohio	119.4	-4.4%	2.8%
7	Illinois	114.2	-3.2%	-2.6%
8	Wisconsin	114.2	-3.2%	14.2%
9	California	111.7	-2.6%	5.5%
10	Louisiana	111.7	-2.6%	-3.4%
11	North Carolina	109.5	-2.1%	0.1%
12	Kansas	108.0	-1.7%	0.5%
13	Indiana	107.6	-1.6%	2.5%
14	Rhode Island	106.8	-1.5%	2.0%
15	Minnesota	106.7	-1.4%	0.5%
16	North Dakota	104.4	-0.9%	4.9%
17	Montana	102.8	-0.5%	1.2%
18	New Hampshire	102.8	-0.5%	-1.8%
19	Maine	102.5	-0.5%	-2.6%
20	Missouri	101.8	-0.3%	2.0%
21	Arkansas	101.4	-0.2%	3.1%
22	Nevada	101.3	-0.2%	-3.1%
23	Connecticut	101.1	-0.1%	1.2%
24	New Jersey	100.9	-0.1%	-3.8%
25	Tennessee	100.7	0.0%	-5.3%
26	Arizona	99.3	0.3%	0.6%
27	New Mexico	98.1	0.6%	-2.0%
28	Alabama	97.6	0.7%	-7.3%
29	Utah	96.8	0.9%	-2.5%
30	Washington	95.5	1.2%	-6.5%
31	Massachusetts	95.3	1.2%	-2.1%
32	Oregon	95.3	1.2%	-3.6%
33	Vermont	90.8	2.3%	0.1%
34	Texas	90.7	2.3%	1.2%
35	Maryland	89.7	2.5%	3.9%
36	Virginia	89.5	2.6%	4.2%
37	Idaho	88.9	2.7%	2.4%
38	South Carolina	88.2	2.9%	-5.5%
39	Pennsylvania	87.3	3.1%	-8.7%
40	Nebraska	87.0	3.1%	-7.7%
41	Mississippi	85.5	3.5%	-14.8%
42	Florida	79.5	4.9%	-1.4%
43	South Dakota	78.3	5.2%	-5.1%
44	West Virginia	77.9	5.3%	-5.6%
45	Kentucky	76.7	5.6%	-7.3%
46	Iowa	75.0	5.9%	-11.4%
47	Wyoming	74.6	6.0%	-11.7%
48	**Michigan**	**70.7**	**6.9%**	**-10.7%**
49	Oklahoma	63.9	8.5%	-15.8%
50	Alaska	62.3	8.9%	-18.3%

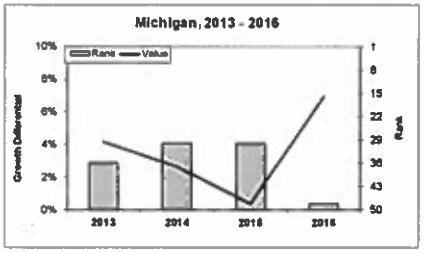
Growth in average tuition at public two-year institutions of higher education relative to median household income growth, 2016

Since higher education is key to higher pay and economic advancement in the innovation economy, access to education is crucial to a state's economic development. As education costs continue to increase at rates two to three times that of inflation, cost remains an important determinant of access. The above table shows the differential between the yearly growth in average yearly tuition charge for a full-time student at a public two-year college relative to the growth in real median household income.

Source: National Center for Education Statistics

Midwest Performance, 2016

State	Yearly Tuition	Rank
Ohio	-4.4%	6
Illinois	-3.2%	7
Wisconsin	-3.2%	8
Indiana	-1.6%	13
Michigan	**6.9%**	**48**



FOUR-YEAR COLLEGE COSTS GROWTH

Rank	State	Score	Growth Rate Differential	Change, 2013-2016 (Abs.)
	50-State Average		*0.3%*	*-2.8%*
1	Delaware	180.3	-9.2%	5.4%
2	New York	148.7	-5.2%	1.0%
3	Hawaii	141.8	-4.3%	3.7%
4	California	136.7	-3.7%	2.9%
5	Ohio	132.7	-3.2%	-0.7%
6	Washington	130.7	-2.9%	1.6%
7	Illinois	128.6	-2.7%	-1.8%
8	North Carolina	125.9	-2.3%	-2.1%
9	Alaska	123.3	-2.0%	-1.8%
10	Indiana	121.4	-1.8%	1.7%
11	Nevada	119.0	-1.5%	1.0%
12	Maine	117.3	-1.2%	-5.5%
13	Florida	115.7	-1.0%	-3.1%
14	New Jersey	115.6	-1.0%	-3.2%
15	Utah	109.1	-0.2%	0.6%
16	Arizona	109.1	-0.2%	0.5%
17	Connecticut	108.2	-0.1%	-3.8%
18	Wisconsin	107.7	0.0%	-3.3%
19	Montana	107.6	0.0%	-0.4%
20	Colorado	106.4	0.1%	3.5%
21	Massachusetts	106.1	0.2%	1.3%
22	Idaho	104.2	0.4%	-0.7%
23	Rhode Island	102.8	0.6%	0.7%
24	Georgia	102.4	0.6%	1.2%
25	Louisiana	100.1	0.9%	0.6%
26	Missouri	99.9	1.0%	-8.0%
27	Maryland	99.4	1.0%	-1.0%
28	Iowa	98.8	1.1%	1.1%
29	Tennessee	97.2	1.3%	-4.2%
30	Texas	96.9	1.3%	-2.8%
31	Minnesota	96.7	1.4%	-6.8%
32	Pennsylvania	96.4	1.4%	0.4%
33	Kentucky	95.9	1.5%	-2.5%
34	New Mexico	95.9	1.5%	-4.7%
35	South Carolina	95.8	1.5%	-5.1%
36	**Michigan**	**94.7**	**1.6%**	**-4.7%**
37	New Hampshire	94.7	1.6%	-1.4%
38	Arkansas	94.0	1.7%	-3.4%
39	Mississippi	93.8	1.7%	-2.9%
40	South Dakota	93.6	1.8%	-8.1%
41	North Dakota	93.4	1.8%	-3.9%
42	Nebraska	92.9	1.8%	-2.3%
43	Oregon	90.8	2.1%	-9.5%
44	Alabama	89.0	2.3%	-6.3%
45	Wyoming	88.6	2.4%	-5.2%
46	Vermont	82.8	3.1%	-7.9%
47	Virginia	80.4	3.4%	-5.9%
48	Kansas	76.8	3.9%	-12.2%
49	West Virginia	65.6	5.3%	-12.4%
50	Oklahoma	63.6	5.5%	-18.0%

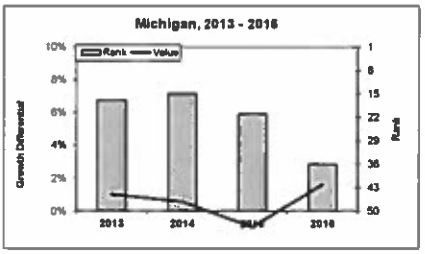
Growth in total tuition, fees, room, board at public four-year institutions of higher education relative to median household income growth, 2016

Cost is a key determinant of access to the opportunities afforded by a college education. In the case of undergraduate degrees, the price of room and board, books and incidental expenses all contribute to the bottom line that students and their families must pay. The table above shows the differential between the yearly growth in the cost of one year of full-time education at a four-year public college or university relative to the growth in real median household income.

Source: National Center for Education Statistics

Midwest Performance, 2016

State	Yearly Costs	Rank
Ohio	-3.2%	5
Illinois	-2.7%	7
Indiana	-1.8%	10
Wisconsin	0.0%	18
Michigan	**1.6%**	**36**



WORKFORCE PREPAREDNESS

States can have excellent Education scores, yet still lack in Workforce Preparedness. In such cases, the education system is not in tune with the demands of the work place or better opportunities can be found elsewhere and the educated move out of state (brain drain). Research indicates that Workforce Preparedness is closely correlated with entrepreneurial dynamism, and hence economic prosperity and growth. For illustration, studies repeatedly show strong positive correlation between bachelor degree attainment in the workforce and state per capita income growth. This driver attempts to measure both formal educational attainment and skill levels of the incumbent workforce.

Midwest Performance

	2016	2014	2012
Michigan	****	****	****
Illinois	****	***	***
Ohio	**	**	**
Wisconsin	**	**	**
Indiana	**	**	**

Rank	State	2016	2014	2012
1	Maryland	*****	*****	*****
2	Massachusetts	*****	*****	*****
3	Virginia	*****	*****	*****
4	Arizona	*****	*****	*****
5	Washington	*****	*****	*****
6	Utah	*****	****	****
7	California	*****	*****	*****
8	Colorado	*****	*****	*****
9	Minnesota	****	****	****
10	New Jersey	****	****	****
11	Connecticut	****	****	****
12	New Hampshire	****	****	***
13	**Michigan**	****	****	****
14	Illinois	****	***	***
15	New York	***	***	***
16	Texas	***	***	***
17	Oregon	***	***	***
18	Kansas	***	***	***
19	New Mexico	***	***	***
20	Georgia	***	***	***
21	Idaho	***	**	**
22	Florida	***	***	***
23	Missouri	***	***	***
24	North Carolina	***	**	**
25	Rhode Island	**	**	**
26	Iowa	**	***	***
27	Alaska	**	***	***
28	Nebraska	**	**	**
29	Ohio	**	**	**
30	Delaware	**	***	***
31	Vermont	**	**	**
32	South Carolina	**	**	**
33	Wisconsin	**	**	**
34	Alabama	**	**	**
35	Pennsylvania	**	**	**
36	Tennessee	**	**	*
37	North Dakota	**	**	**
38	Indiana	**	**	**
39	Oklahoma	**	**	**
40	West Virginia	**	*	**
41	Kentucky	*	*	**
42	Maine	*	*	*
43	Hawaii	*	*	*
44	South Dakota	*	*	*
45	Wyoming	*	*	*
46	Montana	*	*	*
47	Louisiana	*	*	*
48	Mississippi	*	*	*
49	Nevada	*	*	*
50	Arkansas	*	*	*

HIGH SCHOOL ONLY DIPLOMA ATTAINMENT*

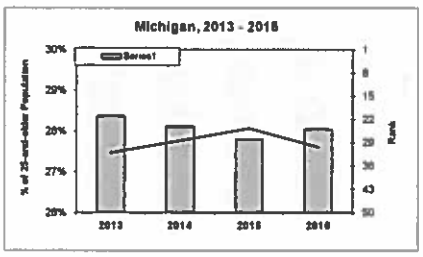
Rank	State	Score	Percent of 25-and-older Population	Change, 2013-2016 (%)
	50-State Average		27.8%	-1.9%
1	Minnesota	124.1	21.4%	-1.9%
2	Arizona	120.6	22.3%	-8.6%
3	Virginia	120.1	22.5%	-13.3%
4	California	119.4	22.6%	3.9%
5	Massachusetts	117.0	23.3%	-0.5%
6	Colorado	116.5	23.4%	13.4%
7	Nebraska	116.4	23.4%	-2.8%
8	New York	116.1	23.5%	-8.5%
9	Washington	114.4	24.0%	0.3%
10	Kansas	112.9	24.4%	4.4%
11	Maryland	112.5	24.5%	1.7%
12	Oregon	112.0	24.6%	-4.5%
13	Utah	110.9	24.9%	1.1%
14	Texas	110.8	24.9%	-7.6%
15	Illinois	110.0	25.1%	-3.6%
16	Idaho	109.9	25.2%	-11.0%
17	Connecticut	109.2	25.3%	1.3%
18	North Dakota	108.0	25.7%	-2.9%
19	Rhode Island	107.3	25.8%	1.4%
20	Iowa	106.3	26.1%	-12.1%
21	North Carolina	106.0	26.2%	-6.8%
22	Montana	103.8	26.8%	-11.0%
23	New Jersey	103.4	26.9%	-2.4%
24	Georgia	101.5	27.4%	1.3%
25	Michigan	100.6	27.6%	0.5%
26	New Hampshire	99.4	27.9%	1.1%
27	New Mexico	99.1	28.0%	7.0%
28	South Carolina	96.6	28.7%	-6.4%
29	South Dakota	96.3	28.8%	-0.3%
30	Vermont	96.0	28.8%	-6.1%
31	Wisconsin	94.3	29.3%	4.0%
32	Florida	94.2	29.3%	0.4%
33	Missouri	93.7	29.4%	1.3%
34	Hawaii	91.9	29.9%	-6.1%
35	Tennessee	89.9	30.4%	-5.5%
36	Mississippi	88.9	30.7%	4.4%
37	Alaska	86.8	31.3%	8.5%
38	Alabama	86.1	31.4%	2.4%
39	Kentucky	86.0	31.5%	-5.3%
40	Louisiana	85.9	31.5%	-8.2%
41	Maine	85.5	31.6%	-3.9%
42	Oklahoma	85.4	31.6%	-3.6%
43	Nevada	85.2	31.7%	-3.3%
44	Wyoming	84.8	31.8%	-3.7%
45	Pennsylvania	83.7	32.1%	-5.6%
46	Arkansas	82.9	32.3%	-1.1%
47	Ohio	82.4	32.4%	-6.0%
48	Indiana	80.9	32.8%	0.4%
49	Delaware	79.5	33.2%	10.7%
50	West Virginia	64.7	37.1%	-2.4%

Percent of 16-and-older labor force holding only a high-school diploma, 2016

A high school diploma is the minimum required education for today's economy and, increasingly, even a diploma is becoming insufficient. Real wages of those without a diploma have been declining precipitously for the last three decades. The above table shows the percentage of each state's adult population that has earned a high school diploma or the equivalent (but not above). * *Not included in subdriver/driver calculations*
Source: U.S. Census Bureau

Midwest Performance, 2016

State	% of 16-and-older Labor Force	Rank
Illinois	25.1%	15
Michigan	**27.6%**	**25**
Wisconsin	29.3%	31
Ohio	32.4%	47
Indiana	32.8%	48



POST–SECONDARY PRE-BA ATTAINMENT

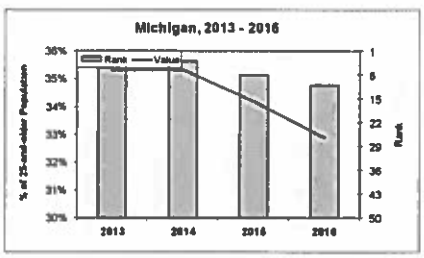
Rank	State	Score	% of Population 25 years and older	Change, 2013-2016 (%)
	50-State Average		29.7%	-1.7%
1	North Dakota	126.4	36.1%	3.2%
2	Idaho	125.0	35.7%	4.8%
3	Wyoming	123.7	35.4%	-2.1%
4	Mississippi	121.4	34.8%	10.8%
5	Utah	121.2	34.8%	-4.7%
6	Iowa	120.6	34.6%	3.9%
7	South Dakota	116.5	33.6%	-4.1%
8	Wisconsin	115.4	33.4%	-0.8%
9	Nebraska	113.8	33.0%	-4.3%
10	New Mexico	113.5	32.9%	7.7%
11	Michigan	113.5	32.9%	-6.9%
12	Arizona	112.9	32.7%	5.7%
13	Nevada	112.4	32.6%	1.3%
14	Montana	111.4	32.4%	-0.4%
15	Minnesota	111.0	32.3%	-6.6%
16	Oregon	110.2	32.1%	-2.7%
17	Kansas	109.8	32.0%	0.5%
18	Hawaii	108.7	31.7%	1.8%
19	South Carolina	106.9	31.2%	5.7%
20	Alaska	104.6	30.7%	-6.4%
21	Alabama	102.7	30.2%	0.0%
22	Arkansas	102.4	30.1%	-3.2%
23	Florida	101.7	30.0%	-4.0%
24	North Carolina	101.5	29.9%	1.2%
25	Ohio	100.7	29.7%	0.1%
26	Louisiana	99.3	29.4%	5.8%
27	Missouri	99.0	29.3%	-8.1%
28	Texas	98.6	29.2%	2.1%
29	California	98.2	29.1%	-2.1%
30	Kentucky	98.1	29.1%	-7.1%
31	Washington	97.9	29.0%	-7.0%
32	Maine	96.5	28.7%	-2.0%
33	Georgia	95.4	28.4%	-1.6%
34	Oklahoma	94.9	28.3%	-11.4%
35	Tennessee	94.6	28.2%	-1.6%
36	Illinois	94.3	28.1%	-1.9%
37	Colorado	92.7	27.7%	-3.8%
38	Indiana	91.6	27.5%	-13.8%
39	Virginia	89.7	27.0%	1.3%
40	New Hampshire	89.3	26.9%	-1.7%
41	West Virginia	87.1	26.3%	4.0%
42	Maryland	86.0	26.0%	1.2%
43	Rhode Island	84.4	25.7%	-2.1%
44	Pennsylvania	82.7	25.2%	-1.0%
45	Delaware	82.2	25.1%	-8.7%
46	Connecticut	80.8	24.8%	-3.3%
47	New York	79.2	24.4%	-3.7%
48	Vermont	76.3	23.6%	-6.5%
49	New Jersey	72.6	22.7%	-2.8%
50	Massachusetts	68.5	21.7%	-7.3%

Percent of 16-and-older labor force with an associate degree or equivalent or some college attainment, 2016

Many mistakenly focus exclusively on bachelor degree attainment as a measure of a state's human capital quality. In fact, some of the most critical occupations for industry success lie in the often fast-growing mid-level categories like highly-skilled tradesmen, technicians, etc. This metric measures those with post high school, pre-bachelor formal education and training– including partial college attendance, as a percentage of the adult workforce. *Source: U.S. Census Bureau*

Midwest Performance, 2016

State	% of 16-and-older Labor Force	Rank
Wisconsin	33.4%	8
Michigan	**32.9%**	**11**
Ohio	29.7%	25
Illinois	28.1%	36
Indiana	27.5%	38



BACHELOR'S DEGREE ATTAINMENT

Rank	State	Score	% of 25-and-older Population	Change, 2013-2016 (%)
	50-State Average		*33.9%*	*5.1%*
1	Massachusetts	149.7	49.1%	7.6%
2	New Jersey	133.4	43.7%	8.7%
3	New York	132.9	43.6%	10.1%
4	Maryland	132.0	43.3%	2.0%
5	Connecticut	130.8	42.9%	1.8%
6	Colorado	128.4	42.1%	0.3%
7	Vermont	128.4	42.1%	12.1%
8	Virginia	127.9	41.9%	7.1%
9	New Hampshire	120.8	39.6%	3.3%
10	Minnesota	119.1	39.0%	6.1%
11	Illinois	118.4	38.8%	5.9%
12	Rhode Island	118.1	38.7%	4.8%
13	Washington	116.6	38.2%	6.8%
14	California	109.5	35.8%	3.6%
15	Pennsylvania	108.0	35.4%	7.8%
16	Oregon	105.9	34.6%	4.4%
17	Kansas	105.4	34.5%	-3.6%
18	Georgia	104.6	34.2%	-1.8%
19	Nebraska	104.4	34.2%	8.2%
20	North Carolina	104.2	34.1%	11.4%
21	Montana	103.1	33.7%	8.3%
22	Maine	101.6	33.2%	5.9%
23	Missouri	101.3	33.1%	6.6%
24	**Michigan**	**101.1**	**33.1%**	**7.6%**
25	Hawaii	101.0	33.0%	4.1%
26	Delaware	99.0	32.4%	-2.9%
27	Texas	98.9	32.3%	12.0%
28	North Dakota	98.8	32.3%	0.1%
29	Florida	98.8	32.3%	3.2%
30	Tennessee	98.7	32.3%	6.8%
31	Alaska	97.3	31.8%	1.6%
32	Iowa	96.6	31.6%	10.2%
33	South Carolina	95.6	31.2%	2.7%
34	Arizona	94.3	30.8%	1.0%
35	Utah	94.3	30.8%	6.1%
36	Kentucky	94.2	30.8%	12.5%
37	Ohio	93.0	30.4%	9.5%
38	Indiana	92.2	30.1%	16.8%
39	South Dakota	92.1	30.1%	9.2%
40	Oklahoma	90.2	29.5%	13.3%
41	Idaho	88.5	28.9%	9.6%
42	New Mexico	87.8	28.7%	-9.3%
43	Wisconsin	87.5	28.6%	-3.4%
44	West Virginia	85.8	28.0%	-3.0%
45	Alabama	85.7	28.0%	-1.3%
46	Louisiana	84.9	27.7%	0.0%
47	Arkansas	82.5	26.9%	8.7%
48	Wyoming	80.2	26.2%	21.7%
49	Nevada	77.1	25.1%	7.8%
50	Mississippi	74.3	24.2%	-14.8%

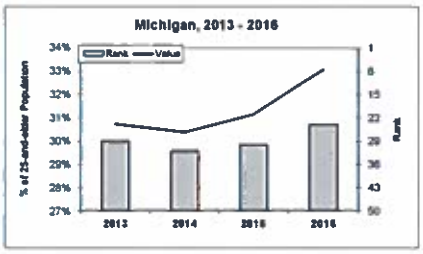
Percent of 16-and-older labor force holding a bachelor's degree or higher, 2016

No state can hope to transition into the innovation economy without a ready and plentiful stock of college graduates. A lack of them also suppresses overall state income and wages, as the average income for those without a college degree has been sluggish or worse in recent decades. The adjacent table shows the percentage of the adult population that holds at least a bachelor's degree or the equivalent.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	% of 16-and-older labor force	Rank
Illinois	38.8%	11
Michigan	**33.1%**	**24**
Ohio	30.4%	37
Indiana	30.1%	38
Wisconsin	28.6%	43



PHYSICAL SCIENCE AND ENGINEERING WORKERS

Rank	State	Score	Percent of Occupations	Change, 2013-2016 (%)
	50-State Average		*1.83%*	*25.3%*
1	Maryland	149.0	3.47%	34.1%
2	**Michigan**	**140.3**	**3.17%**	**29.8%**
3	Massachusetts	129.8	2.80%	10.3%
4	Colorado	129.7	2.79%	33.7%
5	Washington	125.8	2.66%	5.7%
6	California	120.6	2.47%	15.9%
7	Virginia	119.8	2.44%	30.4%
8	Utah	119.2	2.42%	32.3%
9	Connecticut	114.9	2.27%	21.2%
10	Minnesota	113.4	2.22%	38.1%
11	Alabama	112.3	2.18%	24.2%
12	Arizona	110.5	2.12%	31.9%
13	New Jersey	109.7	2.09%	25.9%
14	Oregon	109.4	2.08%	54.1%
15	Rhode Island	108.8	2.06%	32.1%
16	Wisconsin	108.5	2.05%	25.7%
17	New Mexico	108.1	2.03%	23.9%
18	Illinois	107.8	2.02%	40.0%
19	Pennsylvania	107.1	2.00%	19.4%
20	South Carolina	105.1	1.93%	8.4%
21	Georgia	104.9	1.92%	45.0%
22	New Hampshire	104.5	1.91%	29.9%
23	Ohio	104.5	1.90%	46.3%
24	Texas	104.2	1.89%	13.7%
25	Missouri	100.6	1.77%	28.0%
26	Alaska	99.4	1.73%	3.5%
27	North Carolina	98.5	1.70%	23.1%
28	Kansas	97.2	1.65%	28.2%
29	Indiana	96.4	1.62%	6.7%
30	Idaho	96.0	1.61%	22.3%
31	Nebraska	95.7	1.59%	35.1%
32	Tennessee	94.1	1.54%	19.3%
33	Delaware	93.8	1.53%	-35.7%
34	Oklahoma	91.8	1.46%	13.3%
35	Hawaii	91.2	1.44%	26.6%
36	New York	91.2	1.44%	9.4%
37	Vermont	90.2	1.40%	42.2%
38	Maine	90.2	1.40%	35.0%
39	Florida	89.3	1.37%	23.5%
40	Montana	88.5	1.34%	10.4%
41	North Dakota	87.9	1.32%	45.7%
42	West Virginia	87.8	1.32%	56.9%
43	Kentucky	87.0	1.29%	25.6%
44	Iowa	86.3	1.26%	27.4%
45	Louisiana	85.4	1.23%	7.4%
46	South Dakota	85.2	1.22%	37.0%
47	Arkansas	84.2	1.19%	19.7%
48	Wyoming	82.6	1.14%	-6.9%
49	Nevada	81.6	1.10%	62.4%
50	Mississippi	81.2	1.08%	26.1%

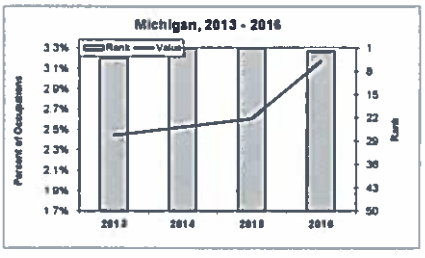
Percent of physical sciences and engineering occupations, 2016

Researchers and skilled scientific workers are an integral part of the innovation economy and can be a key asset in attracting high-value added industries with the promise of a highly-skilled workforce. Equally essential is the retention of skilled college graduates, avoiding a "brain drain," and being able to attract out-of-state workers. The above table provides the percentage of workers in physical sciences and engineering occupations that require at least a bachelor's degree. See Appendix for more detail.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Percent of Occupations	Rank
Michigan	**3.2%**	**2**
Wisconsin	2.0%	16
Illinois	2.0%	18
Ohio	1.9%	23
Indiana	1.6%	29



TECHNOLOGY AND TECHNICIAN WORKERS

Rank	State	Score	Percent of Occupations	Change, 2013-2016 (%)
	50-State Average		*3.33%*	*0.6%*
1	Virginia	146.1	5.58%	-4.4%
2	Washington	141.2	5.33%	-5.6%
3	Colorado	132.6	4.89%	4.0%
4	Massachusetts	132.5	4.89%	-4.5%
5	Maryland	127.6	4.64%	1.2%
6	California	119.1	4.21%	7.8%
7	Delaware	118.3	4.16%	8.7%
8	Texas	117.9	4.14%	7.3%
9	Minnesota	117.0	4.10%	10.1%
10	Arizona	116.6	4.08%	-0.7%
11	Utah	113.0	3.90%	4.9%
12	New Jersey	112.2	3.85%	2.6%
13	North Carolina	111.8	3.84%	2.6%
14	Georgia	111.3	3.81%	4.4%
15	Missouri	107.2	3.60%	4.4%
16	Connecticut	105.5	3.51%	-5.2%
17	New Hampshire	105.4	3.51%	3.0%
18	Pennsylvania	104.9	3.49%	-0.6%
19	Ohio	104.3	3.45%	-1.0%
20	**Michigan**	**103.6**	**3.42%**	**-6.2%**
21	Kansas	103.5	3.41%	-1.1%
22	Wisconsin	103.2	3.40%	10.7%
23	New York	102.9	3.38%	8.6%
24	Vermont	100.6	3.27%	18.5%
25	Nebraska	100.0	3.24%	-4.8%
26	Illinois	100.0	3.23%	6.7%
27	Rhode Island	97.8	3.12%	0.5%
28	Oregon	96.9	3.08%	-7.0%
29	Tennessee	96.8	3.07%	1.7%
30	South Carolina	96.6	3.06%	5.3%
31	Oklahoma	96.5	3.06%	2.6%
32	Florida	96.4	3.05%	2.2%
33	Idaho	94.9	2.97%	1.6%
34	New Mexico	94.5	2.95%	-1.4%
35	Alabama	93.5	2.91%	-13.0%
36	Alaska	90.8	2.77%	-5.1%
37	Indiana	90.4	2.75%	-0.3%
38	South Dakota	90.3	2.74%	-2.1%
39	Maine	90.1	2.73%	-3.9%
40	Iowa	89.7	2.71%	-4.5%
41	West Virginia	88.8	2.66%	5.6%
42	Kentucky	88.7	2.66%	-2.2%
43	Arkansas	84.8	2.46%	-4.1%
44	Montana	84.5	2.45%	-5.1%
45	North Dakota	83.5	2.40%	3.2%
46	Wyoming	80.4	2.24%	-2.6%
47	Mississippi	78.6	2.15%	-5.9%
48	Nevada	77.7	2.10%	10.3%
49	Hawaii	75.9	2.01%	0.7%
50	Louisiana	74.4	1.93%	-10.1%

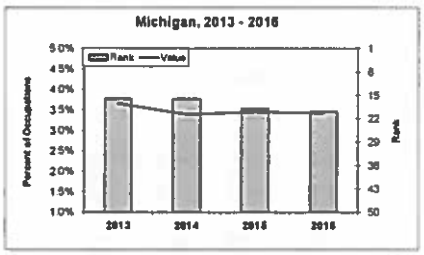
Percent of workers in technology and technician occupations, 2016

The number of technologists and technicians is an indicator of a state's support network for the innovation economy and its ability to put ideas into practice. The above table shows the percentage of workers in technology and technician occupations that require an associate's degree or postsecondary vocational certification. See Appendix for more detail.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Percent of Occupations	Rank
Ohio	3.5%	19
Michigan	**3.4%**	**20**
Wisconsin	3.4%	22
Illinois	3.2%	26
Indiana	2.7%	37



INNOVATION WORKERS OUTSIDE HIGH TECH EMPL.

Rank	State	Score	Percent of Occupations	Change, 2013-2016 (%)
	50-State Average		*10.80%*	*7.4%*
1	Massachusetts	141.5	15.28%	11.7%
2	Illinois	126.6	13.63%	16.6%
3	Connecticut	125.7	13.53%	5.9%
4	Maryland	121.3	13.04%	1.9%
5	Utah	121.0	13.00%	22.5%
6	California	120.7	12.97%	8.6%
7	Minnesota	120.4	12.94%	3.8%
8	Washington	119.7	12.86%	14.3%
9	Colorado	119.5	12.83%	5.6%
10	Virginia	118.4	12.71%	3.5%
11	Oregon	116.2	12.47%	18.1%
12	New York	115.1	12.35%	9.2%
13	Georgia	115.0	12.33%	7.7%
14	Arizona	113.5	12.17%	12.1%
15	New Jersey	111.0	11.89%	3.7%
16	Delaware	107.4	11.48%	7.7%
17	New Hampshire	104.4	11.15%	4.6%
18	Hawaii	103.4	11.04%	4.6%
19	Rhode Island	102.4	10.93%	4.4%
20	Iowa	102.1	10.90%	9.5%
21	Idaho	101.6	10.84%	15.3%
22	Oklahoma	100.6	10.73%	7.7%
23	Maine	100.4	10.71%	7.0%
24	Tennessee	100.3	10.69%	10.4%
25	North Carolina	100.0	10.66%	10.7%
26	Nebraska	100.0	10.66%	18.4%
27	Missouri	99.5	10.61%	0.5%
28	Wisconsin	98.3	10.48%	7.8%
29	Ohio	97.7	10.41%	3.5%
30	**Michigan**	**97.5**	**10.38%**	**-4.8%**
31	Kansas	96.5	10.27%	9.5%
32	Alaska	96.0	10.22%	-0.7%
33	New Mexico	95.5	10.16%	5.1%
34	Florida	94.4	10.04%	9.8%
35	Vermont	93.7	9.96%	2.3%
36	Arkansas	93.2	9.91%	10.5%
37	Texas	93.1	9.89%	1.4%
38	Pennsylvania	92.5	9.82%	2.4%
39	Indiana	91.3	9.69%	11.6%
40	South Carolina	89.0	9.44%	13.4%
41	North Dakota	86.8	9.20%	6.8%
42	Nevada	86.4	9.14%	6.0%
43	Kentucky	86.3	9.14%	3.9%
44	Mississippi	80.7	8.51%	11.4%
45	Alabama	79.6	8.39%	6.3%
46	Montana	78.9	8.31%	5.3%
47	Louisiana	78.5	8.27%	5.0%
48	South Dakota	77.9	8.21%	2.9%
49	West Virginia	74.9	7.86%	-6.7%
50	Wyoming	73.9	7.76%	0.1%

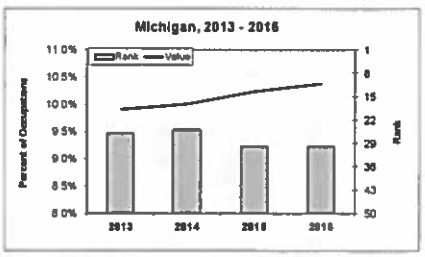
Percent of workers in quasi-science and quasi-technical occupations, 2016

There are many support and quasi-technical occupations that are building blocks of an innovative state, such as managers and teachers. They might be less essential to high-tech enterprises but are important sources of entrepreneurial talent. The above table shows these other innovation economy workers as a percent of all workers. See Appendix for more detail.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Percent of Occupations	Rank
Illinois	13.6%	2
Wisconsin	10.5%	28
Ohio	10.4%	29
Michigan	**10.4%**	**30**
Indiana	9.7%	39



HIGH-TECH MANUFACTURING EMPLOYMENT

Rank	State	Score	% of Total Mfg. Employment	Change, 2013-2016 (%)
	50-State Average		*34.5%*	*-1.5%*
1	Michigan	134.3	50.2%	-1.1%
2	Washington	133.4	49.8%	-3.6%
3	Connecticut	128.3	47.7%	-1.9%
4	Arizona	124.5	46.0%	-8.0%
5	Kansas	117.4	43.0%	-4.0%
6	California	115.4	42.1%	2.4%
7	Kentucky	114.5	41.7%	7.9%
8	Texas	113.2	41.2%	-2.5%
9	Massachusetts	112.9	41.0%	-1.5%
10	Indiana	112.9	41.0%	0.5%
11	Ohio	108.1	39.0%	3.2%
12	Maryland	107.2	38.6%	-7.1%
13	Missouri	106.7	38.4%	8.2%
14	New Hampshire	106.1	38.1%	-1.9%
15	Oklahoma	104.4	37.4%	-3.8%
16	Louisiana	104.2	37.3%	-4.7%
17	South Carolina	104.1	37.3%	3.4%
18	Tennessee	104.1	37.2%	2.8%
19	North Dakota	103.8	37.1%	-7.6%
20	West Virginia	103.3	36.9%	2.6%
21	Florida	102.5	36.6%	-1.9%
22	Vermont	102.3	36.5%	-6.4%
23	Alabama	100.9	35.9%	3.1%
24	Iowa	100.9	35.9%	-4.3%
25	Oregon	100.0	35.5%	-0.8%
26	New Jersey	99.9	35.5%	-5.9%
27	Colorado	98.7	35.0%	-1.8%
28	New York	98.0	34.6%	-2.4%
29	Virginia	96.4	33.9%	-6.1%
30	Illinois	95.1	33.4%	-2.9%
31	Mississippi	94.6	33.2%	0.2%
32	Idaho	93.9	32.9%	-1.2%
33	Utah	93.5	32.7%	-0.8%
34	Maine	92.4	32.3%	7.1%
35	Minnesota	91.3	31.8%	-0.1%
36	Rhode Island	90.9	31.6%	5.1%
37	New Mexico	89.1	30.8%	-18.1%
38	North Carolina	88.2	30.4%	-0.7%
39	Wyoming	86.9	29.9%	-4.7%
40	South Dakota	86.3	29.6%	-0.7%
41	Nebraska	83.5	28.4%	-3.6%
42	Wisconsin	81.6	27.6%	-2.4%
43	Pennsylvania	80.1	27.0%	-4.5%
44	Georgia	78.9	26.4%	-1.2%
45	Delaware	76.5	25.4%	-6.9%
46	Arkansas	65.1	20.5%	0.8%
47	Nevada	57.8	17.4%	-4.3%
48	Montana	56.5	16.8%	3.2%
49	Hawaii	40.2	9.8%	5.1%
			% of Total Mfg.	Change, 2013-

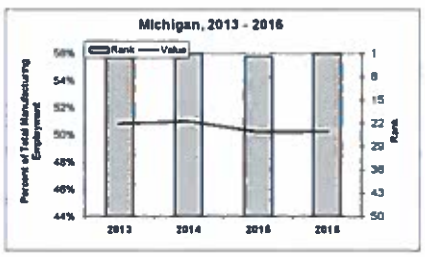
Percent of total covered manufacturing employment in high-tech manufacturing industries, 2016

Advanced manufacturing describes a high value-added application of information to industrial production. The greater efficiency that results and higher skill levels required typically yield higher wages. Additionally, a workforce skilled in advanced manufacturing techniques helps attract similar employers. The above table gives the percentage of each state's manufacturing workers that are employed in high-technology manufacturing industries. See Appendix for more detail.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	% of Total Mfg Employment	Rank
Michigan	50.2%	1
Indiana	41.0%	10
Ohio	39.0%	11
Illinois	33.4%	30
Wisconsin	27.6%	42



HIGH-TECH SERVICES EMPLOYMENT

Rank	State	Score	% of Total Services Employment	Change, 2013-2016 (%)
	50-State Average		*6.8%*	*1.2%*
1	Virginia	158.3	13.8%	-3.4%
2	Maryland	143.3	11.9%	0.3%
3	Washington	141.4	11.7%	5.1%
4	Colorado	140.9	11.6%	1.1%
5	Massachusetts	139.1	11.4%	4.9%
6	California	126.0	9.7%	0.7%
7	New Mexico	122.8	9.3%	-0.5%
8	Utah	122.5	9.3%	4.0%
9	New Jersey	118.9	8.8%	1.6%
10	Texas	116.0	8.4%	0.0%
11	Georgia	115.9	8.4%	1.8%
12	Michigan	115.5	8.4%	8.8%
13	North Carolina	111.4	7.8%	8.1%
14	Illinois	107.9	7.4%	2.2%
15	Kansas	104.6	7.0%	-3.6%
16	New Hampshire	104.5	7.0%	4.0%
17	Minnesota	103.1	6.8%	10.7%
18	Alabama	102.8	6.7%	-0.9%
19	Connecticut	102.7	6.7%	8.1%
20	Missouri	102.3	6.7%	6.2%
21	Florida	101.5	6.6%	1.0%
22	Pennsylvania	101.4	6.6%	1.5%
23	Alaska	101.1	6.5%	-9.7%
24	New York	101.0	6.5%	6.0%
25	Arizona	100.0	6.4%	-0.1%
26	Oregon	97.8	6.1%	1.7%
27	South Carolina	97.2	6.0%	5.1%
28	Idaho	96.7	6.0%	-0.9%
29	Ohio	96.3	5.9%	2.5%
30	Rhode Island	96.0	5.9%	-0.4%
31	Wisconsin	95.5	5.8%	6.3%
32	Nebraska	95.5	5.8%	0.8%
33	Delaware	95.5	5.8%	-22.2%
34	Vermont	94.0	5.6%	2.3%
35	Tennessee	92.9	5.5%	5.7%
36	North Dakota	91.6	5.3%	3.7%
37	Montana	91.3	5.3%	1.4%
38	Indiana	88.4	4.9%	4.7%
39	Kentucky	88.2	4.9%	-3.9%
40	Oklahoma	87.7	4.8%	-0.5%
41	Louisiana	86.6	4.7%	-2.2%
42	Maine	85.1	4.5%	5.1%
43	Iowa	84.2	4.4%	1.4%
44	Wyoming	84.0	4.3%	-5.8%
45	Hawaii	83.3	4.3%	-3.8%
46	West Virginia	82.3	4.1%	0.0%
47	South Dakota	81.1	4.0%	(n/a)
48	Nevada	78.1	3.6%	(n/a)
49	Mississippi	76.5	3.4%	-4.4%
(n/a)	Arkansas	(n/a)	(n/a)	(n/a)

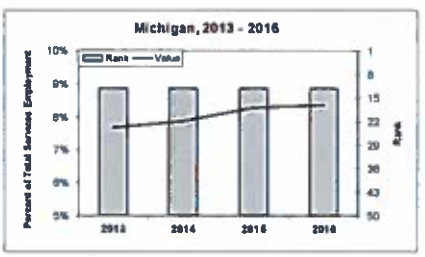
Percent of total covered service-providing employment in high-tech service industries, 2016

Information technology has been important in creating new approaches to industrial production, but it spawned a revolution in many services industries even earlier. Moreover, most information technology firms are categorized as services. Thus, the share of services employment in high-tech areas is an important indicator of an innovation economy base. The above table gives the percentage of each state's service-providing workers that are employed in high-technology service industries. See Appendix.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	% of Total Services Employment	Rank
Michigan	8.4%	12
Illinois	7.4%	14
Ohio	5.9%	29
Wisconsin	5.8%	31
Indiana	4.9%	38



ADULT EDUCATION

Rank	State	Score	Percent	Change, 2011-2015 (%)
	50-State Average		*2.40%*	*-15.0%*
1	Arizona	213.7	6.23%	-34.9%
2	Utah	209.3	6.07%	30.2%
3	New Hampshire	184.8	5.15%	156.9%
4	Minnesota	158.9	4.18%	-13.3%
5	West Virginia	157.7	4.14%	-6.1%
6	Idaho	134.8	3.28%	37.0%
7	Iowa	133.5	3.23%	-55.6%
8	New Mexico	128.6	3.05%	-27.5%
9	Colorado	128.0	3.03%	-22.1%
10	Kansas	124.0	2.88%	-1.1%
11	Virginia	123.0	2.84%	-12.9%
12	Nebraska	119.5	2.71%	-15.0%
13	Maryland	116.0	2.58%	-16.1%
14	Illinois	115.7	2.57%	-21.0%
15	Alaska	114.7	2.53%	-11.8%
16	Missouri	113.2	2.47%	-29.1%
17	California	113.0	2.47%	-14.2%
18	Oregon	109.8	2.34%	-23.7%
19	Massachusetts	109.2	2.32%	-8.5%
20	Alabama	109.2	2.32%	-20.9%
21	Delaware	105.2	2.17%	-4.1%
22	Vermont	103.2	2.10%	-1.7%
23	Wyoming	102.5	2.07%	-24.0%
24	Kentucky	102.3	2.06%	-30.6%
25	Indiana	101.0	2.01%	-30.0%
26	Texas	99.0	1.94%	-19.1%
27	North Dakota	98.5	1.92%	-19.5%
28	Florida	98.3	1.92%	-23.9%
29	South Dakota	98.3	1.91%	-24.9%
30	Washington	98.2	1.91%	-20.0%
31	Wisconsin	98.1	1.91%	-24.4%
32	North Carolina	97.9	1.90%	-25.1%
33	Oklahoma	97.2	1.88%	-22.0%
34	Georgia	96.7	1.85%	-29.5%
35	Hawaii	95.7	1.82%	-16.6%
36	Maine	95.7	1.82%	-15.1%
37	**Michigan**	**95.6**	**1.81%**	**-34.0%**
38	New York	95.4	1.81%	-13.4%
39	Ohio	94.5	1.77%	-30.3%
40	Arkansas	93.4	1.73%	-28.4%
41	Connecticut	92.5	1.70%	-10.5%
42	Mississippi	92.4	1.69%	-25.2%
43	Rhode Island	88.7	1.56%	-16.4%
44	Nevada	88.3	1.54%	-25.4%
45	Pennsylvania	87.5	1.51%	-17.0%
46	Louisiana	87.3	1.50%	-20.2%
47	Tennessee	87.1	1.49%	-28.6%
48	Montana	87.1	1.49%	-16.3%
49	South Carolina	85.6	1.44%	-23.9%
50	New Jersey	85.3	1.43%	-20.9%

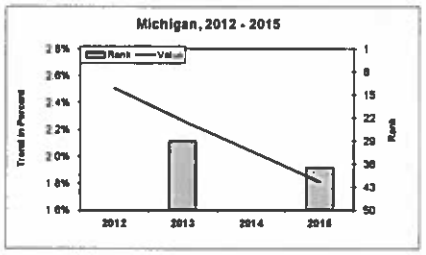
Postsecondary enrollment of 30-year-olds and above to a state's above-30 population, 2015

Continuous skill development and knowledge accrual, or "lifelong learning," is an important component of innovation economies. The needs of employers are changing too quickly for workers to rely on past education. Adult college enrollment will be an important source of lifelong learning. This figure is a ratio of postsecondary enrollment of 30-year-olds and above to a state's above-30 population, published every two years.

Source: National Center for Education Statistics

Midwest Performance, 2015

State	Percent	Rank
Illinois	2.57%	14
Indiana	2.01%	25
Wisconsin	1.91%	31
Michigan	**1.81%**	**37**
Ohio	1.77%	39



SKILLED IMMIGRANTS

Rank	State	Score	Percent of Population	Change, 2013-2016 (%)
	50-State Average		*1.5%*	*34.3%*
1	New Jersey	183.3	5.6%	23.4%
2	California	161.7	4.5%	3.1%
3	New York	156.9	4.2%	1.6%
4	Connecticut	145.0	3.5%	46.5%
5	Maryland	144.5	3.5%	9.4%
6	Florida	141.0	3.3%	2.2%
7	Massachusetts	135.8	3.0%	12.2%
8	Illinois	134.3	2.9%	31.8%
9	Hawaii	133.0	2.9%	23.7%
10	Washington	127.9	2.6%	33.0%
11	Virginia	127.7	2.6%	-2.9%
12	Nevada	123.4	2.3%	-18.4%
13	Rhode Island	120.4	2.2%	43.5%
14	Arizona	119.3	2.1%	32.6%
15	Texas	116.7	2.0%	28.4%
16	Georgia	110.1	1.6%	26.8%
17	Pennsylvania	109.1	1.6%	38.5%
18	Delaware	107.6	1.5%	1.8%
19	North Carolina	107.3	1.5%	61.3%
20	Oregon	107.2	1.5%	0.5%
21	**Michigan**	**104.6**	**1.3%**	**-6.6%**
22	Colorado	104.2	1.3%	34.7%
23	New Hampshire	101.4	1.1%	20.5%
24	Minnesota	100.8	1.1%	10.7%
25	South Carolina	100.4	1.1%	34.4%
26	Utah	99.6	1.0%	76.1%
27	New Mexico	99.4	1.0%	17.6%
28	Alaska	98.6	1.0%	-20.3%
29	Tennessee	97.6	0.9%	53.5%
30	Ohio	95.8	0.8%	23.6%
31	Vermont	95.3	0.8%	21.8%
32	Indiana	95.3	0.8%	44.9%
33	Idaho	93.7	0.7%	90.7%
34	Oklahoma	93.7	0.7%	51.2%
35	Missouri	93.7	0.7%	16.5%
36	Iowa	93.6	0.7%	32.6%
37	Kansas	92.2	0.6%	-12.6%
38	Wisconsin	92.1	0.6%	65.5%
39	Maine	90.4	0.5%	-3.0%
40	Kentucky	90.3	0.5%	23.1%
41	Alabama	89.8	0.5%	30.5%
42	Montana	89.5	0.5%	126.6%
43	Louisiana	88.7	0.4%	23.4%
44	Nebraska	88.5	0.4%	-7.4%
45	Arkansas	88.1	0.4%	68.4%
46	North Dakota	88.0	0.4%	8.2%
47	West Virginia	87.7	0.4%	53.1%
48	South Dakota	87.1	0.4%	255.6%
49	Wyoming	87.1	0.3%	175.2%
50	Mississippi	84.4	0.2%	6.8%

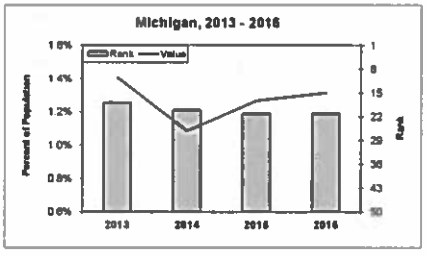
Permanent or temporary foreign-born residents with a bachelor's degree or higher as a percent of the total population, 2016

Silicon Valley has proven that highly skilled foreign workers can be an integral part of an innovation network. With states facing inevitable demographic shifts, the ability to attract well-educated workers from other countries becomes increasingly relevant. In recent years, this has become all the more critical due to federal curtailment of the entry quota for holders of H1B visas.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Percent of Population	Rank
Illinois	2.9%	8
Michigan	**1.3%**	**21**
Ohio	0.8%	30
Indiana	0.8%	32
Wisconsin	0.6%	38



BUSINESS COSTS*

While national monetary policies must keep a close watch on inflation trends on a near-term basis, long-term national and global trends would appear to be disinflationary due in large part to global overcapacity. Productive-capacity investments made during the boom times of the 1990s, along with a global shift to free enterprise economics, have combined to put downward pressure on prices for standardized products and services. The result is that many businesses have lost their pricing power. Their response is to improve productivity and to control costs. Doing both requires innovation and tight financial management.

Some argue that business costs are no longer as important a factor in location and expansion decisions as in previous decades. To the contrary, intense competition forces businesses to routinely consider lower cost areas in which to operate, including overseas locations, while concurrently investing in new technologies and methods to improve productivity, thus lowering costs at current locations. The Business Costs Driver is based on 10 metrics, weighted according to their relative importance in the "typical business" cost equation.

Midwest Performance

	2016	2014	2012
Indiana	***	***	***
Ohio	***	***	***
Illinois	**	**	***
Michigan	**	***	***
Wisconsin	**	**	**

** Metrics are given unequal weights in the calculation of this driver grade. Weighting is 57 percent unit labor costs; 6 percent business taxes; 6 percent state business tax structure; 12 percent industrial rents; 7 percent energy costs; 2.5 percent worker's compensation premiums; 2.5 percent worker's compensation costs; 5 percent healthcare premiums; 1 percent unemployment insurance costs and 1 percent unemployment insurance tax structure. See Data Sources appendix for more details.*

Rank	State	2016	2014	2012
1	Wyoming	*****	*****	*****
2	South Dakota	*****	*****	*****
3	Tennessee	*****	****	****
4	Louisiana	****	****	*****
5	Mississippi	****	****	****
6	Texas	***	****	****
7	West Virginia	***	***	***
8	Iowa	***	***	****
9	Indiana	***	***	***
10	Oklahoma	***	***	****
11	Arkansas	***	***	***
12	North Carolina	***	***	***
13	Nebraska	***	***	***
14	Nevada	***	****	*****
15	Connecticut	***	***	***
16	Ohio	***	***	***
17	Washington	***	***	****
18	Idaho	***	***	****
19	Montana	***	***	***
20	Kansas	***	***	***
21	New Mexico	***	***	***
22	Hawaii	***	**	***
23	South Carolina	***	***	***
24	Virginia	***	**	***
25	Utah	**	**	***
26	Illinois	**	**	***
27	Alabama	**	***	***
28	Kentucky	**	***	***
29	North Dakota	**	**	***
30	Oregon	**	**	***
31	**Michigan**	**	***	***
32	Georgia	**	**	***
33	Missouri	**	**	***
34	Delaware	**	**	***
35	New York	**	**	***
36	Pennsylvania	**	**	**
37	Wisconsin	**	**	**
38	Minnesota	**	**	**
39	Colorado	**	**	**
40	Arizona	**	**	***
41	Maryland	**	**	**
42	New Jersey	**	**	**
43	Florida	**	**	**
44	California	**	**	**
45	Rhode Island	*	**	**
46	Maine	*	*	**
47	Alaska	*	*	*
48	Vermont	*	*	**
49	New Hampshire	*	*	**
50	Massachusetts	*	*	*

UNIT LABOR COSTS

Rank	State	Score	Index	Change, 2013-2016 (%)
	50-State Average			*0.0%*
1	Wyoming	144.1	90.8	-0.3%
2	South Dakota	135.0	92.7	1.5%
3	Tennessee	132.2	93.4	-1.1%
4	Hawaii	123.6	95.2	-1.6%
5	Louisiana	122.5	95.5	-0.2%
6	Mississippi	121.2	95.7	-0.1%
7	Connecticut	118.5	96.3	-0.5%
8	West Virginia	118.1	96.4	-1.1%
9	Texas	117.7	96.5	0.0%
10	Iowa	112.8	97.5	0.3%
11	Washington	109.1	98.4	0.5%
12	Nebraska	108.1	98.5	1.0%
13	Nevada	107.3	98.7	2.4%
14	Ohio	106.4	98.9	-0.3%
15	Indiana	106.4	98.9	-0.4%
16	Montana	105.1	99.2	-0.3%
17	New York	104.9	99.3	1.1%
18	Arkansas	104.0	99.4	0.4%
19	New Mexico	103.8	99.5	-0.2%
20	Oklahoma	103.8	99.5	0.6%
21	Kansas	103.4	99.6	-0.9%
22	North Carolina	103.0	99.7	-0.8%
23	California	102.6	99.8	-1.0%
24	New Jersey	100.4	100.2	-0.5%
25	Idaho	100.0	100.3	1.3%
26	North Dakota	98.9	100.5	0.0%
27	Alaska	98.3	100.7	-1.2%
28	South Carolina	98.2	100.7	-0.8%
29	Illinois	97.1	100.9	0.3%
30	Pennsylvania	94.4	101.5	-0.9%
31	Alabama	94.0	101.6	1.4%
32	Kentucky	93.7	101.7	0.8%
33	Virginia	93.7	101.7	-0.7%
34	**Michigan**	**93.2**	**101.8**	**0.4%**
35	Rhode Island	93.2	101.8	1.7%
36	Maryland	90.3	102.4	-0.8%
37	Utah	90.3	102.4	-0.3%
38	Wisconsin	90.2	102.4	-1.2%
39	Oregon	89.8	102.5	-1.0%
40	Minnesota	88.2	102.8	0.6%
41	Vermont	87.5	103.0	0.2%
42	Georgia	87.1	103.1	0.0%
43	Colorado	84.9	103.6	0.5%
44	Maine	84.7	103.6	-0.4%
45	Missouri	84.5	103.6	1.4%
46	Arizona	84.0	103.8	0.1%
47	Florida	83.7	103.8	0.1%
48	New Hampshire	81.4	104.3	1.2%
49	Massachusetts	74.5	105.8	-0.7%
(n/a)	Delaware	(n/a)	(n/a)	(n/a)

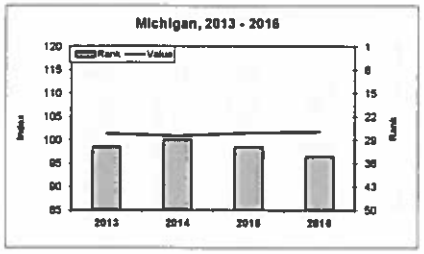
Unit labor cost index, 2016

The single largest cost affecting most employers is labor. The real cost of labor, however, is not the simple hourly wage, but the cost per unit of output. If the labor force is sufficiently productive, high wages do not mean high unit labor costs. The measure of unit labor costs is derived both from the total value of output and from the total cost of labor. Higher values mean more expensive labor per unit of output, and a value of 100 is equal to the U.S. average. It is adjusted for the industry mix in each state.

Source: Bureau of Economic Analysis

Midwest Performance, 2016

State	Index	Rank
Ohio	99	14
Indiana	99	15
Illinois	101	29
Michigan	**102**	**34**
Wisconsin	102	38



ENERGY COSTS

Rank	State	Score	Per kilowatthour	Change, 2013-2016 (%)
	50-State Average		*$0.093*	*1.6%*
1	Oklahoma	125.4	$0.063	-4.4%
2	Washington	124.2	$0.064	7.1%
3	Texas	119.3	$0.068	-1.7%
4	Louisiana	118.8	$0.068	-8.1%
5	Nevada	117.8	$0.069	-11.1%
6	Idaho	114.5	$0.072	6.3%
6	Arkansas	114.5	$0.072	1.6%
8	Virginia	113.3	$0.072	-1.0%
9	North Carolina	110.4	$0.075	-1.8%
10	Oregon	110.2	$0.075	3.3%
11	Utah	109.4	$0.075	6.3%
12	Iowa	108.4	$0.076	8.3%
13	Kentucky	108.3	$0.076	7.2%
14	Montana	108.2	$0.076	1.9%
15	Mississippi	107.5	$0.077	-6.6%
16	Illinois	106.4	$0.078	10.3%
17	New Mexico	106.0	$0.078	-3.2%
18	Georgia	105.6	$0.078	-3.8%
19	Tennessee	104.1	$0.079	-2.6%
20	West Virginia	103.8	$0.080	10.8%
21	Pennsylvania	102.3	$0.081	-0.5%
22	Wyoming	101.1	$0.082	8.9%
23	South Carolina	100.8	$0.082	3.0%
24	Missouri	100.7	$0.082	8.5%
25	Arizona	100.0	$0.082	-0.2%
26	Nebraska	100.0	$0.082	2.8%
27	Florida	99.3	$0.083	-2.4%
28	Ohio	96.9	$0.085	8.9%
28	Colorado	96.9	$0.085	-1.5%
30	Indiana	96.7	$0.085	4.2%
31	North Dakota	95.7	$0.086	10.4%
32	South Dakota	95.6	$0.086	10.8%
32	Alabama	95.6	$0.086	4.2%
34	Minnesota	95.0	$0.086	5.1%
35	**Michigan**	**92.9**	**$0.088**	**-6.5%**
36	Kansas	90.2	$0.090	5.2%
37	Delaware	88.7	$0.091	-2.4%
38	Wisconsin	88.1	$0.091	0.7%
39	Maryland	84.0	$0.094	-0.8%
40	New York	73.3	$0.102	-6.6%
41	Maine	69.6	$0.105	4.8%
42	New Jersey	60.4	$0.112	-4.9%
43	Vermont	44.7	$0.124	-2.9%
44	New Hampshire	31.4	$0.134	7.4%
45	California	29.9	$0.135	5.3%
46	Rhode Island	20.8	$0.142	14.6%
47	Connecticut	19.4	$0.143	4.8%
48	Massachusetts	16.6	$0.145	5.7%
49	Alaska	-8.7	$0.164	4.4%
50	Hawaii	-50.0	$0.227	-29.1%

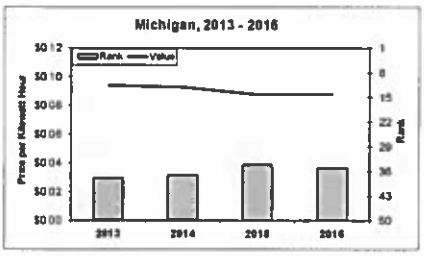
Average industrial and commercial energy price per kilowatt-hour, 2016

Although of less importance than labor, health insurance, and taxes, energy costs are nonetheless a core concern of employers. Like the other metrics in this section, energy prices are also highly variable across states. The above table shows the average industrial and commercial energy costs per kilowatt-hour.

Source: Energy Information Administration

Midwest Performance, 2016

State	Per Kilowatt Hour	Rank
Illinois	$0.078	16
Ohio	$0.085	28
Indiana	$0.085	30
Michigan	**$0.088**	**35**
Wisconsin	$0.091	38



WORKERS' COMPENSATION COSTS

Rank	State	Score	Rate per $100 of Payroll	Change, 2011-2015 (%)
	50-State Average		*$1.82*	*-4.9%*
1	North Dakota	131.0	$0.89	-11.9%
2	Indiana	125.8	$1.05	-9.5%
3	Arkansas	125.5	$1.06	-10.9%
4	West Virginia	120.3	$1.22	-21.3%
5	Virginia	119.6	$1.24	3.3%
6	Utah	118.7	$1.27	-5.9%
7	Oregon	118.3	$1.28	-19.0%
8	Massachusetts	118.0	$1.29	-5.8%
9	Nevada	117.4	$1.31	-1.5%
10	Kansas	114.1	$1.41	-8.4%
11	Texas	112.8	$1.45	-9.4%
11	Ohio	112.8	$1.45	-21.2%
13	Maryland	111.2	$1.50	-10.7%
13	Arizona	111.2	$1.50	-6.8%
15	Kentucky	110.5	$1.52	-22.4%
16	Colorado	109.3	$1.56	9.9%
17	**Michigan**	**108.9**	**$1.57**	**-9.2%**
18	Florida	106.0	$1.66	-8.8%
19	South Dakota	105.7	$1.67	-12.6%
19	Nebraska	105.7	$1.67	-2.3%
21	Tennessee	105.4	$1.68	-16.8%
22	Mississippi	104.7	$1.70	14.1%
23	Idaho	101.8	$1.79	-11.4%
24	Georgia	101.5	$1.80	-4.3%
25	Pennsylvania	100.2	$1.84	-14.4%
26	Alabama	99.8	$1.85	-6.1%
27	Iowa	99.5	$1.86	-2.1%
28	Wyoming	99.2	$1.87	7.5%
29	North Carolina	97.9	$1.91	0.5%
29	Minnesota	97.9	$1.91	-5.9%
31	New Mexico	97.6	$1.92	2.1%
31	Missouri	97.6	$1.92	18.5%
33	South Carolina	96.9	$1.94	-4.9%
34	New Hampshire	96.3	$1.96	-18.3%
34	Hawaii	96.3	$1.96	18.1%
36	Washington	95.9	$1.97	-6.6%
37	Vermont	94.3	$2.02	-2.4%
37	Maine	94.3	$2.02	-9.8%
39	Wisconsin	93.0	$2.06	-4.2%
40	Montana	91.7	$2.10	-16.0%
41	Louisiana	91.4	$2.11	2.4%
42	Rhode Island	88.5	$2.20	10.6%
43	Oklahoma	87.5	$2.23	-19.5%
43	Illinois	87.5	$2.23	-21.2%
45	Delaware	84.6	$2.32	31.1%
46	Connecticut	70.9	$2.74	-8.4%
46	Alaska	70.9	$2.74	-9.0%
48	New York	68.0	$2.83	0.4%
49	New Jersey	65.1	$2.92	6.6%
50	California	54.7	$3.24	11.0%

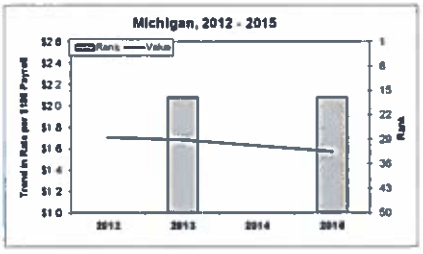
Average workers' compensation rate paid per $100 of payroll, 2015

Workers' compensation and unemployment insurance costs are largely reflected in unit labor costs. When firms evaluate state and local taxes, they frequently lump in compensation and unemployment insurance costs. However, businesses do take these factors into account separately when making relocation and expansion decisions and are therefore shown separately in this report. The table shows a state's average workers' compensation rate paid per $100 of payroll, published every two years.

Source: Oregon Department of Consumer & Business Services

Midwest Performance, 2015

State	Rate per $100 of Payroll	Rank
Indiana	$1.05	2
Ohio	$1.45	11
Michigan	**$1.57**	**17**
Wisconsin	$2.06	39
Illinois	$2.23	43



WORKERS' COMPENSATION PREMIUMS

Rank	State	Score	Benefits per $100 of Covered Wages	Change, 2012-2015 (%)
	50-State Average		*$0.86*	*-13.1%*
1	Texas	128.7	$0.31	-28%
2	Indiana	121.0	$0.45	-22%
3	Arkansas	119.4	$0.48	-4%
4	Utah	118.8	$0.49	-17%
5	Massachusetts	118.2	$0.50	-2%
6	Virginia	117.7	$0.51	-12%
7	**Michigan**	**116.0**	**$0.54**	**-21%**
8	Tennessee	114.9	$0.56	-27%
9	Arizona	112.2	$0.61	-14%
10	Nevada	111.6	$0.62	-18%
10	Kansas	111.6	$0.62	-24%
12	Colorado	110.5	$0.64	-20%
13	South Dakota	108.8	$0.67	6%
14	North Carolina	108.3	$0.68	-31%
14	New Hampshire	108.3	$0.68	-13%
16	Rhode Island	107.2	$0.70	-18%
16	Georgia	107.2	$0.70	-26%
18	Minnesota	106.6	$0.71	-13%
19	Maryland	106.1	$0.72	-9%
20	Oregon	104.4	$0.75	-20%
20	Illinois	104.4	$0.75	-27%
22	Nebraska	102.8	$0.78	-10%
22	Missouri	102.8	$0.78	-8%
24	Ohio	101.7	$0.80	-20%
25	Alabama	100.6	$0.82	-12%
26	North Dakota	99.4	$0.84	1%
26	Connecticut	99.4	$0.84	-9%
28	Mississippi	97.8	$0.87	-8%
28	Louisiana	97.8	$0.87	-19%
30	Kentucky	96.7	$0.89	-11%
30	Florida	96.7	$0.89	-15%
32	Iowa	93.9	$0.94	-18%
33	Wisconsin	92.8	$0.96	-7%
33	New Jersey	92.8	$0.96	-7%
35	New York	92.3	$0.97	-5%
36	New Mexico	91.7	$0.98	-8%
36	Maine	91.7	$0.98	-15%
38	Delaware	91.2	$0.99	-6%
39	Pennsylvania	88.9	$1.03	-8%
40	Idaho	87.8	$1.05	-5%
41	Hawaii	85.6	$1.09	4%
42	Oklahoma	82.3	$1.15	-29%
43	South Carolina	81.8	$1.16	-15%
44	Vermont	81.2	$1.17	-1%
45	California	78.4	$1.22	-12%
46	Alaska	71.8	$1.34	-17%
47	Washington	68.5	$1.40	-14%
48	Wyoming	67.9	$1.41	4%
49	Montana	63.5	$1.49	-10%
50	West Virginia	60.2	$1.55	-15%

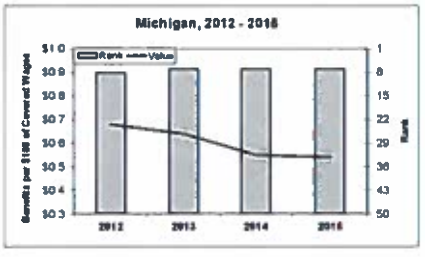
Average workers' compensation benefits paid per $100 of covered wages, 2015

A state's worker's compensation benefits structure drives the premium schedule for business, alongside other policy considerations. While this measure is a cost to the state, it directly affects employer costs if the program is to maintain solvency. There is definite correlation between this metric and the Workers' Compensation Premiums metric. The table shows a state's average workers' benefits rate paid per $100 of covered wages.

Source: National Academy of Social Insurance

Midwest Performance, 2015

State	Benefits per $100 of Covered Wages	Rank
Indiana	$0.45	2
Michigan	**$0.54**	**7**
Illinois	$0.75	20
Ohio	$0.80	24
Wisconsin	$0.96	33



UNEMPLOYMENT INSURANCE COSTS

Rank	State	Score	Rate	Change, 2013-2016 (%)
	50-State Average		*2.08%*	*-29.5%*
1	Utah	119.7	0.70%	-53.6%
2	South Dakota	118.7	0.76%	-28.3%
3	Mississippi	118.6	0.77%	-50.3%
4	Oklahoma	117.4	0.84%	-62.2%
5	New Hampshire	116.8	0.88%	-64.8%
6	Hawaii	115.1	0.98%	-69.8%
7	Montana	113.3	1.09%	-39.4%
8	Nebraska	112.7	1.13%	-33.1%
8	Kansas	112.7	1.13%	-57.8%
10	Tennessee	112.2	1.16%	-52.7%
11	Idaho	111.3	1.21%	-48.7%
12	Washington	110.9	1.24%	-32.6%
13	Wyoming	109.9	1.30%	-57.5%
14	Minnesota	109.2	1.34%	-46.4%
15	North Dakota	107.6	1.44%	27.4%
16	Florida	107.2	1.46%	-57.9%
17	South Carolina	106.4	1.51%	-40.6%
18	Louisiana	105.8	1.55%	-16.2%
19	Alabama	104.8	1.61%	-43.3%
20	Iowa	104.6	1.62%	-23.2%
21	North Carolina	103.6	1.68%	-27.0%
22	Delaware	103.5	1.69%	-38.1%
23	Missouri	101.0	1.84%	-18.6%
24	Virginia	100.7	1.86%	-35.4%
25	Georgia	100.5	1.87%	-26.7%
26	Alaska	99.5	1.93%	-42.0%
27	Nevada	98.8	1.97%	-11.3%
28	Maine	97.9	2.03%	-34.7%
29	Colorado	97.5	2.05%	-22.6%
30	Arkansas	97.0	2.08%	-36.2%
31	Oregon	94.7	2.22%	-27.9%
32	Indiana	94.6	2.23%	-26.2%
33	Texas	93.8	2.28%	-20.3%
34	Arizona	93.1	2.32%	-1.3%
35	New Jersey	92.8	2.34%	-26.2%
36	New Mexico	91.9	2.39%	46.6%
37	Ohio	91.8	2.40%	-14.0%
38	Maryland	89.8	2.52%	-35.2%
39	Wisconsin	89.3	2.55%	-35.8%
40	Massachusetts	87.0	2.69%	-32.4%
41	West Virginia	85.4	2.79%	-8.2%
42	Kentucky	81.9	3.00%	-12.0%
43	Illinois	80.6	3.08%	-32.0%
44	Rhode Island	75.0	3.42%	-10.5%
45	New York	74.0	3.48%	-23.2%
46	Michigan	72.4	3.58%	-31.2%
47	Connecticut	69.9	3.73%	-10.1%
48	Vermont	69.6	3.75%	-7.6%
49	California	55.1	4.63%	-9.9%
50	Pennsylvania	35.2	5.84%	-11.9%

Average employer contributions as a percentage of taxable wages, 2016

Unemployment insurance costs are another major labor cost factor that is often only evaluated in combination with compensation costs. However, businesses do take these factors into account separately when making relocation and expansion decisions. The above table shows the average unemployment insurance rate paid by the employer in each state paid on taxable wages.

Source: U.S. Department of Labor

UNEMPLOYMENT INSURANCE TAX STRUCTURE

Rank	State	Score	Index	Change, 2013-2016 (%)
	50-State Average		*5.00*	*0.4%*
1	Oklahoma	134.1	6.48	6.9%
2	Florida	126.5	6.14	2.7%
3	Delaware	122.0	5.94	-3.1%
4	Ohio	119.8	5.84	-0.5%
5	Mississippi	117.7	5.75	-0.7%
6	North Carolina	117.3	5.73	-1.0%
7	Missouri	116.2	5.68	0.9%
8	Nebraska	115.7	5.66	-0.2%
9	Louisiana	115.3	5.64	-5.4%
10	Indiana	115.0	5.63	-2.3%
11	Arizona	114.8	5.62	-7.9%
12	Kansas	113.3	5.55	-4.3%
13	Texas	113.0	5.54	0.5%
14	Alabama	110.8	5.44	6.9%
15	California	109.2	5.37	-3.2%
15	North Dakota	109.2	5.37	-1.3%
17	New Mexico	109.0	5.36	-6.3%
18	Washington	107.0	5.27	-1.1%
19	Montana	106.3	5.24	-0.8%
20	Vermont	106.1	5.23	-2.2%
21	Connecticut	105.2	5.19	-0.4%
22	Utah	104.0	5.14	-3.0%
23	Tennessee	102.5	5.07	1.2%
24	Hawaii	101.1	5.01	6.6%
25	New Jersey	100.2	4.97	3.5%
26	Maryland	99.8	4.95	4.4%
27	West Virginia	99.3	4.93	-4.1%
28	Minnesota	98.0	4.87	4.5%
29	Alaska	96.9	4.82	-3.6%
30	Arkansas	96.6	4.81	-2.2%
30	Wyoming	96.6	4.81	4.6%
32	New York	96.4	4.80	-5.5%
32	Oregon	96.4	4.80	-1.8%
34	Iowa	95.7	4.77	2.1%
35	Georgia	94.2	4.70	5.6%
35	Wisconsin	94.2	4.70	-5.2%
37	South Carolina	93.3	4.66	0.4%
38	Illinois	92.1	4.61	3.8%
38	Virginia	92.1	4.61	4.3%
40	South Dakota	91.2	4.57	2.7%
41	New Hampshire	90.8	4.55	12.3%
42	Colorado	89.9	4.51	-0.4%
43	Maine	85.4	4.31	-4.9%
43	Nevada	85.4	4.31	-2.0%
45	Pennsylvania	84.3	4.26	28.3%
46	Idaho	80.0	4.07	3.8%
47	Michigan	77.1	3.94	-7.3%
48	Kentucky	74.6	3.83	-2.8%
49	Massachusetts	70.4	3.64	0.6%
50	Rhode Island	63.2	3.32	-5.7%

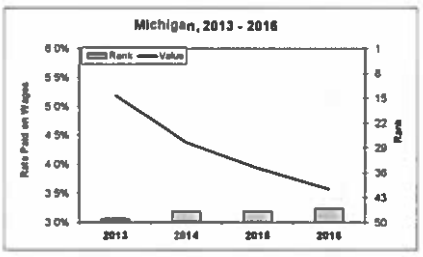
Tax Foundation Unemployment Insurance Tax Index, 2016

The Tax Foundation in its annual State Unemployment Insurance Tax Index scores states higher that have fewer the distortions, a simpler tax structure, a broader base and lower rates, with a maximum score of 10. The Unemployment Insurance Tax Index is made up of two sub-indexes - the unemployment insurance tax rate sub-index and the tax base sub-index. See Appendix for more detail.

Source: Tax Foundation

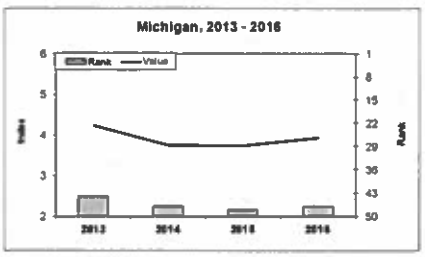
Midwest Performance, 2016

State	Rate	Rank
Indiana	2.23%	32
Ohio	2.40%	37
Wisconsin	2.55%	39
Illinois	3.08%	43
Michigan	**3.58%**	**46**



Midwest Performance, 2016

State	Index	Rank
Ohio	5.84	4
Indiana	5.63	10
Wisconsin	4.70	35
Illinois	4.61	38
Michigan	**3.94**	**47**



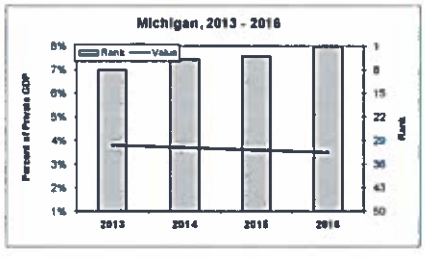
BUSINESS TAX BURDEN

Rank	State	Score	Percent	Change, 2013-2016 (%)
	50-State Average		4.7%	-2.8%
1	Connecticut	123.1	3.5%	2.9%
1	**Michigan**	**123.1**	**3.5%**	**-7.9%**
1	Missouri	123.1	3.5%	0.0%
4	North Carolina	121.0	3.6%	5.9%
5	Indiana	118.9	3.7%	0.0%
5	Oregon	118.9	3.7%	12.1%
5	Utah	118.9	3.7%	0.0%
8	Georgia	116.8	3.8%	2.7%
9	Ohio	112.6	4.0%	-2.4%
9	Virginia	112.6	4.0%	5.3%
11	Louisiana	110.5	4.1%	7.9%
11	Maryland	110.5	4.1%	7.9%
11	Massachusetts	110.5	4.1%	2.5%
14	Alabama	108.4	4.2%	-6.7%
14	California	108.4	4.2%	-6.7%
14	Oklahoma	108.4	4.2%	-10.6%
17	Colorado	106.3	4.3%	-10.4%
17	Idaho	106.3	4.3%	-6.5%
19	Delaware	104.2	4.4%	2.3%
19	Iowa	104.2	4.4%	-6.4%
19	Tennessee	104.2	4.4%	-4.3%
19	Wisconsin	104.2	4.4%	-2.2%
23	Minnesota	102.1	4.5%	-2.2%
23	Wyoming	102.1	4.5%	-32.8%
25	Arkansas	100.0	4.6%	9.5%
25	New Hampshire	100.0	4.6%	4.5%
25	Pennsylvania	100.0	4.6%	0.0%
28	Alaska	97.9	4.7%	-60.8%
28	Florida	97.9	4.7%	-14.5%
28	Kentucky	97.9	4.7%	0.0%
28	South Carolina	97.9	4.7%	-2.1%
28	South Dakota	97.9	4.7%	4.4%
28	Texas	97.9	4.7%	-6.0%
34	Arizona	95.8	4.8%	-5.9%
34	Illinois	95.8	4.8%	-4.0%
34	Nebraska	95.8	4.8%	11.6%
37	Kansas	91.6	5.0%	6.4%
38	Montana	89.5	5.1%	-5.6%
39	Rhode Island	87.4	5.2%	-1.9%
40	Nevada	85.3	5.3%	-1.9%
40	New Jersey	85.3	5.3%	3.9%
42	Washington	81.1	5.5%	10.0%
43	Hawaii	74.8	5.8%	-7.9%
43	New York	74.8	5.8%	0.0%
45	West Virginia	72.7	5.9%	-1.7%
46	Mississippi	64.4	6.3%	-1.6%
47	New Mexico	62.3	6.4%	-3.0%
48	Maine	56.0	6.7%	4.7%
49	North Dakota	49.7	7.0%	-29.3%
50	Vermont	39.2	7.5%	1.4%

State and local business taxes per dollar of private economic activity, 2016
Taxes, typically highly varied across states, are a key component of states' competitive positions, especially for businesses. A business-friendly tax policy helps to attract firms. The measure for business taxes is taken from a study prepared by Ernst & Young for the Council on State Taxation. The above table shows the share of state and local business taxes in proportion to total business revenue for the most current fiscal year as represented by gross domestic product.
Source: Ernst & Young

Midwest Performance, 2016

State	Percent of Private GDP	Rank
Michigan	**3.5%**	**1**
Indiana	3.7%	5
Ohio	4.0%	9
Wisconsin	4.4%	19
Illinois	4.8%	34



STATE BUSINESS TAX STRUCTURE

Rank	State	Score	Index	Change, 2013-2016 (%)
	50-State Average		5.20	-0.9%
1	South Dakota	184.9	10.00	0.0%
1	Wyoming	184.9	10.00	0.0%
3	Utah	116.9	6.05	1.7%
4	North Carolina	115.7	5.98	21.3%
5	Missouri	115.3	5.96	-1.2%
6	New York	112.7	5.81	12.2%
6	Virginia	112.7	5.81	-1.4%
8	**Michigan**	**111.9**	**5.76**	**-0.5%**
8	Oklahoma	111.9	5.76	2.1%
10	Georgia	111.4	5.73	-1.2%
10	Hawaii	111.4	5.73	-1.2%
12	Mississippi	109.3	5.61	-1.6%
13	Montana	109.0	5.59	3.7%
14	Alabama	107.9	5.53	8.4%
14	South Carolina	107.9	5.53	-0.2%
16	North Dakota	107.6	5.51	5.4%
17	West Virginia	107.4	5.50	4.0%
18	Colorado	106.4	5.44	3.6%
19	Arizona	106.2	5.43	4.8%
19	Florida	106.2	5.43	-1.5%
21	Maryland	106.0	5.42	-0.7%
21	Tennessee	106.0	5.42	-0.9%
23	Indiana	103.4	5.27	1.7%
24	Idaho	103.1	5.25	-0.9%
25	New Mexico	100.7	5.11	7.4%
26	Illinois	99.3	5.03	21.2%
27	Alaska	98.6	4.99	-0.6%
28	Kentucky	97.9	4.95	-1.6%
29	Nebraska	97.4	4.92	5.4%
29	Wisconsin	97.4	4.92	2.9%
31	Rhode Island	96.9	4.89	10.6%
32	Connecticut	96.7	4.88	-0.4%
33	California	95.7	4.82	-0.6%
34	Nevada	95.0	4.78	-52.2%
34	Oregon	95.0	4.78	-0.6%
36	Massachusetts	94.1	4.73	-1.0%
37	Vermont	92.8	4.65	4.7%
38	Kansas	92.1	4.61	-0.2%
39	Arkansas	91.9	4.60	0.0%
40	Louisiana	91.7	4.59	-13.2%
41	Maine	90.4	4.51	3.9%
42	New Jersey	90.0	4.49	-0.7%
43	Minnesota	88.3	4.39	0.2%
44	Pennsylvania	84.8	4.19	-2.8%
45	Washington	80.5	3.94	-23.0%
46	Ohio	80.2	3.92	-24.5%
47	New Hampshire	78.6	3.83	-2.3%
48	Iowa	77.3	3.75	0.5%
49	Texas	72.1	3.45	-25.2%
50	Delaware	60.4	2.77	-11.8%

Tax Foundation Corporate Tax Index, 2016
The Tax Foundation in its annual State Business Tax Climate Index evaluates that the fewer the distortions, the simpler the tax structure, the broader the base and the lower the rates, the higher the index score, with a maximum of 10. The Corporate Tax Index is made up of two sub-indexes - the tax rate sub-index and the tax base sub-index. See Appendix for more detail.

Source: Tax Foundation

Midwest Performance, 2016

State	Index	Rank
Michigan	**5.76**	**8**
Indiana	5.27	23
Illinois	5.03	26
Wisconsin	4.92	29
Ohio	3.92	46

METRO INDUSTRIAL RENTS

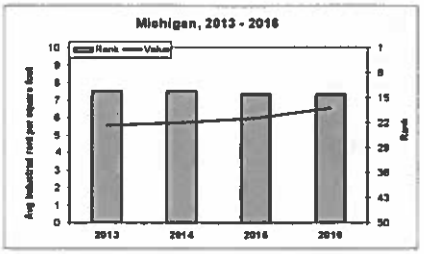
Rank	State	Score	Avg industrial rent per square foot	Change, 2013-2016 (%)
	50-State Average		*$7.2*	*12.0%*
1	Arkansas	106.4	$4.41	3.2%
2	South Carolina	105.9	$4.62	-1.7%
3	Wisconsin	105.0	$4.92	7.0%
4	Indiana	104.9	$4.96	3.3%
5	Kentucky	104.6	$5.07	1.5%
6	Alabama	103.6	$5.44	6.3%
7	North Carolina	103.5	$5.49	7.8%
8	Nebraska	103.4	$5.51	6.5%
9	Ohio	103.2	$5.60	22.6%
10	Massachusetts	102.0	$6.01	-18.4%
11	New Mexico	101.7	$6.12	-10.3%
12	Illinois	101.4	$6.24	23.2%
13	Missouri	100.9	$6.43	27.8%
14	**Michigan**	**100.5**	**$6.56**	**18.2%**
15	Georgia	100.1	$6.72	15.4%
16	Tennessee	99.9	$6.78	4.9%
17	Idaho	99.2	$7.03	30.2%
18	Connecticut	99.2	$7.05	23.2%
19	Pennsylvania	97.9	$7.50	13.3%
20	Colorado	96.9	$7.87	16.0%
21	Nevada	95.9	$8.26	38.4%
22	Oregon	95.8	$8.27	6.5%
23	Maryland	94.1	$8.91	33.7%
24	Arizona	94.0	$8.92	13.4%
25	Texas	93.8	$9.01	21.4%
26	New York	92.8	$9.38	-20.1%
27	California	91.5	$9.83	21.4%
28	Florida	90.2	$10.31	8.1%
29	Washington	88.9	$10.79	32.6%
30	Hawaii	84.5	$12.38	3.3%
(n/a)	Alaska	(n/a)	(n/a)	(n/a)
(n/a)	Delaware	(n/a)	(n/a)	(n/a)
(n/a)	Iowa	(n/a)	(n/a)	(n/a)
(n/a)	Kansas	(n/a)	(n/a)	(n/a)
(n/a)	Louisiana	(n/a)	(n/a)	(n/a)
(n/a)	Maine	(n/a)	(n/a)	(n/a)
(n/a)	Minnesota	(n/a)	(n/a)	(n/a)
(n/a)	Mississippi	(n/a)	(n/a)	(n/a)
(n/a)	Montana	(n/a)	(n/a)	(n/a)
(n/a)	New Hampshire	(n/a)	(n/a)	(n/a)
(n/a)	New Jersey	(n/a)	(n/a)	(n/a)
(n/a)	North Dakota	(n/a)	(n/a)	(n/a)
(n/a)	Oklahoma	(n/a)	(n/a)	(n/a)
(n/a)	Rhode Island	(n/a)	(n/a)	(n/a)
(n/a)	South Dakota	(n/a)	(n/a)	(n/a)
(n/a)	Utah	(n/a)	(n/a)	(n/a)
(n/a)	Vermont	(n/a)	(n/a)	(n/a)
(n/a)	Virginia	(n/a)	(n/a)	(n/a)
(n/a)	West Virginia	(n/a)	(n/a)	(n/a)
(n/a)	Wyoming	(n/a)	(n/a)	(n/a)

Metro Industrial Rents average, 2016

Industrial occupancy costs rank high as a site-location factor, after availability of transportation and utilities, availability of labor, and site characteristics. The best available method of comparison is to use regularly reported rents for major metro areas in each state. The above table lists the average industrial rent per square foot for the main metropolitan area in each state.

Midwest Performance, 2016

State	Avg industrial rent per square foot	Rank
Wisconsin	$4.92	3
Indiana	$4.96	4
Ohio	$5.60	9
Illinois	$6.24	12
Michigan	**$6.56**	**14**



SMALL BUSINESS HEALTH CARE PREMIUMS

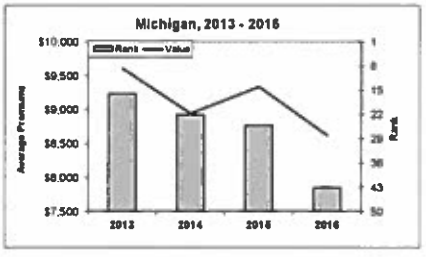
Rank	State	Score	Dollars	Change, 2013-2016 (%)
	50-State Average		*$6,448*	*-36.6%*
1	Tennessee	134.7	$4,344	-52.7%
2	Idaho	125.2	$4,782	-38.2%
3	Mississippi	123.7	$4,852	-47.0%
4	Arkansas	121.7	$4,944	-40.2%
5	Missouri	120.6	$4,998	-51.2%
6	Utah	115.7	$5,220	-48.9%
7	Maine	114.3	$5,286	-43.6%
8	Kentucky	110.8	$5,446	-40.4%
9	Iowa	110.1	$5,479	-39.9%
10	Arizona	110.0	$5,485	-38.1%
11	South Dakota	109.3	$5,516	-45.6%
12	Indiana	108.1	$5,574	-49.6%
13	South Carolina	107.3	$5,610	-44.5%
14	Oklahoma	105.8	$5,679	-41.5%
15	Louisiana	103.2	$5,802	-40.3%
16	Minnesota	102.9	$5,811	-38.0%
17	Georgia	102.9	$5,815	-38.3%
18	New Mexico	102.5	$5,831	-39.7%
19	Oregon	101.8	$5,865	-39.7%
20	Florida	101.3	$5,888	-41.7%
21	Nebraska	100.5	$5,924	-39.2%
22	Washington	100.5	$5,927	-43.2%
23	Hawaii	100.2	$5,937	-38.9%
24	Virginia	100.1	$5,942	-39.9%
25	Wisconsin	100.0	$5,946	-41.8%
26	North Carolina	100.0	$5,949	-37.7%
27	Nevada	99.0	$5,992	-37.3%
28	Illinois	98.1	$6,037	-47.8%
29	Kansas	97.2	$6,076	-36.4%
30	Alabama	96.8	$6,095	-36.6%
31	Colorado	96.5	$6,111	-35.5%
32	Texas	95.0	$6,177	-37.0%
33	Wyoming	94.2	$6,213	-45.0%
34	Ohio	90.4	$6,391	-38.3%
35	Montana	90.1	$6,407	-39.2%
36	North Dakota	86.9	$6,552	-30.7%
37	West Virginia	86.7	$6,560	-32.7%
38	Rhode Island	85.3	$6,629	-41.6%
39	Pennsylvania	84.5	$6,662	-33.5%
40	Connecticut	78.3	$6,949	-41.2%
41	Delaware	75.5	$7,082	-37.7%
42	Maryland	42.3	$8,613	-16.2%
43	**Michigan**	**42.2**	**$8,619**	**-10.2%**
44	Vermont	40.2	$8,711	-16.5%
45	New Hampshire	32.2	$9,079	-22.2%
46	New Jersey	31.0	$9,136	-21.4%
47	Massachusetts	29.2	$9,220	-22.5%
48	Alaska	27.3	$9,309	-38.8%
49	New York	22.4	$9,535	-16.0%
50	California	3.4	$10,413	2.8%

Average of mean single and family premiums for firms with 99 or fewer employees, 2016

As health care costs continue to escalate, the cost of employer-provided health insurance is increasingly becoming a concern for employers. The variation of these costs from state-to-state often receives scant attention. But health care insurance costs can be a significant determinant of firms' willingness to locate to or remain in a given state. The above table is an average of total single and family coverage health insurance premiums across all plan types for companies with 99 or fewer employees.
Source: U.S. Department of Health and Human Services

Midwest Performance, 2016

State	Average Premium	Rank
Indiana	$5,574	12
Wisconsin	$5,946	25
Illinois	$6,037	28
Ohio	$6,391	34
Michigan	**$8,619**	**43**



PRODUCTIVITY AND LABOR SUPPLY

One of the fundamental drivers of economic health is quantity and quality of labor available in a state. The Workforce Preparedness Driver measures quality of labor. This Driver measures the inflow and availability of labor in a state and the efficiency with which workers produce goods and services. High productivity, coupled with a good supply of skilled labor, is necessary to maintain a rising standard of living and to keepthe cost of doing business competitive.

Productivity measures for state comparison are particularly difficult to come by. Four metrics are used, two for overall productivity, another for manufacturing and a fourth for the services sector. They are supplemented with two general measures of labor supply.

Midwest Performance

	2016	2014	2012
Illinois	****	****	***
Indiana	***	***	**
Wisconsin	***	***	**
Ohio	**	***	**
Michigan	**	**	*

Rank	State	2016	2014	2012
1	Washington	*****	*****	*****
2	Delaware	*****	*****	*****
3	California	*****	*****	****
4	Texas	*****	*****	*****
5	Maryland	****	*****	****
6	Colorado	****	*****	****
7	New York	****	*****	****
8	Massachusetts	****	****	****
9	Connecticut	****	****	****
10	Louisiana	****	****	*****
11	Utah	****	****	***
12	Alaska	****	****	****
13	Virginia	****	****	****
14	Nevada	****	****	****
15	New Jersey	****	****	****
16	Wyoming	****	****	*****
17	Oregon	****	***	****
18	Illinois	****	****	***
19	Minnesota	***	****	***
20	North Dakota	***	*****	*****
21	North Carolina	***	***	***
22	Arizona	***	***	***
23	Nebraska	***	****	***
24	Georgia	***	***	***
25	Hawaii	***	**	**
26	New Hampshire	***	***	**
27	Iowa	***	***	**
28	Pennsylvania	***	***	**
29	Florida	***	***	**
30	Tennessee	***	***	**
31	South Dakota	***	***	**
32	Indiana	***	***	**
33	Wisconsin	***	***	**
34	Rhode Island	**	***	**
35	Missouri	**	***	**
36	Ohio	**	***	**
37	Kansas	**	**	**
38	South Carolina	**	**	**
39	New Mexico	**	**	****
40	Idaho	**	**	*
41	Oklahoma	**	***	**
42	**Michigan**	**	**	*
43	Montana	**	**	*
44	Kentucky	*	**	**
45	Alabama	*	**	*
46	Maine	*	*	*
47	West Virginia	*	**	*
48	Vermont	*	*	*
49	Arkansas	*	*	*
50	Mississippi	*	*	*

NET DOMESTIC MIGRATION RATE

Rank	State	Score	Migration per 1,000 residents	Change, 2013-2016 (Abs)
	50-State Average		*-0.3*	*-0.6*
1	Oregon	135.6	12.6	10.3
2	Nevada	134.4	1.0	7.1
3	Idaho	131.8	11.2	8.8
4	Florida	130.4	10.6	5.5
5	South Carolina	129.9	10.4	4.1
6	Washington	127.1	9.3	7.2
7	Arizona	126.3	9.0	5.3
8	Colorado	126.2	8.9	2.1
9	Montana	120.7	6.8	1.5
10	Utah	120.4	6.7	4.7
11	North Carolina	118.9	6.1	2.0
12	Tennessee	115.8	4.9	2.5
13	Texas	114.9	4.5	0.3
14	Delaware	112.6	3.6	0.0
15	Georgia	112.5	3.6	4.1
16	Maine	107.9	1.8	2.4
17	South Dakota	107.1	1.5	-3.1
18	New Hampshire	106.7	1.3	2.6
19	Arkansas	104.3	0.4	1.1
20	Alabama	102.3	-0.4	-1.0
21	Minnesota	102.2	-0.4	-0.2
22	Kentucky	101.3	-0.8	-0.3
23	Missouri	101.0	-0.9	0.1
24	Nebraska	100.9	-1.0	-0.5
25	Oklahoma	100.7	-1.0	-4.6
26	Indiana	99.3	-1.6	-1.6
27	Iowa	99.0	-1.7	-1.8
28	Wisconsin	98.3	-2.0	-0.7
29	Ohio	97.2	-2.4	-0.7
30	**Michigan**	**96.4**	**-2.7**	**0.1**
31	Louisiana	96.3	-2.8	-2.5
32	Virginia	95.8	-3.0	-3.3
33	Mississippi	95.4	-3.1	-1.5
34	California	95.4	-3.1	-1.7
35	New Mexico	94.7	-3.4	1.6
36	Vermont	94.1	-3.6	-2.6
37	Pennsylvania	93.3	-3.9	-1.6
38	Rhode Island	92.9	-4.1	0.8
39	Massachusetts	92.0	-4.4	-4.0
40	West Virginia	90.8	-4.9	-3.8
41	Maryland	90.8	-4.9	-3.1
42	Kansas	87.5	-6.2	-2.1
43	Alaska	85.7	-6.9	-2.1
44	New Jersey	83.9	-7.6	-2.3
45	Wyoming	83.5	-7.8	-11.9
46	Hawaii	82.9	-8.0	-7.5
47	Connecticut	82.6	-8.1	-3.4
48	North Dakota	82.0	-8.3	-30.6
49	Illinois	81.5	-8.6	-3.3
50	New York	78.5	-9.7	-4.0

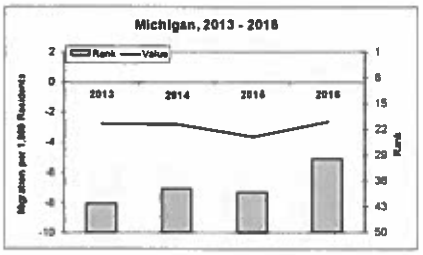
Net domestic migration per 1,000 residents, 2016

The net domestic migration rate measures the difference between in-migration to an area and out-migration from the same area during a time period. It is an overall indicator of the attractiveness of the state as individuals vote with their feet on what they consider a preferable living and working environment. The table above shows the net domestic migration during a time period as a percentage of an area's population at the midpoint of the time period.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	Migration per 1,000 Residents	Rank
Indiana	-1.6	26
Wisconsin	-2.0	28
Ohio	-2.4	29
Michigan	**-2.7**	**30**
Illinois	-8.6	49



PRIME WORKING AGE RESIDENTS

Rank	State	Score	Share in Population	Change, 2013-2016 (%)
	50-State Average		*25.7%*	*-0.3%*
1	Alaska	134.1	28.8%	3.8%
2	Colorado	131.4	28.6%	0.6%
3	California	127.6	28.2%	0.4%
4	Utah	126.8	28.1%	0.1%
5	Texas	125.8	28.0%	0.1%
6	Nevada	122.6	27.7%	-1.0%
7	Washington	122.5	27.7%	1.5%
8	New York	116.1	27.1%	-0.1%
9	Georgia	115.9	27.1%	-2.3%
10	Oregon	115.7	27.0%	1.6%
11	Hawaii	115.0	27.0%	0.6%
12	Louisiana	113.2	26.8%	1.5%
13	Illinois	112.4	26.7%	-1.0%
14	Virginia	112.4	26.7%	-2.2%
15	North Dakota	112.2	26.7%	6.8%
16	Maryland	110.8	26.6%	-0.9%
17	Wyoming	106.7	26.2%	0.6%
18	Massachusetts	106.1	26.1%	-0.4%
19	Tennessee	104.3	25.9%	-0.7%
20	North Carolina	103.9	25.9%	-2.0%
21	Oklahoma	103.6	25.9%	0.2%
22	Minnesota	103.3	25.8%	-1.1%
23	New Jersey	103.2	25.8%	-1.9%
24	Arizona	101.7	25.7%	-0.9%
25	Nebraska	101.3	25.6%	0.5%
26	South Carolina	98.7	25.4%	-0.1%
27	Idaho	98.3	25.3%	-0.3%
28	New Mexico	97.9	25.3%	1.2%
29	Kentucky	97.6	25.3%	-2.1%
30	Alabama	97.5	25.2%	-0.6%
31	Missouri	97.2	25.2%	-0.7%
32	Mississippi	97.0	25.2%	-0.8%
33	Indiana	96.9	25.2%	-1.2%
34	Rhode Island	96.6	25.2%	1.5%
35	Kansas	96.2	25.1%	-1.1%
36	Delaware	95.6	25.1%	0.6%
37	Arkansas	95.1	25.0%	-1.5%
38	Florida	93.7	24.9%	-0.1%
39	Ohio	93.0	24.8%	0.0%
40	Pennsylvania	91.7	24.7%	0.3%
41	Wisconsin	89.8	24.5%	-2.0%
42	Iowa	88.8	24.4%	0.0%
43	South Dakota	87.7	24.3%	-0.9%
44	**Michigan**	**87.2**	**24.2%**	**-0.2%**
45	Connecticut	85.5	24.1%	-2.9%
46	West Virginia	84.3	24.0%	-1.8%
47	Montana	81.7	23.7%	-0.4%
48	New Hampshire	79.2	23.5%	-1.9%
49	Maine	76.8	23.2%	-0.4%
50	Vermont	72.5	22.8%	-1.7%

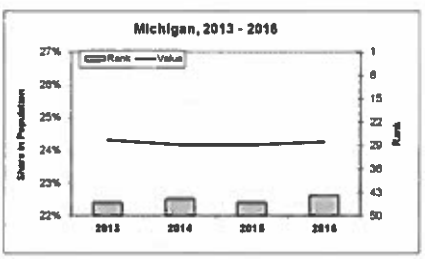
Proportion of the population ages 25 to 44, 2016

The age structure of the population of a state reflects its attractiveness to young skilled workers as Richard Florida proposes in his book, "The Rise of the Creative Class." The table shows the percentage of the population age 25 to 44.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	Share in Population	Rank
Illinois	26.7%	13
Indiana	25.2%	33
Ohio	24.8%	39
Wisconsin	24.5%	41
Michigan	**24.2%**	**44**



GROSS DOMESTIC PRODUCT PER JOB

Rank	State	Score	Dollars per Job	Change, 2013-2016 (%)
	50-State Average		*$89,802*	*4.5%*
1	Delaware	143.9	$123,917	10.8%
2	New York	141.5	$122,036	6.3%
3	Connecticut	130.2	$112,895	5.4%
4	California	130.0	$112,731	8.1%
5	Washington	127.3	$110,587	9.2%
6	Alaska	127.1	$110,424	-14.8%
7	Massachusetts	123.0	$107,151	5.8%
8	New Jersey	122.4	$106,620	3.0%
9	Maryland	119.6	$104,410	7.7%
10	Illinois	116.3	$101,738	5.7%
11	Wyoming	110.0	$96,656	-5.6%
12	Texas	109.3	$96,087	-2.6%
13	Virginia	109.1	$95,968	4.6%
14	Pennsylvania	107.6	$94,733	5.3%
15	Oregon	105.8	$93,248	6.7%
16	Hawaii	105.0	$92,597	7.7%
17	North Dakota	104.2	$91,989	-1.7%
18	Minnesota	103.2	$91,169	6.6%
19	Rhode Island	102.7	$90,788	4.7%
20	Ohio	101.8	$90,064	6.5%
21	Indiana	101.7	$90,002	6.5%
22	North Carolina	101.2	$89,585	7.5%
23	Nebraska	100.8	$89,264	6.0%
24	Iowa	100.7	$89,192	10.7%
25	Georgia	100.3	$88,846	7.9%
26	Colorado	99.7	$88,374	3.5%
27	Louisiana	99.6	$88,318	-1.1%
28	New Hampshire	99.4	$88,127	7.4%
29	**Michigan**	**98.4**	**$87,360**	**8.1%**
30	Nevada	95.9	$85,340	3.9%
31	Wisconsin	95.7	$85,153	7.7%
32	New Mexico	95.7	$85,143	0.4%
33	Tennessee	94.5	$84,220	7.9%
34	Arizona	94.2	$83,980	4.7%
35	Utah	91.5	$81,788	7.6%
36	West Virginia	91.3	$81,600	3.4%
37	South Dakota	90.1	$80,646	5.0%
38	Missouri	90.0	$80,548	3.9%
39	Oklahoma	88.7	$79,552	-3.3%
40	Florida	88.2	$79,093	5.2%
41	Kentucky	87.6	$78,627	4.4%
42	Kansas	87.4	$78,471	2.3%
43	Alabama	87.2	$78,319	4.0%
44	South Carolina	86.7	$77,889	7.4%
45	Arkansas	82.3	$74,349	2.1%
46	Maine	78.9	$71,649	8.2%
47	Vermont	78.6	$71,389	6.1%
48	Idaho	76.8	$69,957	3.6%
49	Montana	75.7	$69,054	2.6%
50	Mississippi	75.0	$68,476	2.2%

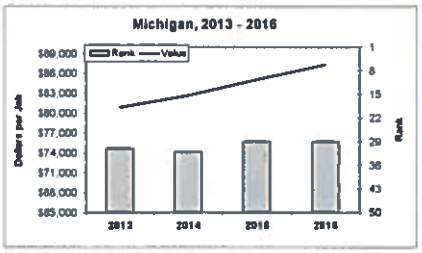
Gross domestic product per job, 2016

Measuring productivity in exact fashion is, unfortunately, a very difficult task at the state level. No single measure is available for the total output per hour worked in all industries at the state level. However, one crude but telling way to estimate productivity is to divide a state's total economic output by its total number of jobs. The above table shows the nominal gross domestic product–the total value of goods and services produced in a state–per job held.

Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2016

State	Dollars per Job	Rank
Illinois	$101,738	10
Ohio	$90,064	20
Indiana	$90,002	21
Michigan	**$87,360**	**29**
Wisconsin	$85,153	31



SERVICE SECTOR PRODUCTIVITY

Rank	State	Score	Dollars per job	Change, 2013-2016 (%)
	50-State Average		*$84,809*	*6.9%*
1	Delaware	161.3	$130,297	11.5%
2	New York	153.8	$124,413	6.4%
3	Connecticut	137.6	$111,525	5.1%
4	Washington	133.8	$108,537	10.5%
5	California	131.7	$106,924	8.9%
6	New Jersey	128.0	$103,934	2.2%
7	Massachusetts	126.2	$102,541	5.6%
8	Alaska	121.3	$98,628	4.6%
9	Illinois	120.9	$98,347	7.3%
10	Maryland	118.7	$96,576	7.2%
11	Hawaii	112.5	$91,693	6.4%
12	Virginia	111.5	$90,916	4.4%
13	Pennsylvania	110.0	$89,724	4.9%
14	New Hampshire	108.9	$88,810	8.5%
15	Rhode Island	107.5	$87,696	4.6%
16	Nebraska	107.1	$87,392	13.6%
17	Minnesota	106.6	$86,986	7.6%
18	Georgia	106.3	$86,780	7.3%
19	North Dakota	106.2	$86,672	8.4%
20	Colorado	105.0	$85,749	4.7%
21	Texas	103.1	$84,212	7.0%
22	Ohio	101.9	$83,270	5.5%
23	Iowa	101.3	$82,834	15.1%
24	South Dakota	100.8	$82,438	9.4%
25	Wisconsin	100.3	$82,005	10.2%
26	Nevada	99.7	$81,587	5.7%
27	Wyoming	99.1	$81,081	2.8%
28	North Carolina	97.5	$79,837	8.7%
29	Oregon	97.4	$79,769	10.1%
30	Arizona	97.4	$79,731	5.4%
31	**Michigan**	**97.0**	**$79,391**	**9.6%**
32	Tennessee	96.7	$79,162	8.2%
33	Missouri	95.2	$77,981	3.1%
34	Utah	94.2	$77,176	11.3%
35	Florida	93.5	$76,667	4.1%
36	Kansas	93.2	$76,422	4.1%
37	Indiana	92.3	$75,737	9.3%
38	New Mexico	92.0	$75,461	7.1%
39	Oklahoma	90.0	$73,921	4.3%
40	Louisiana	89.3	$73,315	4.0%
41	Arkansas	89.0	$73,051	5.2%
42	Vermont	88.6	$72,734	6.3%
43	Maine	88.0	$72,263	8.4%
44	Kentucky	86.6	$71,217	6.8%
45	West Virginia	85.2	$70,088	4.9%
46	Alabama	85.1	$70,033	5.4%
47	South Carolina	85.0	$69,949	5.9%
48	Idaho	79.8	$65,787	6.2%
49	Montana	79.3	$65,384	6.2%
50	Mississippi	77.3	$63,800	3.8%

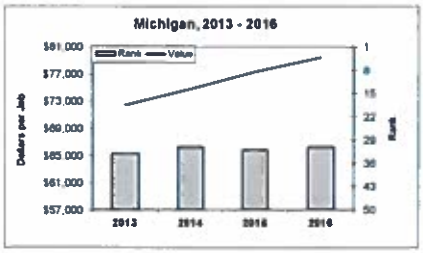
Private service-providing industries GDP per job, 2016

No comparable value-added productivity measure similar to the Annual Survey of Manufacturers is collected for service-providing industries. The best measure of service productivity that is annually available is the gross domestic product of service-producing industries per service job. The above table gives the gross domestic product of all private service-producing industries divided by service-producing jobs. See Appendix for more detail.

Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2016

State	Dollars per Job	Rank
Illinois	$98,347	9
Ohio	$83,270	22
Wisconsin	$82,005	25
Michigan	**$79,391**	**31**
Indiana	$75,737	37



MANUFACTURING VALUE ADDED PER HOUR

Rank	State	Score	Dollars per Hour	Change, 2013-2016 (%)
	50-State Average		*$150.6*	*2.4%*
1	Louisiana	180.6	$283.5	-3.9%
2	Texas	139.5	$213.2	-2.4%
3	Maryland	131.9	$200.3	9.8%
4	Wyoming	129.2	$195.7	5.1%
5	Connecticut	122.2	$183.8	6.5%
6	Washington	122.2	$183.8	-3.7%
7	Virginia	120.2	$180.4	0.7%
8	California	119.9	$179.8	6.2%
9	North Carolina	118.8	$177.9	0.0%
10	Arizona	117.6	$175.8	-4.5%
11	Massachusetts	117.2	$175.2	4.4%
12	West Virginia	115.9	$172.9	12.8%
13	New Mexico	111.9	$166.1	-59.3%
14	Colorado	110.0	$162.9	1.5%
15	Delaware	109.7	$162.4	-0.4%
16	New Jersey	108.4	$160.2	7.3%
17	Florida	107.3	$158.3	10.4%
18	Utah	105.0	$154.4	1.7%
19	Kansas	104.6	$153.7	22.5%
20	Nevada	104.1	$152.8	-8.5%
21	New York	103.6	$151.9	15.1%
22	Hawaii	103.3	$151.4	78.1%
23	Illinois	101.9	$149.0	3.2%
24	Iowa	100.2	$146.2	-4.2%
25	North Dakota	100.1	$146.0	-11.8%
26	New Hampshire	99.9	$145.6	10.6%
27	Montana	99.3	$144.5	-12.9%
28	Pennsylvania	99.0	$144.1	5.5%
29	Minnesota	98.9	$143.9	0.0%
30	Tennessee	98.5	$143.2	-0.8%
31	Missouri	96.0	$139.0	3.9%
32	Indiana	95.9	$138.8	-2.4%
33	Ohio	94.9	$137.1	2.5%
34	South Carolina	93.6	$134.9	9.4%
35	Nebraska	92.8	$133.4	-3.9%
36	Georgia	91.9	$131.9	3.1%
37	Oklahoma	90.6	$129.8	5.1%
38	Oregon	89.9	$128.6	-28.4%
39	**Michigan**	**89.2**	**$127.3**	**(n/a)**
40	Alabama	88.5	$126.1	-3.6%
41	Wisconsin	88.3	$125.8	-5.6%
42	South Dakota	87.8	$124.9	22.1%
43	Kentucky	86.1	$122.1	-6.4%
44	Rhode Island	83.8	$118.1	-3.2%
45	Vermont	80.7	$112.9	12.5%
46	Maine	80.5	$112.5	-0.2%
47	Idaho	79.5	$110.8	-1.5%
48	Alaska	77.3	$107.1	26.1%
49	Arkansas	76.2	$105.2	3.3%
50	Mississippi	75.5	$104.0	-3.4%

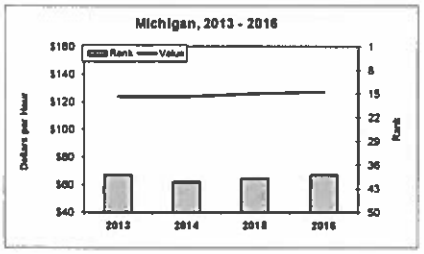
Value added per manufacturing production hour, 2016

Manufacturing productivity plays a central role in Michigan and its Midwestern competitors. The measure of value added, which is the difference between the value of inputs and the resultant outputs, per hour worked is less sensitive to business cycles and varying labor-market structures than output per worker. Value added also reflects the capacity of a manufacturing base for high wages. The figures shown here are value added per production hour worked in manufacturing industries.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	Dollars per Hour	Rank
Illinois	$149.0	23
Indiana	$138.8	32
Ohio	$137.1	33
Michigan	**$127.3**	**39**
Wisconsin	$125.8	41



LABOR FORCE PARTICIPATION RATE

Rank	State	Score	Participation Rate	Change, 2013-2016 (%)
	50-State Average		*63.5%*	*-0.6%*
1	North Dakota	129.1	71.5%	-1.7%
2	Iowa	122.0	69.6%	0.0%
3	Nebraska	121.6	69.5%	-3.2%
3	Minnesota	121.6	69.5%	-1.0%
5	South Dakota	119.8	69.0%	-0.6%
6	Utah	118.6	68.7%	0.7%
6	New Hampshire	118.6	68.7%	-0.7%
8	Wisconsin	117.1	68.3%	-0.1%
9	Maryland	112.7	67.1%	-0.1%
9	Kansas	112.7	67.1%	-1.3%
11	Wyoming	112.3	67.0%	-1.9%
12	Vermont	111.9	66.9%	-2.2%
12	Colorado	111.9	66.9%	-2.0%
14	Alaska	108.9	66.1%	-2.5%
15	Connecticut	108.2	65.9%	0.8%
16	Missouri	106.3	65.4%	1.7%
17	Illinois	105.6	65.2%	-0.3%
18	Massachusetts	104.5	64.9%	-0.2%
19	Virginia	104.1	64.8%	-2.4%
20	Indiana	103.7	64.7%	2.7%
21	Rhode Island	102.6	64.4%	-1.8%
22	Idaho	101.1	64.0%	0.5%
23	Montana	100.7	63.9%	-0.5%
24	New Jersey	100.4	63.8%	-1.2%
25	Washington	100.0	63.7%	0.3%
25	Texas	100.0	63.7%	-2.7%
27	Pennsylvania	98.5	63.3%	0.0%
28	Maine	97.8	63.1%	-3.1%
29	Hawaii	96.3	62.7%	3.5%
30	Oregon	95.9	62.6%	2.6%
31	Ohio	95.5	62.5%	-1.1%
31	Delaware	95.5	62.5%	2.8%
33	Georgia	95.2	62.4%	-0.6%
34	California	94.8	62.3%	-0.6%
35	Nevada	94.0	62.1%	-2.7%
36	North Carolina	92.9	61.8%	0.3%
37	**Michigan**	**91.1**	**61.3%**	**1.3%**
38	Oklahoma	90.7	61.2%	-0.8%
39	New York	88.4	60.6%	-1.3%
40	Arizona	87.3	60.3%	0.8%
41	Tennessee	86.6	60.1%	-1.2%
42	Florida	83.2	59.2%	-1.8%
43	South Carolina	82.9	59.1%	0.5%
43	Louisiana	82.9	59.1%	-1.0%
45	Arkansas	79.1	58.1%	1.0%
46	New Mexico	77.3	57.6%	-0.3%
46	Kentucky	77.3	57.6%	-4.6%
48	Alabama	74.3	56.8%	-1.4%
49	Mississippi	71.3	56.0%	-0.4%
50	West Virginia	60.9	53.2%	-1.1%

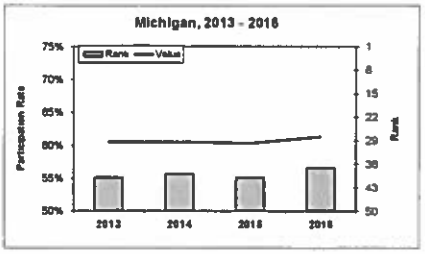
Percent of non-institutionalized population in the labor force, 2016

The labor force participation rate is an indicator of the available workforce and the labor pool that is looking for work. A declining participation rate implies less potential income earners and therefore less spending in the state, slowing down economic growth. The table shows the share of the non-institutionalized civilian population that is working or unemployed.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Participation Rate	Rank
Wisconsin	68.3%	8
Illinois	65.2%	17
Indiana	64.7%	20
Ohio	62.5%	31
Michigan	**61.3%**	**37**



LEGAL ENVIRONMENT

A state must find the right mix of size, taxing power, program, and expenditure to provide high return on investment in the form of public assets and services, while at the same time interfering minimally in the day-to-day dealings of the marketplace.

Next to tax policy, legal and regulatory policy is probably the most important aspect of business climate. The metrics chosen to reflect the legal environment measure the consequences (e.g. liability costs) of a state's legal environment. This driver does not seek to score policies or practices per se. However, it does take advantage of liability ratings (from U.S. Chamber of Commerce/Harris) that do include judgments on regulatory policies and practices.

Midwest Performance

	2016	2014	2012
Indiana	*****	*****	*****
Wisconsin	*****	*****	****
Ohio	****	****	****
Michigan	****	****	***
Illinois	*	*	*

Rank	State	2016	2014	2012
1	South Dakota	*****	*****	*****
2	Nebraska	*****	*****	*****
3	Indiana	*****	*****	*****
4	Idaho	*****	*****	*****
5	Minnesota	*****	*****	*****
6	Oregon	*****	*****	*****
7	Maine	*****	*****	*****
8	Iowa	*****	*****	*****
9	New Hampshire	*****	*****	****
10	Kansas	*****	*****	*****
11	Alaska	*****	*****	*****
12	Utah	*****	*****	****
13	North Dakota	*****	*****	*****
14	North Carolina	*****	*****	*****
15	Wisconsin	*****	*****	****
16	Wyoming	*****	****	****
17	Virginia	*****	****	*****
18	Arkansas	*****	****	****
19	Washington	*****	****	****
20	South Carolina	****	****	****
21	New Mexico	****	****	****
22	Tennessee	****	****	***
23	Vermont	****	****	****
24	Ohio	****	****	****
25	Arizona	****	****	****
26	**Michigan**	****	****	***
27	Hawaii	****	***	***
28	Nevada	****	****	***
29	Kentucky	****	****	****
30	Oklahoma	****	****	***
31	Texas	****	****	***
32	Mississippi	****	****	***
33	Colorado	****	****	****
34	Massachusetts	****	***	***
35	Georgia	****	****	****
36	Alabama	****	****	***
37	California	****	***	***
38	Maryland	****	***	***
39	Montana	***	***	**
40	West Virginia	***	**	**
41	Missouri	***	***	***
42	Pennsylvania	***	***	**
43	Delaware	***	****	***
44	Louisiana	***	***	***
45	Rhode Island	***	***	**
46	Connecticut	***	**	**
47	New Jersey	**	**	**
48	New York	**	*	**
49	Illinois	*	*	*
50	Florida	*	*	*

MALPRACTICE COSTS

Rank	State	Score	Index	Change, 2013-2016 (%)
	50-State Average			*7.4%*
1	Nebraska	124.0	-1.62	1.9%
2	Minnesota	121.1	-1.44	1.0%
3	Wisconsin	117.8	-1.24	0.6%
4	South Dakota	116.6	-1.17	-17.4%
5	North Dakota	116.4	-1.15	-0.2%
6	Iowa	114.0	-1.01	19.3%
7	Indiana	113.6	-0.98	-3.9%
8	Idaho	112.8	-0.94	-10.3%
9	Hawaii	112.3	-0.90	152.6%
10	Kansas	111.4	-0.85	-21.9%
11	Mississippi	111.0	-0.82	2.6%
12	Arkansas	110.7	-0.80	-2.6%
13	Alabama	109.3	-0.72	-3.3%
14	Louisiana	108.4	-0.66	-8.4%
15	Alaska	108.1	-0.64	2.6%
16	Tennessee	107.7	-0.62	2.2%
17	California	106.7	-0.56	-10.7%
18	Maine	105.8	-0.50	-10.3%
19	Oregon	105.0	-0.45	-24.2%
20	Vermont	104.8	-0.44	-22.1%
21	South Carolina	104.3	-0.41	-13.4%
22	Colorado	102.4	-0.29	208.5%
23	North Carolina	102.1	-0.28	-2.6%
24	New Mexico	101.6	-0.24	-31.7%
25	Missouri	100.6	-0.19	-185.2%
26	Oklahoma	99.4	-0.11	36.3%
27	Washington	98.8	-0.07	-29.0%
28	Utah	98.1	-0.03	-151.3%
29	Kentucky	97.9	-0.02	-63.2%
30	Texas	97.9	-0.01	-106.1%
31	Nevada	96.5	0.07	-96.1%
32	Virginia	95.6	0.12	309.8%
33	Arizona	92.9	0.29	-39.2%
34	Wyoming	92.7	0.30	-49.6%
35	Georgia	92.4	0.32	76.1%
36	New Hampshire	91.8	0.35	59.1%
37	Ohio	91.3	0.39	12.0%
38	Delaware	87.7	0.61	56.9%
39	Massachusetts	86.7	0.67	0.6%
40	**Michigan**	**83.0**	**0.90**	**44.0%**
41	Montana	82.7	0.92	59.0%
42	West Virginia	82.1	0.95	8.0%
43	Pennsylvania	81.1	1.02	139.8%
44	New Jersey	79.8	1.10	5.6%
45	Rhode Island	79.1	1.14	60.1%
46	Maryland	73.6	1.47	9.4%
47	Illinois	68.0	1.82	2.7%
48	New York	64.4	2.04	1.7%
49	Connecticut	63.1	2.12	5.8%
50	Florida	56.1	2.56	-2.8%

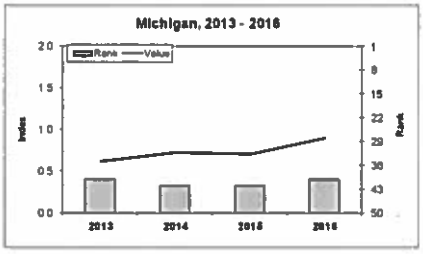
Index of medical malpractice insurance rates across three disciplines, 2016

Malpractice insurance rates strongly affect the health care industry, both in quality and cost. Malpractice insurance itself is in turn, strongly affected by the regulatory limits and civil-suit policies set by states. The above table presents an index of the relative costs of medical malpractice insurance for three specialties. Higher values correspond to relatively more expensive coverage.

Source: Medical Liability Monitor

Midwest Performance, 2016

State	Index	Rank
Wisconsin	-1.24	3
Indiana	-0.98	7
Ohio	0.39	37
Michigan	**0.90**	**40**
Illinois	1.82	47



BUSINESS LIABILITY COSTS

Rank	State	Score	Dollars per 100,000 GDP	Change, 2012-2015 (%)
	50-State Average		*$190*	*8.5%*
1	Oregon	118.3	$143	10.5%
2	North Carolina	117.8	$144	5.5%
3	Kentucky	116.7	$146	8.2%
4	Washington	116.0	$148	5.6%
5	Indiana	113.3	$153	4.9%
6	Ohio	113.0	$154	2.0%
7	New Hampshire	112.4	$155	9.1%
8	South Carolina	111.8	$156	8.9%
9	South Dakota	111.5	$157	12.8%
10	**Michigan**	**111.1**	**$158**	**-1.5%**
11	New Mexico	109.7	$160	14.2%
12	Arkansas	108.7	$162	-1.0%
13	Utah	108.5	$163	8.5%
14	Wyoming	108.3	$163	16.5%
15	Nevada	107.9	$164	8.3%
16	Arizona	107.2	$165	11.8%
17	Virginia	106.7	$166	12.5%
18	Maine	106.1	$168	6.0%
19	West Virginia	104.9	$170	10.0%
20	Nebraska	103.4	$173	-2.8%
21	Georgia	103.1	$174	7.1%
22	Tennessee	103.1	$174	-17.9%
23	Texas	102.3	$175	8.0%
24	California	101.7	$177	3.0%
25	Kansas	100.4	$179	8.2%
26	Idaho	99.6	$181	17.6%
27	Maryland	99.5	$181	3.2%
28	Mississippi	97.0	$186	9.0%
29	Alaska	96.4	$187	26.4%
30	Alabama	95.7	$189	6.0%
31	Iowa	95.7	$189	1.3%
32	North Dakota	94.2	$192	13.5%
33	Missouri	93.8	$193	1.2%
34	Minnesota	93.1	$194	3.5%
35	Wisconsin	92.6	$195	4.6%
36	Oklahoma	88.2	$204	21.5%
37	Pennsylvania	87.0	$207	1.7%
38	Colorado	84.3	$212	7.4%
39	Massachusetts	83.9	$213	6.8%
40	Louisiana	83.5	$214	14.4%
41	Hawaii	81.7	$217	-3.9%
42	Vermont	81.0	$219	3.1%
43	Montana	80.1	$221	5.4%
44	Connecticut	72.8	$236	12.1%
45	Rhode Island	68.6	$244	13.1%
46	New Jersey	65.2	$251	5.0%
47	Delaware	54.7	$273	8.5%
48	Illinois	49.6	$283	22.1%
49	New York	44.9	$293	18.0%
50	Florida	41.0	$301	43.2%

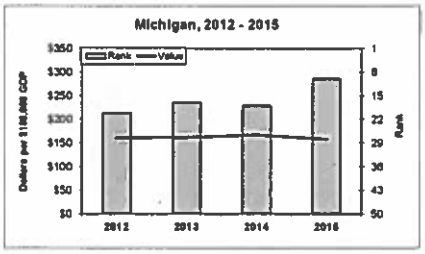
Average business-liability coverage paid per $100,000 of gross domestic product, 2015

Like malpractice and the health care industry, business liability insurance costs can strongly influence the competitiveness of the private market as a whole. It can also be indicative of the greater regulatory environment and attitudes of a state. The above table shows the total amount of liability coverage paid, including product liability, workers' compensation and other liability coverage, per $100,000 of gross domestic product.

Source: Insurance Information Institute

Midwest Performance, 2015

State	Dollars per $100,000 GDP	Rank
Indiana	$153	5
Ohio	$154	6
Michigan	**$158**	**10**
Wisconsin	$195	35
Illinois	$283	48



LIABILITY SYSTEM REPUTATION

Rank	State	Score	Score	Change, 2011-2016 (%)
	50-State Average		*68.5*	*10.8%*
1	South Dakota	119.1	75.3	8.3%
2	Vermont	118.8	75.2	12.1%
3	Idaho	118.2	75.0	6.4%
4	Minnesota	115.7	74.2	3.9%
5	New Hampshire	114.7	73.9	12.5%
6	Alaska	114.4	73.8	6.8%
7	Nebraska	113.4	73.5	-0.8%
8	Wyoming	112.8	73.3	1.0%
9	Maine	112.5	73.2	5.8%
10	Delaware	111.2	72.8	-4.0%
10	Utah	111.2	72.8	4.4%
10	Virginia	111.2	72.8	3.7%
13	Iowa	110.6	72.6	4.5%
14	Massachusetts	109.0	72.1	8.7%
15	Indiana	108.4	71.9	4.2%
16	Connecticut	108.1	71.8	12.5%
17	Kansas	107.1	71.5	1.3%
17	North Dakota	107.1	71.5	2.4%
19	Maryland	104.9	70.8	21.4%
20	Wisconsin	104.6	70.7	3.4%
21	**Michigan**	**103.6**	**70.4**	**11.7%**
21	Oregon	103.6	70.4	12.5%
23	Hawaii	102.4	70.0	12.0%
24	Rhode Island	102.1	69.9	14.8%
25	Arizona	101.7	69.8	4.5%
26	Montana	98.3	68.7	31.6%
26	Ohio	98.3	68.7	10.6%
28	New York	97.3	68.4	3.0%
28	Washington	97.3	68.4	4.6%
30	Oklahoma	97.0	68.3	24.2%
30	Tennessee	97.0	68.3	7.2%
32	New Mexico	96.7	68.2	29.4%
32	North Carolina	96.7	68.2	3.6%
34	South Carolina	95.1	67.7	20.2%
35	Colorado	94.8	67.6	5.3%
36	Arkansas	93.5	67.2	17.5%
37	Nevada	91.6	66.6	16.8%
38	Pennsylvania	90.7	66.3	17.8%
39	Texas	84.3	64.3	12.4%
40	Georgia	83.7	64.1	0.2%
41	New Jersey	82.8	63.8	6.2%
42	Kentucky	76.1	61.7	8.6%
43	Alabama	74.2	61.1	15.7%
43	Mississippi	74.2	61.1	31.1%
45	West Virginia	72.6	60.6	35.3%
46	Florida	72.3	60.5	9.4%
47	California	70.7	60.0	18.6%
48	Illinois	67.9	59.1	15.2%
49	Missouri	64.7	58.1	0.5%
50	Louisiana	60.0	56.6	21.7%

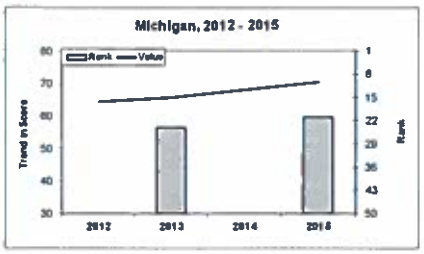
Total Score in State Liability Systems Ranking Study, 2016

Harris Interactive conducts a yearly survey for the U.S. Chamber Institute of Legal Reform to assess how fair and reasonable a state's tort liability system is thought to be by corporate attorneys. The above table shows each state's final score rating in the State Liability Systems Ranking Study.

Source: Harris Interactive

Midwest Performance, 2016

State	Score	Rank
Indiana	71.9	15
Wisconsin	70.7	20
Michigan	**70.4**	**21**
Ohio	68.7	26
Illinois	59.1	48



PHYSICAL INFRASTRUCTURE

In the innovation economy, infrastructure can be broadly defined to include both traditional physical infrastructure, such as roads, water and sewer, and "virtual" infrastructure (the digital economy). The former are covered under this driver. The metrics chosen attempt to measure outcomes, productivity, and level of service rather than inputs, such as capital expenditures per resident.

Midwest Performance

	2016	2014	2012
Illinois	****	****	****
Wisconsin	***	***	**
Ohio	***	***	**
Indiana	***	***	***
Michigan	**	***	***

Rank	State	2016	2014	2012
1	Hawaii	*****	***	*****
2	New York	*****	*****	*****
3	Nevada	*****	*****	****
4	Illinois	****	****	****
5	Massachusetts	****	****	****
6	Washington	****	****	****
7	Arizona	****	****	****
8	Oregon	****	****	***
9	Virginia	****	****	***
10	Minnesota	****	****	****
11	Colorado	****	****	***
12	New Jersey	****	***	**
13	Montana	***	****	***
14	North Dakota	***	***	****
15	Georgia	***	***	****
16	Utah	***	*****	****
17	Delaware	***	***	***
18	Vermont	***	***	**
19	Pennsylvania	***	***	***
20	Nebraska	***	***	***
21	New Hampshire	***	**	***
22	Maryland	***	***	****
23	Wyoming	***	***	****
24	Wisconsin	***	***	**
25	Alabama	***	*	***
26	Texas	***	***	**
27	Connecticut	***	****	***
28	Ohio	***	***	**
29	Indiana	***	***	***
30	Missouri	***	***	***
31	Alaska	***	***	***
32	Tennessee	***	***	*
33	South Dakota	***	***	***
34	California	***	***	***
35	North Carolina	**	***	***
36	Rhode Island	**	**	*
37	Iowa	**	**	**
38	**Michigan**	**	***	***
39	Kansas	**	***	*
40	Arkansas	**	**	**
41	Mississippi	**	**	*
42	Idaho	**	***	***
43	Kentucky	**	***	***
44	Louisiana	**	*	*
45	Oklahoma	*	*	*
46	West Virginia	*	**	***
47	Maine	*	*	**
48	Florida	*	***	***
49	South Carolina	*	***	**
50	New Mexico	*	***	***

HIGHWAY QUALITY

Rank	State	Score	Rough Highway Miles per 1,000	Change, 2013-2016 (%)
	50-State Average		*179.9*	*137.9%*
1	Kentucky	118.4	28.4	-38.3%
2	Ohio	115.4	47.2	-56.8%
3	New Hampshire	114.9	50.5	-51.3%
4	Louisiana	114.1	55.0	-77.9%
5	Georgia	114.0	55.8	-29.0%
6	Alabama	113.4	59.5	-10.9%
7	Hawaii	112.4	65.8	-84.4%
8	Nebraska	111.6	71.0	-35.7%
9	Montana	111.4	71.9	19.1%
10	Vermont	110.8	75.4	21.6%
11	Illinois	109.1	86.0	-14.8%
12	Mississippi	108.4	90.8	-18.1%
13	Texas	108.3	91.4	-37.6%
14	Pennsylvania	108.2	91.9	34.8%
15	Virginia	107.9	93.7	-44.3%
16	Arizona	107.6	95.4	100.0%
17	Maryland	106.9	99.8	-24.0%
18	New York	106.8	100.4	-28.8%
19	New Jersey	106.8	100.7	-59.5%
20	Tennessee	105.2	110.4	71.9%
21	Nevada	104.8	112.7	718.8%
22	North Dakota	104.3	116.1	121.4%
23	Wisconsin	103.0	123.9	-47.3%
24	Delaware	102.7	125.8	107.8%
25	Washington	101.4	134.1	-0.2%
26	Missouri	98.6	151.2	159.6%
27	Iowa	98.4	152.8	-14.0%
28	Utah	96.9	162.2	173.4%
29	Indiana	96.6	163.6	-3.2%
30	South Dakota	95.7	169.1	185.9%
31	Oklahoma	94.8	175.0	15.6%
32	Colorado	94.1	179.2	31.1%
33	Kansas	93.9	180.8	208.0%
34	Massachusetts	92.0	192.5	12.9%
35	Oregon	90.7	200.6	99.4%
36	Minnesota	90.1	204.1	77.5%
37	Rhode Island	89.5	207.9	-38.3%
38	West Virginia	88.5	214.0	79.4%
39	Connecticut	88.3	215.2	8.4%
40	Arkansas	87.4	220.8	30.9%
41	Wyoming	82.6	250.7	257.9%
42	Maine	82.2	253.1	156.6%
43	North Carolina	79.4	270.4	152.8%
44	Alaska	79.4	270.7	-0.3%
45	New Mexico	62.8	373.2	317.0%
46	California	62.6	374.7	10.7%
47	Michigan	56.7	411.1	185.2%
48	Idaho	53.2	432.6	407.1%
49	South Carolina	39.3	518.9	631.7%
50	Florida	-21.7	897.3	3214.3%

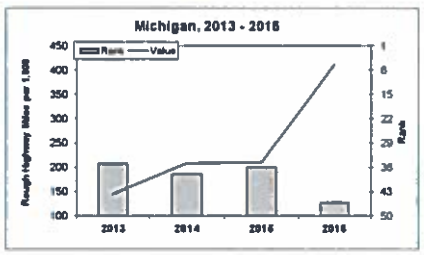
Miles graded "rough" or worse per 1,000 miles of highway; 2016

Poor highway conditions reduce the convenience, speed, and efficiency of a highway network. They also eventually require repair that can become increasingly costly as conditions worsen. The U.S. government measures highway quality in terms of miles of rough road bed. The above table shows the number of miles in each state graded rough or worse per 1,000 total miles of state and interstate highway.

Source: Federal Highway Administration

Midwest Performance, 2016

State	Rough Highway Miles per 1,000	Rank
Ohio	47.2	2
Illinois	86.0	11
Wisconsin	123.9	23
Indiana	163.6	29
Michigan	411.1	47



BRIDGE QUALITY

Rank	State	Score	Percent	Change, 2013-2016 (%)
	50-State Average		*9.3%*	*15.3%*
1	Nevada	123.3	1.6%	-91.0%
2	Texas	123.0	1.7%	-70.8%
3	Florida	121.7	2.1%	-75.1%
4	Arizona	119.9	2.6%	-13.3%
5	Utah	118.2	3.1%	28.1%
6	Georgia	112.8	4.7%	119.9%
7	Washington	112.5	4.8%	-44.4%
8	Delaware	112.2	4.9%	-24.4%
9	Tennessee	112.0	5.0%	-75.9%
10	Oregon	110.9	5.3%	-71.4%
11	California	110.3	5.5%	-50.8%
12	Vermont	109.8	5.6%	42.4%
13	Hawaii	109.6	5.7%	0.0%
14	Colorado	109.4	5.7%	-8.0%
15	Maryland	109.2	5.8%	-62.0%
16	Minnesota	108.5	6.0%	-49.1%
17	Arkansas	107.4	6.3%	-8.7%
18	New Mexico	106.8	6.5%	-31.7%
19	Virginia	106.0	6.7%	-26.8%
20	Ohio	105.5	6.9%	-58.0%
21	Alabama	102.9	7.6%	-12.6%
22	Indiana	101.8	8.0%	-6.8%
23	Connecticut	101.6	8.0%	-18.1%
24	Kentucky	101.3	8.1%	-20.1%
25	Illinois	100.3	8.4%	-12.4%
26	Kansas	99.7	8.6%	-58.4%
27	Wisconsin	99.5	8.7%	-34.7%
28	Montana	98.9	8.8%	-36.1%
29	New Jersey	98.1	9.0%	-37.9%
30	Idaho	97.5	9.2%	-27.8%
31	Massachusetts	97.2	9.3%	48.4%
32	Alaska	96.0	9.7%	-13.0%
33	North Carolina	95.3	9.9%	-17.0%
34	South Carolina	93.9	10.3%	-52.8%
35	Wyoming	91.6	11.0%	29.3%
36	New York	91.4	11.0%	45.8%
37	Michigan	91.3	11.1%	16.7%
38	New Hampshire	87.4	12.2%	529.4%
39	Mississippi	87.2	12.3%	48.7%
40	Missouri	84.6	13.1%	-2.1%
41	Louisiana	83.2	13.5%	54.0%
42	Maine	80.2	14.4%	2.6%
43	Oklahoma	78.0	15.0%	80.9%
44	North Dakota	78.0	15.0%	18.3%
45	Nebraska	76.7	15.4%	109.9%
46	West Virginia	70.3	17.3%	267.0%
47	South Dakota	62.5	19.6%	73.6%
48	Pennsylvania	61.9	19.8%	251.2%
49	Iowa	59.3	20.5%	100.3%
50	Rhode Island	44.7	24.9%	8.0%

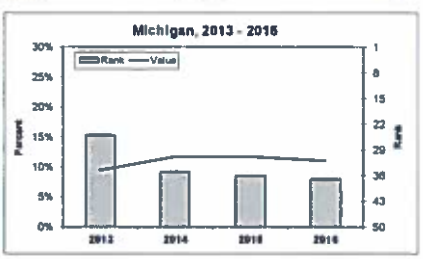
Percent of bridges characterized as "deficient," 2016

Like road quality, bridge quality is an important indicator of the health of a state's physical infrastructure. Furthermore, bridges requiring significant repair or replacement can pose an acute challenge to traffic flows. The table presented here shows the number percentage of each state's bridges categorized as "deficient" by the U.S. government.

Source: Federal Highway Administration

Midwest Performance, 2016

State	Percent	Rank
Ohio	6.9%	20
Indiana	8.0%	22
Illinois	8.4%	25
Wisconsin	8.7%	27
Michigan	11.1%	37



TRANSIT USE

Rank	State	Score	Percent of Workers	Change, 2013-2016 (%)
	50-State Average		*3.1%*	*6.5%*
1	New York	250.0	28.1%	4.6%
2	New Jersey	223.1	11.3%	7.1%
3	Massachusetts	206.5	10.0%	9.8%
4	Illinois	196.0	9.1%	6.7%
5	Maryland	190.6	8.7%	-1.0%
6	Hawaii	165.7	6.7%	11.1%
7	Washington	159.3	6.2%	8.4%
8	Pennsylvania	150.0	5.4%	6.3%
9	California	144.9	5.0%	3.2%
10	Connecticut	141.0	4.7%	3.8%
11	Virginia	137.6	4.4%	1.9%
12	Oregon	136.4	4.3%	11.4%
13	Minnesota	125.1	3.4%	9.5%
14	Nevada	125.0	3.4%	11.0%
15	Colorado	119.3	2.9%	1.4%
16	Delaware	116.0	2.7%	-13.1%
17	Rhode Island	115.2	2.6%	0.1%
18	Utah	114.0	2.5%	13.1%
19	Georgia	107.4	2.0%	10.5%
20	Florida	105.9	1.9%	4.9%
21	Arizona	104.9	1.8%	3.9%
22	Wyoming	103.7	1.7%	7.9%
23	Wisconsin	103.2	1.6%	5.2%
24	Ohio	101.5	1.5%	13.6%
25	Texas	100.0	1.4%	1.9%
26	Missouri	100.0	1.4%	17.0%
27	Alaska	98.6	1.3%	-26.9%
28	Louisiana	98.1	1.2%	26.5%
29	**Michigan**	**97.6**	**1.2%**	**5.2%**
30	New Mexico	96.9	1.1%	15.9%
31	Vermont	96.7	1.1%	9.1%
32	Iowa	95.6	1.0%	22.2%
33	North Carolina	95.3	1.0%	14.4%
34	Kentucky	95.1	1.0%	6.6%
35	Indiana	94.2	0.9%	-1.3%
36	West Virginia	93.5	0.9%	41.7%
37	New Hampshire	92.7	0.8%	8.8%
38	Idaho	91.8	0.7%	-3.7%
39	Montana	91.5	0.7%	-2.1%
40	Tennessee	91.5	0.7%	1.0%
41	Nebraska	90.8	0.6%	5.2%
42	Maine	90.5	0.6%	6.1%
43	South Carolina	89.3	0.5%	2.1%
44	South Dakota	89.1	0.5%	25.8%
45	Kansas	88.5	0.5%	16.0%
46	North Dakota	88.2	0.4%	47.0%
47	Oklahoma	87.4	0.4%	-6.2%
48	Arkansas	87.1	0.3%	-15.8%
49	Alabama	86.5	0.3%	-18.6%
50	Mississippi	86.3	0.3%	-16.6%

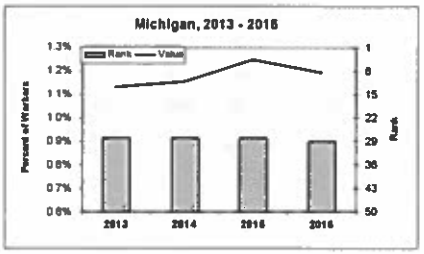
Percent of those earning 100% or more above federal poverty level that take public transportation to work, 2016

In the last half of the 20th century the landscape of U.S. cites was shaped by sprawl. The automobile became, and remains, the primary means for transport to work from the suburbs to office /industry centers. But now, after years of neglect, public transit is experiencing a resurgence, offering convenience, predictable travel time and energy efficiency, enhancing quality of life. This metric measures the percentage of those who are not working at home and take public transportation to work.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	Percent of Workers	Rank
Illinois	9.1%	4
Wisconsin	1.6%	23
Ohio	1.5%	24
Michigan	**1.2%**	**29**
Indiana	0.9%	35



MAJOR MARKET AIR ACCESS

Rank	State	Score	Nonstop Flights per 1,000 Residents	Change, 2013-2016 (%)
	50-State Average			*12.5*
1	Nevada	151.9	36.0	-0.3%
2	Alaska	139.8	30.6	5.1%
3	Hawaii	126.8	24.7	14.7%
4	Montana	125.5	24.1	-0.7%
5	North Dakota	124.1	23.5	-25.3%
6	Colorado	121.9	22.6	0.4%
7	Utah	113.5	18.8	1.7%
8	Wyoming	111.2	17.8	-22.8%
9	Virginia	108.6	16.6	-7.3%
10	Vermont	108.2	16.4	-0.5%
11	Oregon	107.7	16.2	4.1%
12	Arizona	106.4	15.6	-4.7%
13	Kentucky	105.4	15.2	0.6%
14	Idaho	104.6	14.8	2.8%
15	Washington	104.0	14.6	17.8%
16	Maine	103.8	14.5	1.6%
17	Minnesota	103.8	14.5	-0.2%
18	Massachusetts	102.9	14.1	1.2%
19	South Dakota	102.4	13.8	-22.7%
20	Illinois	102.3	13.8	-1.3%
21	Florida	102.1	13.7	1.1%
22	Tennessee	101.5	13.4	-1.2%
23	North Carolina	101.2	13.3	-6.5%
24	Missouri	100.6	13.0	-3.8%
25	California	100.4	12.9	2.2%
26	Georgia	99.6	12.6	-0.1%
27	Nebraska	98.7	12.2	-8.1%
28	Rhode Island	98.2	11.9	1.9%
29	New York	94.8	10.4	-4.5%
30	**Michigan**	**93.2**	**9.7**	**5.0%**
31	Texas	93.1	9.7	0.4%
32	New Mexico	90.7	8.6	-21.6%
33	Pennsylvania	90.7	8.6	-12.0%
34	New Hampshire	90.4	8.5	-10.0%
35	Wisconsin	90.4	8.5	-5.9%
36	Indiana	89.4	8.0	10.9%
37	Louisiana	88.5	7.6	7.2%
38	Ohio	88.3	7.5	-6.2%
39	South Carolina	88.0	7.4	-4.1%
40	Iowa	87.5	7.2	-10.2%
41	New Jersey	87.0	7.0	0.8%
42	Maryland	86.9	6.9	-1.8%
43	Connecticut	84.1	5.7	-2.2%
44	Oklahoma	82.8	5.1	-16.4%
45	Arkansas	82.2	4.8	-10.8%
46	Alabama	81.0	4.2	-6.8%
47	Kansas	78.6	3.2	-18.1%
48	West Virginia	78.2	3.0	-13.9%
49	Mississippi	75.8	2.0	-36.7%
50	Delaware	71.4	0.0	-99.5%

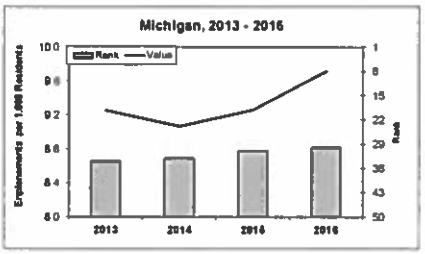
Nonstop departures to largest commercial and technology markets per 1,000 residents, 2016

The convenience of flying to major business centers has a large effect on states' competitive positions. Employers prefer states and regions with relatively easy access to the nation's largest financial, legal, and government centers. Nonstop flights to the top 20 venture capital hubs were tallied, and the counts are shown here as a proportion of each state's population. See Appendix for more detail.

Source: U.S. Department of Transportation

Midwest Performance, 2016

State	Flights per 1,000 Residents	Rank
Illinois	13.8	20
Michigan	**9.7**	**30**
Wisconsin	8.5	35
Indiana	8.0	36
Ohio	7.5	38



AIRPORT PERFORMANCE

Rank	State	Score	Percent Delayed	Change, 2013-2016 (%)
	50-State Average		*17.7%*	*-6.5%*
1	Hawaii	130.6	9.3%	-10%
2	Montana	128.7	9.8%	-12%
3	Alaska	125.9	10.5%	-18%
4	North Dakota	120.9	11.8%	-34%
5	South Dakota	118.0	12.6%	(n/a)
6	Nebraska	114.8	13.4%	-28%
7	Idaho	113.6	13.7%	-6%
8	Wyoming	113.4	13.8%	-13%
9	Utah	112.6	14.0%	6%
10	Minnesota	112.5	14.0%	-12%
11	Oklahoma	109.7	14.8%	-26%
12	Iowa	109.1	14.9%	-30%
13	Kansas	109.0	14.9%	-28%
14	New Hampshire	108.2	15.1%	-18%
15	Wisconsin	106.1	15.7%	-23%
16	Connecticut	104.7	16.0%	-8%
17	Alabama	103.9	16.3%	-15%
18	Indiana	103.7	16.3%	-10%
19	Washington	103.6	16.3%	16%
20	Mississippi	102.7	16.6%	-11%
20	Arkansas	102.7	16.6%	-24%
22	**Michigan**	**102.3**	**16.7%**	**-5%**
23	Oregon	101.1	17.0%	12%
24	New Mexico	100.4	17.2%	-16%
25	Kentucky	100.2	17.2%	-9%
26	Arizona	99.8	17.3%	-1%
27	Ohio	99.8	17.3%	-11%
28	Rhode Island	99.1	17.5%	4%
29	Virginia	96.3	18.2%	-9%
30	Missouri	96.2	18.3%	-18%
31	Pennsylvania	95.8	18.4%	1%
32	North Carolina	95.3	18.5%	0%
33	South Carolina	95.1	18.6%	-8%
34	Colorado	92.9	19.1%	-28%
35	Tennessee	92.6	19.2%	-7%
36	Louisiana	90.5	19.8%	(n/a)
37	Georgia	90.4	19.8%	-5%
38	Delaware	89.6	20.0%	42%
39	West Virginia	88.3	20.3%	-8%
40	Texas	86.7	20.7%	-12%
41	Maryland	85.5	21.1%	-20%
42	Illinois	84.8	21.2%	(n/a)
43	Florida	79.0	22.7%	15%
44	Nevada	78.0	23.0%	1%
45	California	76.5	23.4%	19%
46	Massachusetts	74.4	23.9%	25%
47	New York	73.2	24.2%	12%
48	Maine	71.9	24.6%	21%
49	Vermont	71.0	24.8%	7%
50	New Jersey	62.0	27.2%	-1%

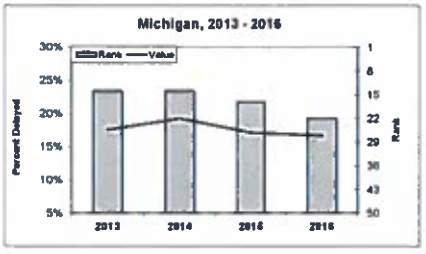
Percent of arrivals and departures delayed, 2016

Infrastructure must not only be available but offer efficient service. While the "Major Market Access" metric measures the availability of flights to major commercial and technology hubs, this metric measures quality of service in the form of timeliness. The above table shows the percentage of arrivals and departures delayed due to air carrier delay, security delay, or national aviation system delay.

Source: U.S. Bureau of Transporation Statistics

Midwest Performance, 2016

State	Percent Delayed	Rank
Wisconsin	15.7%	15
Indiana	16.3%	18
Michigan	**16.7%**	**22**
Ohio	17.3%	27
Illinois	21.2%	42



WATER QUALITY

Rank	State	Score	Percent of Population	Change, 2013-2016 (%)
	50-State Average		*7.7%*	*189.4%*
1	North Dakota	115.4	0.4%	2.2%
2	Minnesota	113.7	0.9%	-23.9%
3	Delaware	113.2	1.0%	-71.4%
4	Nevada	112.9	1.1%	4.7%
5	**Michigan**	**112.3**	**1.3%**	**23.4%**
6	Colorado	110.7	1.7%	-28.3%
7	Connecticut	110.2	1.9%	155.7%
8	Illinois	110.1	1.9%	-10.2%
9	Alabama	109.9	2.0%	-58.6%
10	Virginia	109.4	2.1%	-25.3%
11	Maine	108.9	2.3%	-29.6%
12	New Hampshire	108.8	2.3%	-77.0%
13	Arizona	107.7	2.6%	-26.3%
14	Rhode Island	106.9	2.9%	-81.3%
15	Georgia	106.1	3.1%	-74.6%
16	North Carolina	105.9	3.1%	58.9%
17	New York	105.0	3.4%	-92.5%
18	Oregon	104.7	3.5%	-79.8%
19	Indiana	103.0	4.0%	136.3%
20	Wisconsin	102.5	4.1%	5.9%
21	Iowa	101.5	4.5%	13.4%
22	Tennessee	101.1	4.6%	-27.2%
23	Vermont	100.8	4.6%	-23.9%
24	Mississippi	100.6	4.7%	-56.1%
25	Hawaii	100.0	4.9%	-93.3%
26	South Dakota	100.0	4.9%	31.3%
27	Idaho	95.1	6.3%	11.0%
28	Wyoming	95.1	6.3%	211.6%
29	Massachusetts	95.1	6.4%	-41.5%
30	Florida	94.4	6.5%	896.0%
31	Missouri	93.7	6.8%	65.2%
32	Pennsylvania	93.5	6.8%	36.3%
33	Kansas	92.9	7.0%	79.4%
34	Nebraska	90.5	7.7%	-5.1%
35	Montana	87.3	8.6%	-23.6%
36	Texas	85.9	9.1%	24.1%
37	Arkansas	84.0	9.6%	-2.9%
38	South Carolina	83.3	9.8%	353.1%
39	New Mexico	76.2	11.9%	51.5%
40	California	74.0	12.6%	319.7%
41	West Virginia	72.8	12.9%	269.1%
42	Washington	72.8	12.9%	3482.7%
43	Ohio	67.2	14.6%	702.7%
44	New Jersey	64.1	15.5%	161.3%
45	Alaska	63.9	15.6%	60.1%
46	Utah	58.1	17.3%	48.5%
47	Louisiana	53.0	18.8%	27.8%
48	Oklahoma	43.8	21.5%	-9.0%
49	Maryland	16.2	29.7%	2295.6%
50	Kentucky	-2.5	35.2%	903.0%

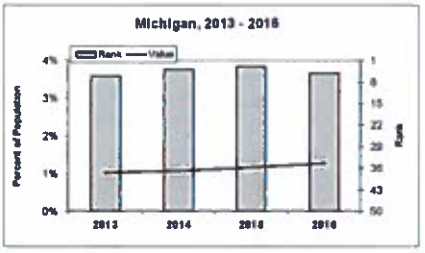
Percent of population served by water systems with reported health violations, 2016

Water treatment and provision is a large cost for municipalities and states. Much of this cost is, rightly, to ensure that water quality meets health standards. The above table shows the percentage of each state's population that was served by community water systems that have recorded health-standard violations.

Source: U.S. Environmental Protection Agency

Midwest Performance, 2016

State	Percent of Population	Rank
Michigan	**1.3%**	**5**
Illinois	1.9%	8
Indiana	4.0%	19
Wisconsin	4.1%	20
Ohio	14.6%	43



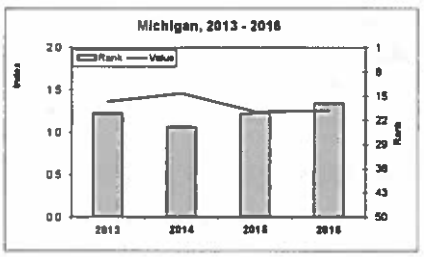
ENERGY RELIABILITY

Rank	State	Score	Index	Change, 2013-2016 (%)
	50-State Average		*2*	*0.2%*
1	Massachusetts	123.6	0.58	0
2	Nebraska	120.6	0.71	0
3	Arizona	118.5	0.79	0
4	Vermont	114.8	0.94	-1
5	New York	114.7	0.95	0
6	Utah	113.3	1.00	1
7	Missouri	113.1	1.01	0
8	Oregon	112.7	1.03	0
9	Washington	112.6	1.03	0
10	Delaware	112.1	1.05	0
11	Ohio	111.2	1.09	0
12	Pennsylvania	110.7	1.11	0
13	Iowa	110.1	1.13	0
14	Nevada	108.5	1.20	-1
15	Rhode Island	108.3	1.21	0
16	Maryland	107.9	1.22	-1
17	Michigan	107.1	1.26	0
18	South Dakota	106.5	1.28	0
19	New Jersey	105.4	1.33	0
20	Minnesota	105.2	1.33	0
21	Wyoming	104.3	1.37	0
22	Colorado	103.7	1.40	0
23	Arkansas	102.5	1.44	0
24	New Hampshire	101.3	1.49	0
25	California	100.0	1.55	1
26	North Dakota	99.7	1.56	0
27	Indiana	98.2	1.62	0
28	Georgia	98.1	1.63	0
29	Illinois	97.4	1.65	0
30	Virginia	96.9	1.67	-1
31	Kentucky	95.9	1.71	0
32	Texas	95.1	1.74	0
33	Alabama	94.8	1.76	-1
34	Kansas	94.5	1.77	0
35	North Carolina	94.4	1.77	-1
36	Idaho	91.5	1.89	0
37	Montana	90.7	1.92	0
38	Mississippi	89.8	1.96	0
39	Wisconsin	88.7	2.01	1
40	Oklahoma	83.5	2.22	-1
41	Alaska	83.2	2.23	0
42	Florida	82.0	2.28	-1
43	Louisiana	77.3	2.47	1
44	West Virginia	77.1	2.48	0
45	Tennessee	72.9	2.65	-1
46	South Carolina	72.5	2.67	-1
47	Connecticut	59.7	3.19	3
48	Maine	31.2	4.35	0
49	New Mexico	-0.6	5.65	4
(n/a)	Hawaii	(n/a)	(n/a)	(n/a)

System Average Interruption Frequency Index, 2016
In an information technology world, reliable power distribution has become an increasingly important consideration in business attraction and retention. The above table lists the System Average Interruption Frequency Index across all utility providers which represents the average number of interruptions per customer, including major event days.
Source: U.S. Energy Administration Information

Midwest Performance, 2016

State	Index	Rank
Ohio	1.09	11
Michigan	**1.26**	**17**
Indiana	1.62	27
Illinois	1.65	29
Wisconsin	2.01	39



DIGITAL CONNECTIVITY

Important building blocks of the innovation economy and technology-based economic development are not only traditional/public works infrastructure but "virtual" infrastructure, information highways, and IT services. The ability to connect and communicate directly relates to the innovative and entrepreneurial capacity of a state. The following metrics give an overview of the access to and use of the Internet and computers, focusing on outcome measures rather than underlying infrastructure investments.

Midwest Performance

	2016	2014	2012
Illinois	**	**	*
Indiana	*	*	*
Michigan	*	*	*
Wisconsin	*	*	*
Ohio	*	*	*

Rank	State	2016	2014	2012
1	North Dakota	*****	*****	*****
2	South Dakota	*****	*****	*****
3	Wyoming	*****	***	***
4	Maryland	*****	****	***
5	Alaska	****	***	***
6	Utah	****	***	***
7	Vermont	****	***	***
8	Rhode Island	****	***	***
9	Massachusetts	****	****	***
10	Iowa	****	***	****
11	Hawaii	****	***	****
12	Kansas	****	**	**
13	Montana	***	***	***
14	New Hampshire	***	***	***
15	Oregon	***	***	***
16	Delaware	***	***	***
17	New Jersey	***	**	**
18	California	***	***	**
19	Idaho	***	**	***
20	Virginia	***	**	**
21	Washington	***	**	**
22	New York	***	**	**
23	Connecticut	**	***	**
24	Colorado	**	**	**
25	Mississippi	**	**	**
26	Illinois	**	**	*
27	Texas	**	**	*
28	Nebraska	**	**	**
29	Louisiana	**	*	*
30	Nevada	**	**	**
31	Maine	**	*	**
32	Minnesota	**	*	*
33	Alabama	**	**	**
34	Missouri	**	*	*
35	Arkansas	**	**	*
36	Kentucky	**	*	*
37	Pennsylvania	**	*	*
38	North Carolina	**	*	**
39	Georgia	*	*	*
40	Indiana	*	*	*
41	Oklahoma	*	*	*
42	Tennessee	*	*	*
43	New Mexico	*	*	*
44	Arizona	*	*	*
45	Florida	*	*	*
46	**Michigan**	*	*	*
47	Wisconsin	*	*	*
48	South Carolina	*	*	*
49	Ohio	*	*	*
50	West Virginia	*	*	*

BROADBAND CONNECTIONS

Rank	State	Score	Lines per Household	Change, 2013-2016 (%)
	50-State Average		*3.0*	*61.4%*
1	Hawaii	151.7	3.83	50.3%
2	Alaska	145.9	3.73	86.0%
3	New Jersey	137.9	3.60	122.0%
4	California	136.3	3.57	72.2%
5	Kansas	136.1	3.57	59.1%
6	Kentucky	124.3	3.36	54.8%
7	Utah	123.9	3.36	61.1%
8	Connecticut	120.3	3.30	50.4%
9	New York	118.8	3.27	45.9%
10	Delaware	116.2	3.22	46.0%
11	Maryland	116.2	3.22	53.6%
12	Massachusetts	114.6	3.20	55.9%
13	Texas	112.7	3.16	53.4%
14	Washington	110.8	3.13	46.8%
15	Illinois	110.3	3.12	54.1%
16	Louisiana	107.3	3.07	48.1%
17	Nevada	105.5	3.04	42.9%
18	Colorado	105.3	3.04	59.4%
19	New Hampshire	103.8	3.01	55.4%
20	Georgia	103.5	3.01	59.4%
21	Wyoming	103.1	3.00	57.5%
22	Oregon	101.0	2.96	62.1%
23	Rhode Island	100.6	2.96	67.4%
24	Minnesota	100.2	2.95	59.4%
25	Vermont	100.0	2.95	62.7%
26	Virginia	100.0	2.95	62.3%
27	Florida	99.4	2.94	63.6%
28	Pennsylvania	98.5	2.92	55.8%
29	North Carolina	97.6	2.91	57.9%
30	Idaho	96.4	2.88	79.1%
31	Oklahoma	95.5	2.87	62.2%
32	Missouri	94.5	2.85	56.5%
33	Ohio	94.4	2.85	42.6%
34	Arizona	94.0	2.84	56.0%
35	Mississippi	93.8	2.84	59.7%
36	Indiana	90.8	2.79	62.0%
37	Maine	90.5	2.78	65.4%
38	Tennessee	90.1	2.78	63.5%
39	Alabama	88.7	2.75	72.4%
40	North Dakota	88.4	2.75	58.5%
41	Iowa	88.3	2.75	82.2%
42	**Michigan**	**88.3**	**2.75**	**52.2%**
43	Wisconsin	87.2	2.73	63.8%
44	New Mexico	86.9	2.72	72.5%
45	Arkansas	86.4	2.71	60.9%
46	Nebraska	86.2	2.71	60.2%
47	South Carolina	86.1	2.71	57.4%
48	South Dakota	85.1	2.69	66.7%
49	Montana	82.2	2.64	73.7%
50	West Virginia	65.9	2.36	78.7%

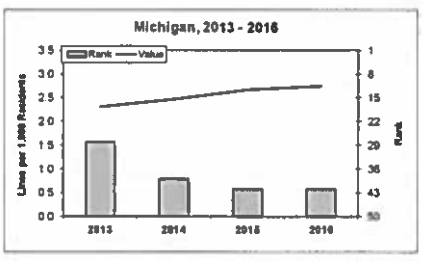
Number of broadband Internet lines per household, 2016

The term "broadband" is a catch-all phrase that encompasses cable and wireless Internet access, DSL, ISDN, T-1, and T-3. Once the province only of larger businesses and early-adopter individuals, broadband's high download speeds are increasingly available to the everyday user and small business. Available and inexpensive broadband is becoming vital to economic competitiveness. The adjacent table shows the number of broadband lines per household in each state.

Source: Federal Communications Commission

Midwest Performance, 2016

State	Lines per 1,000 Residents	Rank
Illinois	3.12	15
Ohio	2.85	33
Indiana	2.79	36
Michigan	**2.75**	**42**
Wisconsin	2.73	43



BROADBAND COVERAGE

Rank	State	Score	Providers per 100,000 Residents	Change, 2013-2016 (%)
	50-State Average		*13.9*	*67.5%*
1	Iowa	184.3	49.8	-526.9%
2	North Dakota	179.9	47.6	-218.2%
3	Wyoming	176.8	46.2	1491.0%
4	South Dakota	163.1	39.5	-467.7%
5	Montana	153.3	34.7	508.8%
6	Vermont	148.0	32.1	959.6%
7	Nebraska	143.5	29.9	102.1%
8	Idaho	136.0	26.2	101.7%
9	Kansas	125.3	21.0	-258.0%
10	Maine	122.4	19.5	-290.7%
11	Alaska	121.0	18.9	375.5%
12	New Mexico	119.7	18.2	386.8%
13	New Hampshire	114.6	15.7	215.9%
14	Oregon	113.4	15.2	224.2%
15	Arkansas	112.5	14.7	-44.8%
16	Minnesota	110.1	13.6	-98.6%
17	Oklahoma	109.5	13.3	-160.7%
18	Mississippi	107.7	12.4	148.3%
19	Kentucky	107.3	12.2	80.6%
20	Utah	107.2	12.2	-1.7%
21	Alabama	103.8	10.5	299.6%
22	Missouri	102.5	9.9	74.8%
23	Colorado	102.0	9.6	41.1%
24	West Virginia	100.3	8.7	64.3%
25	Wisconsin	99.7	8.5	-208.2%
26	Louisiana	99.4	8.3	82.2%
27	Indiana	99.3	8.3	142.9%
28	South Carolina	98.5	7.9	97.3%
29	Washington	98.1	7.7	138.1%
30	Tennessee	97.7	7.5	-90.7%
31	Nevada	96.3	6.8	156.2%
32	Georgia	95.9	6.6	-140.4%
33	Arizona	95.4	6.4	108.5%
34	Delaware	95.2	6.3	32.6%
35	Ohio	95.0	6.2	-68.5%
36	Virginia	94.8	6.1	75.0%
37	Maryland	94.6	6.0	38.6%
38	**Michigan**	**94.5**	**5.9**	**56.2%**
39	Illinois	94.5	5.9	77.5%
40	North Carolina	93.0	5.2	-121.6%
41	Pennsylvania	92.6	5.0	25.3%
42	Texas	90.3	3.9	99.0%
43	New Jersey	90.1	3.8	23.1%
44	New York	89.1	3.3	-123.9%
45	Connecticut	88.1	2.8	-110.6%
46	Florida	87.9	2.7	23.5%
47	California	85.7	1.6	-123.5%
48	Massachusetts	85.7	1.6	42.8%
(n/a)	Rhode Island	(n/a)	(n/a)	(n/a)
(n/a)	Hawaii	(n/a)	(n/a)	(n/a)

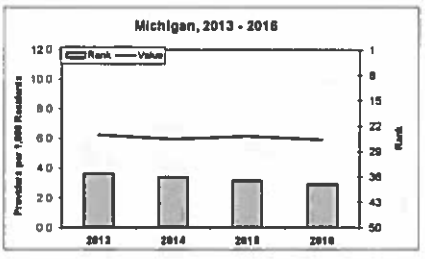
High-speed internet providers per 100,000 residents, 2016

A good geographic coverage of broadband makes sure that all parts of the state have the opportunity to be part of digital and mobile technology transformations. At the same time, the access has to be at a reasonable cost and service, and some extent of competition is more likely to assure such an outcome. The table above shows the number of high-speed Internet providers relative to the population.

Source: Federal Communications Commission

Midwest Performance, 2016

State	Providers per 100,000 Residents	Rank
Wisconsin	8.5	25
Indiana	8.3	27
Ohio	6.2	35
Michigan	**5.9**	**38**
Illinois	5.9	39



INTERNET SPEED

Rank	State	Score	Peak Connection Speed	Change, 2013-2016 (%)
	50-State Average		*68*	*29%*
1	Delaware	129.6	93	58.0%
2	Massachusetts	126.7	91	38.0%
3	Maryland	126.0	90	45.3%
4	Virginia	124.1	89	37.5%
5	Rhode Island	122.6	87	44.8%
6	New Jersey	122.5	87	37.6%
7	Utah	121.8	87	41.2%
8	New York	116.1	82	36.4%
9	Washington	115.4	81	38.0%
10	California	112.1	79	36.9%
11	Pennsylvania	107.7	75	29.1%
12	North Dakota	106.5	74	39.1%
13	New Hampshire	105.6	73	31.2%
14	Texas	105.5	73	31.6%
15	Connecticut	105.2	73	34.0%
16	**Michigan**	**105.0**	**73**	**23.7%**
17	Wyoming	104.0	72	38.5%
18	Oregon	103.6	72	38.7%
19	Illinois	103.0	71	30.0%
20	Vermont	102.3	71	38.0%
21	Colorado	102.1	71	34.1%
22	Georgia	101.2	70	39.5%
23	Florida	101.2	70	29.3%
24	Nevada	100.8	70	28.3%
25	Indiana	100.1	69	24.9%
26	Minnesota	99.9	69	29.0%
27	Arizona	99.9	69	28.0%
28	North Carolina	99.1	68	36.3%
29	Tennessee	97.9	67	27.9%
30	Missouri	97.1	67	33.2%
31	South Dakota	96.2	66	16.9%
32	Kansas	93.8	64	31.0%
33	Hawaii	92.5	63	23.4%
34	Wisconsin	91.6	62	33.6%
35	Alaska	90.1	61	19.6%
36	Oklahoma	89.6	60	27.8%
37	South Carolina	88.9	60	25.4%
38	Montana	88.6	59	25.1%
39	Nebraska	87.8	59	18.8%
40	Alabama	87.4	58	21.0%
41	Iowa	86.4	58	23.4%
42	Louisiana	84.7	56	24.1%
43	West Virginia	84.3	56	20.4%
44	New Mexico	83.2	55	23.4%
45	Idaho	79.6	52	15.7%
46	Maine	77.8	51	16.7%
47	Kentucky	76.1	49	16.8%
48	Arkansas	75.5	49	21.7%
49	Mississippi	75.1	48	15.7%
50	Ohio	70.0	44	51.7%

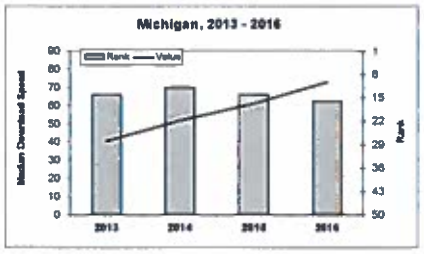
Average peak connenction speed in megabits per second, 2016

Fully benefiting from today's information highway is not only a matter of access and competitive ISP services but speed. Even though broadband coverage has reached most areas of the nation, states and regions vary considerably in quality of the service indicated by connectivity characteristics and speed. The above table lists the average peak connection speed in megabits per second in each state – provided annually by Akamai in their State of the Internet report.

Source: Akamai

Midwest Performance, 2016

State	Average Connection Speed	Rank
Michigan	**73**	**16**
Illinois	71	19
Indiana	69	25
Wisconsin	62	34
Ohio	44	50



NEXT GENERATION INTERNET

Rank	State	Score	Number per 100,000 establ.	Change, 2013-2016 (%)
	50-State Average		*5.5*	*2.2%*
1	South Dakota	162.5	13.6	0.0%
2	Maryland	157.1	12.8	7.1%
3	Mississippi	145.3	11.3	0.0%
4	North Dakota	134.6	9.8	-8.3%
5	Rhode Island	123.1	8.3	11.1%
6	Alabama	122.3	8.2	0.0%
7	Arkansas	120.5	7.9	0.0%
8	Massachusetts	119.3	7.8	0.0%
9	West Virginia	115.5	7.3	0.0%
10	Virginia	110.8	6.6	0.0%
11	Oregon	110.2	6.5	33.3%
12	New Hampshire	110.2	6.5	0.0%
13	Utah	108.8	6.4	0.0%
14	Montana	107.7	6.2	40.0%
15	Tennessee	107.5	6.2	0.0%
16	Louisiana	107.1	6.1	-12.5%
17	Nevada	105.6	5.9	0.0%
18	Alaska	105.4	5.9	0.0%
19	New Mexico	104.5	5.8	0.0%
20	Missouri	103.4	5.6	-14.3%
21	Wyoming	102.6	5.5	0.0%
22	Vermont	102.5	5.5	0.0%
23	Ohio	101.6	5.4	0.0%
24	Idaho	101.2	5.3	20.0%
25	Pennsylvania	100.3	5.2	0.0%
26	Kansas	99.7	5.1	0.0%
27	Delaware	98.6	5.0	0.0%
28	Iowa	97.2	4.8	0.0%
29	New York	96.9	4.8	0.0%
30	North Carolina	96.2	4.7	-16.7%
31	Indiana	95.7	4.6	25.0%
32	Colorado	94.8	4.5	0.0%
33	Kentucky	93.9	4.4	25.0%
34	Illinois	93.4	4.3	0.0%
35	Texas	92.7	4.2	0.0%
36	California	92.6	4.2	0.0%
37	Oklahoma	92.0	4.1	0.0%
38	Georgia	91.3	4.0	0.0%
39	Hawaii	91.1	4.0	0.0%
40	Arizona	89.8	3.8	0.0%
41	South Carolina	89.5	3.8	0.0%
42	Washington	86.3	3.3	0.0%
43	Maine	83.6	3.0	33.3%
44	Connecticut	82.2	2.8	0.0%
45	Wisconsin	82.0	2.8	0.0%
46	Nebraska	78.8	2.3	0.0%
47	**Michigan**	**78.6**	**2.3**	**0.0%**
48	Florida	76.8	2.1	-33.3%
49	Minnesota	74.0	1.7	0.0%
50	New Jersey	73.0	1.5	0.0%

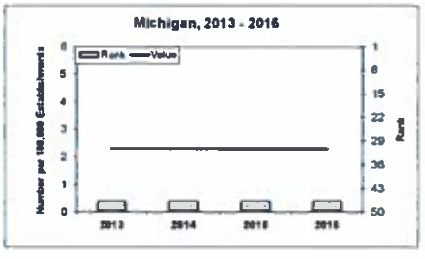
Number of Abilene network participants & connectors per 100,000 establishments, 2016

What broadband is to the dial-up modem, the Abilene network, or "Internet2," is to broadband. With a transmission speed that is magnitudes beyond anything available to the average consumer or firm, universities and private research labs use it to conduct complex joint research projects. The availability and use of the network hints at future competitiveness in the information-technology arena. The above table lists the number of network participants and connectors relative to establishments.

Source: Abilene Network

Midwest Performance, 2016

State	Number per 100,000 Establ.	Rank
Ohio	5.4	23
Indiana	4.6	31
Illinois	4.3	34
Wisconsin	2.8	45
Michigan	**2.3**	**47**



RURAL INTERNET ACCESS

Rank	State	Score	Percent	Change, 2011-2015 (%)
	50-State Average		72%	*58.7%*
1	Wyoming	116.8	84%	84.0%
2	Montana	115.5	83%	83.0%
3	Utah	114.2	82%	82.0%
4	New Hampshire	112.9	81%	81.0%
4	Oregon	112.9	81%	81.0%
4	Washington	112.9	81%	81.0%
7	Idaho	111.6	80%	80.0%
8	Colorado	110.3	79%	79.0%
8	New Jersey	110.3	79%	79.0%
10	Illinois	109.0	78%	78.0%
10	Minnesota	109.0	78%	78.0%
12	Nebraska	106 5	76%	76 0%
12	North Dakota	106 5	76%	76 0%
14	California	103 9	74%	74 0%
14	Iowa	103 9	74%	74 0%
14	South Dakota	103 9	74%	74 0%
17	Texas	102 6	73%	73 0%
17	Wisconsin	102 6	73%	73 0%
19	Louisiana	101 3	72%	72 0%
19	North Carolina	101 3	72%	72 0%
21	New York	100 0	71%	71 0%
22	Florida	98 7	70%	70 0%
22	Indiana	98 7	70%	70 0%
22	Kansas	98 7	70%	70 0%
25	Maryland	97 4	69%	69 0%
25	Michigan	97.4	69%	69.0%
27	Arkansas	96.1	68%	68.0%
27	Ohio	96.1	68%	68.0%
27	Oklahoma	96.1	68%	68.0%
30	Georgia	94.8	67%	67.0%
30	South Carolina	94.8	67%	67.0%
30	Virginia	94.8	67%	67.0%
33	Missouri	93.5	66%	66.0%
34	Mississippi	91.0	64%	64.0%
35	Alabama	89.7	63%	63.0%
36	Pennsylvania	88.4	62%	62.0%
36	Tennessee	88.4	62%	62.0%
36	West Virginia	88.4	62%	62.0%
39	Kentucky	87.1	61%	61.0%
39	New Mexico	87.1	61%	61.0%
41	Arizona	85.8	60%	60.0%
(n/a)	Alaska	(n/a)	(n/a)	0 00
(n/a)	Connecticut	(n/a)	(n/a)	0 00
(n/a)	Delaware	(n/a)	(n/a)	0 00
(n/a)	Hawaii	(n/a)	(n/a)	0 00
(n/a)	Maine	(n/a)	(n/a)	0 00
(n/a)	Massachusetts	(n/a)	(n/a)	0 00
(n/a)	Nevada	(n/a)	(n/a)	0 00
(n/a)	Rhode Island	(n/a)	(n/a)	0 00
(n/a)	Vermont	(n/a)	(n/a)	0 00

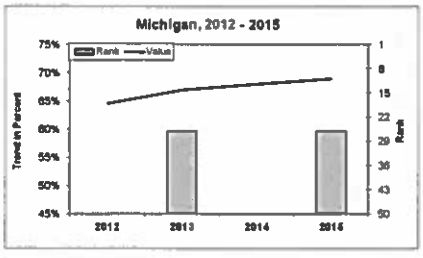
Percent of farms with Internet access, 2015

The percentage of farms with Internet access expresses a number of important factors about a state's digital infrastructure. In a parallel to rural electrification in the 1930s, chief among these factors are questions about the "last mile"—the extent to which reliable, cheap or convenient Internet access has reached rural areas—and the development of community-access portals in more rural areas. The above table shows the percentage of farms that use computers for Internet access, published every two years.

Source: U.S. Department of Agriculture

Midwest Performance, 2015

State	Number per 100,000 Establ.	Rank
Illinois	78%	10
Wisconsin	73%	17
Indiana	70%	22
Michigan	**69%**	**25**
Ohio	68%	27



QUALITY OF LIFE (SENSE OF PLACE)

Quality of Life (or "Sense of Place") has been gaining increased attention from those responsible for economic development. Amenity value caught the attention of thoughtful professionals and public officials, particularly with the release of Richard Florida's 2002 book, "The Rise of the Creative Class." States, regions, and cities have become increasingly concerned about how to attract not just businesses, but individual entrepreneurs and young skilled workers in general who increasingly put emphasis on quality of life in their location decisions. Also, they will soon become very aware of the mobility of experienced, energetic retiring/semi-retiring baby boomers looking for places to call home that offer opportunities to continue to work, play, contribute to society, and make money. In short, amenity economics is back! Quality of life is a desirable attribute in its own right–pursuit of the good life, but it is increasingly important as a factor when attracting and retaining the "right" kinds of workers and companies to sustain future growth. In this way, good quality of life begets better quality of life.

Comprised of sub-drivers in Civic Energy and Harmony, Lifestyle and Play, Pocketbook Indicators, and Health and Safety, this driver seeks to measure the overall quality of life in each state. Quality of life often varies considerably within states. Consequently, future scores for this driver could be broken out by region.

Midwest Performance

	2016	2014	2012
Michigan	***	**	**
Wisconsin	***	***	***
Ohio	**	**	**
Indiana	**	*	**
Illinois	*	**	**

Rank	State	2016	2014	2012
1	Vermont	*****	*****	*****
2	Massachusetts	****	***	****
3	Iowa	****	*****	*****
4	Montana	****	****	****
5	South Dakota	****	*****	*****
6	Nebraska	****	****	****
7	Minnesota	****	****	****
8	Maine	****	***	****
9	Rhode Island	****	***	***
10	New Hampshire	****	****	****
11	Florida	***	***	***
12	Wyoming	***	****	***
13	North Carolina	***	***	***
14	North Dakota	***	***	****
15	Missouri	***	***	****
16	**Michigan**	***	**	**
17	Idaho	***	**	***
18	Virginia	***	***	***
19	Alaska	***	***	***
20	Washington	***	**	**
21	Arkansas	***	**	**
22	Wisconsin	***	***	***
23	Kansas	***	***	****
24	Tennessee	***	**	**
25	Alabama	***	**	**
26	Kentucky	***	**	**
27	West Virginia	***	***	***
28	Maryland	***	***	***
29	Oregon	***	**	***
30	South Carolina	***	**	**
31	Ohio	**	**	**
32	Pennsylvania	**	***	***
33	Indiana	**	*	**
34	Delaware	**	**	***
35	Oklahoma	**	**	**
36	Colorado	**	**	***
37	Louisiana	**	**	***
38	Connecticut	**	**	***
39	Mississippi	**	**	**
40	Hawaii	**	**	**
41	New Mexico	**	*	**
42	Utah	**	**	***
43	New Jersey	**	*	***
44	New York	*	*	*
45	Illinois	*	**	**
46	Georgia	*	*	**
47	Nevada	*	*	*
48	California	*	*	**
49	Arizona	*	*	**
50	Texas	*	*	*

CIVIC ENERGY AND HARMONY

Midwest Performance

	2016	2014	2012
Illinois	***	****	****
Ohio	***	*	**
Wisconsin	***	***	****
Michigan	***	**	**
Indiana	**	*	**

Rank	State	2016	2014	2012
1	Vermont	*****	*****	*****
2	Massachusetts	*****	****	*****
3	Maryland	*****	*****	*****
4	Colorado	*****	****	****
5	Minnesota	****	****	*****
6	New York	****	***	****
7	Connecticut	****	****	****
8	New Hampshire	****	****	*****
9	Washington	****	****	***
10	Montana	****	***	****
11	New Jersey	****	***	***
12	Rhode Island	****	****	***
13	Oregon	****	****	****
14	Iowa	****	****	****
15	Virginia	****	****	****
16	Wyoming	****	***	***
17	Nebraska	****	***	***
18	Georgia	****	***	****
19	North Carolina	****	***	***
20	Pennsylvania	***	***	***
21	Utah	***	****	***
22	Maine	***	***	***
23	Illinois	***	****	****
24	Missouri	***	***	***
25	California	***	***	***
26	Delaware	***	***	****
27	Ohio	***	*	**
28	Wisconsin	***	***	****
29	Alaska	***	***	***
30	**Michigan**	***	**	**
31	South Dakota	***	***	***
32	Florida	***	**	***
33	Tennessee	***	**	**
34	Indiana	**	*	**
35	Idaho	**	**	**
36	Alabama	**	*	**
37	Texas	**	**	**
38	Kansas	**	***	****
39	Arkansas	**	**	**
40	Oklahoma	**	**	**
41	South Carolina	**	**	**
42	North Dakota	**	**	**
43	Kentucky	**	*	**
44	New Mexico	**	*	***
45	West Virginia	**	*	**
46	Arizona	**	**	**
47	Hawaii	*	**	*
48	New Mexico	*	***	***
49	Mississippi	*	**	**
50	Nevada	*	*	*

CHARITABLE GIVING

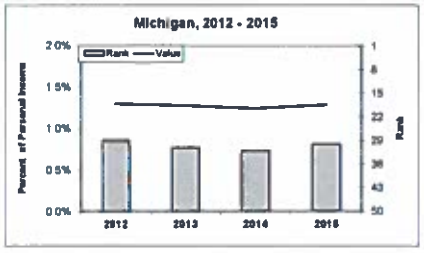
Rank	State	Score	Percent	Change, 2012-2015 (%)
	50-State Average		*1.35%*	*-0.7%*
1	Utah	190.3	3.13%	-4.0%
2	Georgia	146.2	2.25%	12.9%
3	Arkansas	126.6	1.86%	28.8%
4	Alabama	124.9	1.83%	1.8%
5	Maryland	120.9	1.75%	4.1%
6	Wyoming	118.7	1.70%	(n/a)
7	New York	116.6	1.66%	6.4%
8	South Carolina	115.4	1.64%	0.2%
9	Idaho	114.9	1.63%	-3.3%
10	Mississippi	114.4	1.62%	1.0%
11	North Carolina	112.5	1.58%	0.5%
12	Washington	109.4	1.52%	9.8%
13	Tennessee	107.7	1.48%	-1.2%
14	California	107.4	1.48%	6.2%
15	Oregon	107.0	1.47%	-0.9%
16	Florida	105.8	1.45%	2.6%
17	Virginia	105.8	1.45%	2.1%
18	Connecticut	104.4	1.42%	-2.9%
19	Oklahoma	104.1	1.41%	-11.0%
20	Kansas	103.1	1.39%	-9.4%
21	Colorado	102.1	1.37%	-4.8%
22	Texas	101.5	1.36%	-4.7%
23	South Dakota	100.8	1.35%	-2.8%
24	Missouri	100.3	1.34%	-0.1%
25	Montana	100.2	1.33%	-6.9%
26	Minnesota	99.8	1.33%	-0.6%
27	Illinois	99.8	1.33%	-3.8%
28	Massachusetts	98.0	1.29%	1.0%
29	Nevada	97.8	1.29%	-9.2%
30	**Michigan**	**97.5**	**1.28%**	**-1.5%**
31	Arizona	96.6	1.26%	-0.6%
32	Nebraska	96.6	1.26%	-11.0%
33	Kentucky	94.5	1.22%	-2.9%
34	Delaware	91.8	1.17%	-2.0%
35	Iowa	91.4	1.16%	-1.2%
36	Indiana	91.2	1.16%	-1.6%
37	Louisiana	89.6	1.13%	-3.2%
38	New Jersey	89.6	1.12%	-2.4%
39	Wisconsin	89.3	1.12%	-0.6%
40	Ohio	87.7	1.09%	-2.7%
41	Pennsylvania	87.5	1.08%	-2.5%
42	New Mexico	83.4	1.00%	-7.3%
43	Vermont	80.6	0.95%	-1.2%
44	Hawaii	80.4	0.94%	-6.9%
45	Rhode Island	77.7	0.89%	-8.1%
46	North Dakota	76.6	0.87%	8.8%
47	New Hampshire	75.8	0.85%	6.3%
48	Maine	74.0	0.81%	1.3%
49	Alaska	73.5	0.81%	-5.5%
50	West Virginia	70.9	0.75%	0.5%

Itemized contributions as percent of personal income, 2015

The contributions of each resident to charitable causes are a sign of community involvement and the tie of the residents to their home state. Although charitable deductions on federal income tax returns do not indicate the location of the use of those funds, they provide a general sense of a state's civic participation. The above table shows the amount of itemized charitable deductions as a percent of the state's personal income.
Source: Internal Revenue Service

Midwest Performance, 2015

State	Percent of Personal Income	Rank
Illinois	1.33%	27
Michigan	**1.28%**	**30**
Indiana	1.16%	36
Wisconsin	1.12%	39
Ohio	1.09%	40



VOTER TURNOUT

Rank	State	Score	Percent	Change, 2012-2016 (%)
	50-State Average		*60.8%*	*1.6%*
1	Minnesota	130.8	74.2%	-1.9%
2	New Hampshire	124.2	71.4%	1.9%
3	Maine	122.0	70.5%	3.5%
4	Colorado	121.1	70.1%	-0.3%
5	Wisconsin	119.4	69.4%	-4.3%
6	Iowa	117.0	68.4%	-2.2%
7	Massachusetts	114.3	67.2%	1.4%
8	Maryland	112.9	66.6%	0.6%
9	Oregon	112.5	66.4%	5.1%
10	Virginia	111.7	66.1%	-0.4%
11	North Carolina	108.6	64.8%	0.3%
12	Washington	108.6	64.8%	1.0%
13	**Michigan**	**108.3**	**64.7%**	**-0.1%**
14	Florida	108.3	64.6%	1.8%
15	Delaware	107.7	64.4%	2.7%
16	Connecticut	107.3	64.2%	5.4%
17	New Jersey	107.0	64.1%	3.6%
18	Vermont	106.0	63.7%	5.4%
19	Pennsylvania	105.7	63.6%	7.0%
20	Ohio	104.2	62.9%	-2.6%
21	Nebraska	103.3	62.5%	-4.1%
22	Missouri	102.7	62.3%	-0.4%
23	Illinois	101.9	61.9%	5.1%
24	Montana	101.6	61.8%	-1.3%
25	Alaska	100.4	61.3%	-4.1%
26	North Dakota	99.6	60.9%	0.7%
27	Louisiana	97.4	60.0%	-0.6%
28	Wyoming	96.8	59.7%	1.4%
29	Georgia	95.4	59.2%	1.3%
30	Idaho	95.4	59.1%	-0.8%
31	Rhode Island	95.1	59.0%	1.8%
32	Alabama	94.9	59.0%	0.1%
33	Kentucky	94.4	58.7%	6.2%
34	South Dakota	93.8	58.5%	-1.6%
35	Kansas	92.0	57.7%	1.6%
36	Nevada	91.0	57.3%	0.3%
37	New York	89.9	56.8%	6.8%
38	South Carolina	89.7	56.7%	0.2%
39	California	89.6	56.7%	2.7%
40	Utah	89.6	56.7%	2.3%
41	Indiana	88.8	56.4%	2.3%
42	Mississippi	87.0	55.6%	-6.9%
43	Arizona	85.7	55.0%	4.0%
44	New Mexico	85.2	54.8%	0.2%
45	Arkansas	80.4	52.8%	4.5%
46	Oklahoma	79.5	52.4%	6.5%
47	Texas	77.6	51.6%	3.7%
48	Tennessee	76.7	51.2%	-1.9%
49	West Virginia	74.1	50.1%	8.2%
50	Hawaii	55.5	42.2%	-4.6%

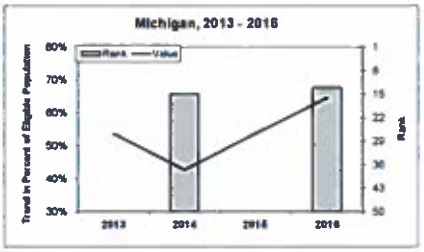
Percent of eligible voters' turnout at general elections, 2016

High voter turnout indicates that the residents take an interest in the development of the state, and is the key to a responsive government. The above table shows the average percent of the eligible population that voted in general elections for the highest office.

Source: George Mason University

Midwest Performance, 2016

State	Percent of Eligible Population	Rank
Wisconsin	69.4%	5
Michigan	**64.7%**	**13**
Ohio	62.9%	20
Indiana	56.4%	41
Illinois	61.9%	23



GENDER EQUITY

Rank	State	Score	Percent	Change, 2013-2016 (%)
	50-State Average		*43.3%*	*1.1%*
1	Maryland	161.0	53.2%	2.0%
2	Massachusetts	154.7	52.1%	2.2%
3	Vermont	141.1	49.9%	2.6%
4	Colorado	138.1	49.4%	3.8%
5	Virginia	136.7	49.1%	2.5%
6	New Jersey	130.1	48.0%	2.8%
7	Minnesota	121.0	46.5%	1.8%
8	New Hampshire	119.3	46.2%	5.2%
9	New York	118.9	46.1%	4.6%
10	Alaska	114.9	45.5%	-1.8%
11	Connecticut	114.3	45.4%	1.2%
12	Washington	113.3	45.2%	2.7%
13	Maine	113.2	45.2%	1.7%
14	Pennsylvania	106.4	44.1%	3.3%
15	North Carolina	106.3	44.0%	2.5%
16	Missouri	106.2	44.0%	3.4%
17	Nebraska	106.1	44.0%	6.3%
18	Rhode Island	105.7	44.0%	0.9%
19	Montana	105.3	43.9%	2.1%
20	Oklahoma	104.2	43.7%	2.8%
21	California	103.0	43.5%	2.1%
22	South Dakota	102.1	43.3%	0.1%
23	North Dakota	101.6	43.3%	2.9%
24	Oregon	101.5	43.2%	4.1%
25	Illinois	100.1	43.0%	2.1%
26	**Michigan**	**99.9**	**43.0%**	**-2.2%**
27	New Mexico	99.6	42.9%	-0.7%
28	Utah	98.4	42.7%	-0.9%
29	Texas	96.7	42.5%	0.1%
30	Kentucky	96.2	42.4%	0.2%
31	Indiana	95.8	42.3%	2.4%
32	Georgia	94.5	42.1%	2.1%
33	Delaware	94.3	42.0%	-0.3%
34	Iowa	94.2	42.0%	-0.2%
35	Ohio	93.1	41.8%	2.2%
36	Wyoming	92.5	41.7%	-4.7%
37	Tennessee	92.2	41.7%	-1.2%
38	West Virginia	92.1	41.7%	1.0%
39	Arizona	90.0	41.3%	0.2%
40	Kansas	89.7	41.3%	-3.1%
41	Wisconsin	88.1	41.0%	2.4%
42	South Carolina	86.8	40.8%	-1.3%
43	Alabama	86.2	40.7%	-1.9%
44	Arkansas	80.0	39.7%	-2.3%
45	Florida	79.5	39.6%	1.8%
46	Louisiana	78.3	39.4%	-1.6%
47	Idaho	71.1	38.2%	0.3%
48	Mississippi	70.1	38.0%	-0.7%
49	Hawaii	66.0	37.3%	4.4%
50	Nevada	51.3	34.9%	-5.8%

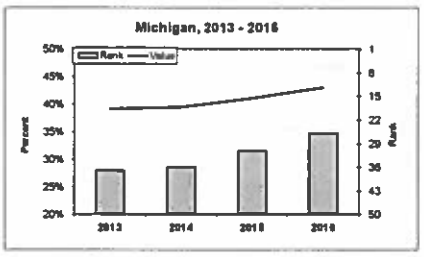
Percent of female labor force in "top jobs," 2016

Increasingly, there is a preference for diverse business environments, especially among the young and highly educated workers. Race and gender equity is not only desirable because it is fair and just, workplaces that demonstrate a commitment to and opportunities for career advancement of women and minorities are essential to economic competitiveness. The above table shows the percentage of the women in managerial, business, and financial, as well as professional and related occupations.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Percent	Rank
Illinois	43.0%	25
Michigan	**43.0%**	**26**
Indiana	42.3%	31
Ohio	41.8%	35
Wisconsin	41.0%	41



RACIAL/ETHNIC EQUITY

Rank	State	Score	Percent	Change, 2013-2016 (%)
	50-State Average		*33.3%*	*0.3%*
1	New Jersey	142.0	49.4%	0.5%
2	Massachusetts	136.9	47.2%	-0.2%
3	California	129.9	44.4%	9.0%
4	Vermont	129.3	44.2%	3.7%
5	New Hampshire	128.6	43.9%	2.9%
6	Washington	128.4	43.8%	1.2%
7	Maryland	122.0	41.2%	3.1%
8	Virginia	118.7	39.9%	-2.7%
9	Rhode Island	118.3	39.7%	1.3%
10	Texas	116.5	38.9%	-4.4%
11	Connecticut	115.9	38.7%	8.1%
12	Illinois	113.6	37.8%	-3.3%
13	Oregon	111.9	37.0%	5.0%
14	Pennsylvania	110.7	36.6%	6.7%
15	Missouri	108.0	35.5%	3.2%
16	New York	107.9	35.4%	1.6%
17	Kansas	106.3	34.8%	-1.8%
18	Colorado	106.3	34.8%	-1.0%
19	Iowa	106.1	34.7%	3.1%
20	Utah	105.7	34.5%	5.7%
21	Arizona	105.6	34.5%	0.0%
22	Ohio	103.0	33.4%	4.2%
23	**Michigan**	**102.9**	**33.4%**	**0.8%**
24	North Carolina	102.4	33.2%	3.2%
25	Oklahoma	100.3	32.3%	7.0%
26	Nebraska	99.7	32.1%	-3.0%
27	Georgia	98.9	31.7%	-1.7%
28	Minnesota	97.5	31.2%	-2.8%
29	Florida	97.1	31.0%	7.0%
30	Idaho	96.7	30.8%	0.3%
31	New Mexico	96.4	30.7%	1.9%
32	Delaware	95.9	30.5%	-1.6%
33	Hawaii	95.2	30.3%	-7.8%
34	Wyoming	95.0	30.2%	-2.1%
35	Tennessee	94.9	30.1%	1.0%
36	West Virginia	94.5	30.0%	3.8%
37	Arkansas	94.1	29.8%	-4.8%
38	Montana	92.9	29.3%	0.1%
39	Wisconsin	92.4	29.1%	-1.6%
40	Indiana	90.0	28.1%	5.5%
41	Alabama	87.5	27.1%	-2.3%
42	Alaska	86.3	26.6%	-8.1%
43	Louisiana	84.9	26.0%	1.2%
44	South Carolina	84.7	26.0%	-1.9%
45	Nevada	84.5	25.9%	-10.6%
46	South Dakota	83.9	25.7%	1.0%
47	Maine	82.9	25.2%	2.2%
48	Kentucky	79.8	24.0%	-0.9%
49	North Dakota	75.3	22.1%	0.6%
50	Mississippi	72.3	20.9%	-17.0%

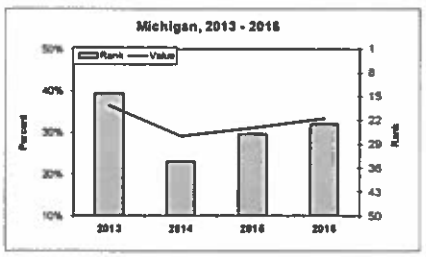
Percent of non-white labor force in "top jobs," 2016

This metric captures the same information as women in top jobs on the preceding page, except it measures the foothold of racial minorities at the top of the career ladder. The above table shows the percentage of non-white employees who are in managerial, business, and financial, as well as professional and related occupations.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Percent	Rank
Illinois	37.8%	12
Ohio	33.4%	22
Michigan	**33.4%**	**23**
Wisconsin	29.1%	39
Indiana	28.1%	40



HATE CRIMES

Rank	State	Score	Incidents per 100,000 residents	Change, 2013-2016 (%)
	50-State Average		*2.06*	*55.9%*
1	Arkansas	114.4	0.42	-56.2%
2	Rhode Island	113.9	0.47	-30.0%
3	Georgia	113.8	0.47	-34.9%
4	Oregon	113.7	0.48	-83.2%
5	Wisconsin	113.1	0.54	-38.6%
6	Indiana	113.0	0.55	-70.6%
7	West Virginia	112.4	0.60	-82.1%
8	Maine	112.2	0.61	-67.3%
9	Tennessee	111.9	0.64	-78.8%
10	Kentucky	110.9	0.73	-81.5%
11	Ohio	109.5	0.85	-76.1%
12	Idaho	109.0	0.90	-54.8%
13	North Carolina	107.1	1.06	-11.9%
14	Florida	107.0	1.07	173.4%
15	Pennsylvania	106.2	1.14	124.7%
16	Minnesota	105.5	1.20	-59.3%
17	Alabama	103.4	1.38	164.1%
18	Nebraska	103.3	1.39	-41.5%
19	Mississippi	102.7	1.45	440.9%
20	Vermont	102.6	1.45	-24.6%
21	New York	102.5	1.46	-53.7%
22	Alaska	102.2	1.49	36.1%
23	Delaware	101.2	1.58	21.5%
24	Hawaii	100.9	1.60	(n/a)
25	Montana	100.0	1.68	-45.8%
26	Colorado	97.6	1.88	-24.0%
27	Iowa	97.6	1.89	459.4%
28	Missouri	97.2	1.92	13.7%
29	South Dakota	94.8	2.13	26.1%
30	Texas	94.1	2.19	336.3%
31	Nevada	94.1	2.20	-32.9%
32	South Carolina	93.0	2.29	113.4%
33	**Michigan**	**92.9**	**2.30**	**-32.0%**
34	California	92.0	2.37	7.9%
35	Washington	90.2	2.53	-39.5%
36	Illinois	88.1	2.71	217.1%
37	Oklahoma	85.6	2.93	175.3%
38	Connecticut	85.3	2.96	-27.1%
39	Louisiana	84.8	3.00	342.0%
40	New Mexico	84.7	3.01	123.3%
41	New Hampshire	83.1	3.15	76.9%
42	Arizona	80.8	3.35	37.3%
43	Utah	73.3	4.00	53.9%
44	Massachusetts	72.8	4.05	-24.8%
45	New Jersey	67.6	4.51	-3.1%
46	North Dakota	66.3	4.62	-34.6%
47	Kansas	65.9	4.65	93.8%
48	Virginia	58.3	5.31	268.8%
49	Maryland	51.7	5.89	584.8%
(n/a)	Wyoming	(n/a)	(n/a)	(n/a)

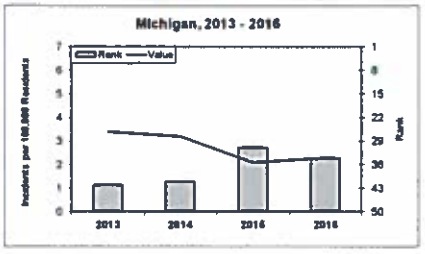
Number of reported hate-crime incidents / 100,000 covered residents, 2016

Hate crimes and similar behavior indicate that there are social tensions between groups of different origin and values. A lower level of community cohesion will diminish the attractiveness of a state, especially in today's economy with an increasing influx of immigrants and the importance of alternative lifestyles. The above table shows the number of reported incidents that were motivated in whole or in part by a bias against the victim's perceived race, religion, ethnicity, sexual orientation, or disability.

Source: Federal Bureau of Investigation

Midwest Performance, 2016

State	Incidents per 100,000 Residents	Rank
Wisconsin	0.54	5
Indiana	0.55	6
Ohio	0.85	11
Michigan	**2.30**	**33**
Illinois	2.71	36



GENERATIONAL CREATIVE CLASS

Rank	State	Score	Share of Labor Force	Change, 2013-2016 (%)
	50-State Average		*18.3%*	*7.1%*
1	Massachusetts	152.4	28.8%	16.6%
2	New York	132.7	24.6%	12.1%
3	Connecticut	132.5	24.6%	18.9%
4	New Jersey	130.0	24.0%	16.9%
5	Vermont	126.7	23.3%	11.3%
6	Maryland	124.6	22.9%	2.4%
7	Colorado	122.5	22.5%	5.4%
8	New Hampshire	121.9	22.3%	11.6%
9	Rhode Island	121.7	22.3%	17.6%
10	Illinois	117.5	21.4%	6.1%
11	Washington	116.0	21.1%	12.9%
12	Virginia	115.9	21.1%	5.6%
13	Minnesota	114.3	20.7%	3.1%
14	Pennsylvania	108.3	19.4%	9.3%
15	Montana	106.7	19.1%	7.0%
16	Kansas	106.3	19.0%	-5.5%
17	North Dakota	106.2	19.0%	11.5%
18	Hawaii	105.3	18.8%	5.7%
19	California	103.8	18.5%	0.3%
20	Oregon	103.7	18.5%	7.2%
21	Nebraska	102.2	18.2%	5.4%
22	Tennessee	101.9	18.1%	8.6%
23	Texas	100.4	17.8%	15.2%
24	North Carolina	100.2	17.7%	7.8%
25	Iowa	100.2	17.7%	10.0%
26	**Michigan**	**99.8**	**17.7%**	**17.8%**
27	Alaska	98.3	17.3%	2.0%
28	Florida	97.4	17.1%	3.7%
29	Missouri	96.9	17.0%	13.7%
30	Ohio	96.8	17.0%	17.9%
31	Maine	95.9	16.8%	-0.6%
32	Georgia	95.6	16.8%	1.3%
33	Arizona	95.2	16.7%	-3.3%
34	Delaware	93.8	16.4%	-9.4%
35	Oklahoma	93.5	16.3%	21.4%
36	South Dakota	92.7	16.2%	2.7%
37	Idaho	92.3	16.1%	25.6%
38	South Carolina	92.1	16.0%	0.2%
39	Indiana	91.2	15.8%	30.8%
40	New Mexico	91.2	15.8%	-5.9%
41	Utah	91.2	15.8%	6.1%
42	Louisiana	87.5	15.1%	-3.0%
43	Alabama	87.1	15.0%	6.8%
44	Wisconsin	86.5	14.8%	-3.8%
45	Kentucky	86.3	14.8%	-1.7%
46	West Virginia	85.0	14.5%	-10.8%
47	Wyoming	82.3	14.0%	23.6%
48	Arkansas	79.6	13.4%	5.2%
49	Nevada	79.1	13.3%	11.0%
50	Mississippi	73.7	12.1%	-19.1%

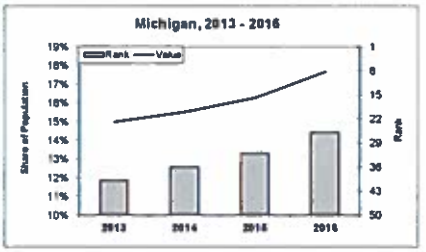
Percent of labor force age 16-34 & 55+ years old with a bachelor's degree or higher, 2016

Creativity is evident at all age levels. Most notably, a new group of highly talented experienced workers is emerging as a byproduct of today's 'longevity revolution' – the 'third age' productive years of 55-79. This metric gets at the breadth of talent of a state by combining attainment at both ends of the age spectrum: 16-34 and 55+.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Share of Labor Force	Rank
Illinois	21.4%	10
Michigan	**17.7%**	**26**
Ohio	17.0%	30
Indiana	15.8%	39
Wisconsin	14.8%	44



NUMBER OF NONPROFITS

Rank	State	Score	Nonprofits per 100,000 residents	Change, 2013-2016 (%)
	50-State Average		*554*	*9.6%*
1	Montana	153.2	971	6.5%
2	Vermont	149.2	938	9.7%
3	Iowa	143.6	892	4.6%
4	Wyoming	133.9	812	13.9%
5	Rhode Island	127.0	755	3.2%
6	South Dakota	126.1	748	4.5%
7	North Dakota	125.8	745	1.4%
8	Nebraska	121.3	708	10.8%
9	Alaska	120.9	705	8.2%
10	Maine	119.0	688	7.9%
11	Delaware	117.6	677	13.3%
12	Minnesota	110.1	615	5.6%
13	New Hampshire	109.7	611	7.8%
14	Wisconsin	108.1	599	12.2%
15	Connecticut	104.5	569	10.1%
16	Missouri	104.5	569	7.4%
17	West Virginia	104.5	569	13.4%
18	Oregon	104.2	566	5.4%
19	Kansas	103.9	564	5.3%
20	Ohio	103.5	561	8.3%
21	Maryland	103.2	558	11.6%
22	Indiana	102.3	551	9.7%
23	Massachusetts	102.2	550	9.1%
24	Colorado	101.8	547	13.7%
25	Pennsylvania	100.2	533	7.7%
26	Hawaii	99.8	530	8.5%
27	New York	98.3	517	10.8%
28	Illinois	97.9	515	9.5%
29	Virginia	97.2	508	10.1%
30	South Carolina	96.1	499	8.4%
31	Washington	95.9	498	8.1%
32	New Mexico	94.2	484	10.6%
33	**Michigan**	**94.0**	**482**	**11.2%**
34	New Jersey	93.5	478	9.7%
35	Oklahoma	93.5	478	8.5%
36	Tennessee	93.1	475	11.4%
37	North Carolina	92.3	468	15.7%
38	Idaho	91.9	464	6.5%
39	Arkansas	91.1	458	12.0%
40	Mississippi	88.7	438	10.6%
41	Georgia	87.2	426	13.4%
42	Alabama	86.9	423	11.2%
43	California	86.1	417	10.4%
44	Kentucky	85.9	415	8.6%
45	Louisiana	85.5	412	12.2%
46	Florida	83.7	397	11.8%
47	Texas	83.3	393	12.0%
48	Arizona	75.8	332	10.7%
49	Utah	72.1	301	11.1%
50	Nevada	71.8	299	14.4%

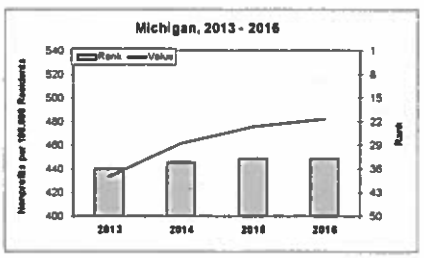
Number of nonprofit organizations per 100,000 residents, 2016

Nonprofit organizations such as charities are mobilizers of public participation in the development of the community, and reflect the strength of the social network that supports the economy. The above table gives the number of nonprofit organizations per state per 100,000 residents.

Source: National Center for Charitable Statistics

Midwest Performance, 2016

State	Nonprofits per 100,000 Residents	Rank
Wisconsin	599	14
Ohio	561	20
Indiana	551	22
Illinois	515	28
Michigan	**482**	**33**



LIFESTYLE AND PLAY

Midwest Performance

	2016	2014	2012
Ohio	**	**	**
Wisconsin	**	**	**
Michigan	**	**	**
Indiana	**	*	*
Illinois	*	*	*

Rank	State	2016	2014	2012
1	Vermont	*****	*****	*****
2	Alaska	*****	*****	*****
3	Florida	*****	*****	*****
4	Montana	*****	*****	*****
5	Hawaii	****	*****	*****
6	Rhode Island	****	****	****
7	California	****	****	****
8	Massachusetts	****	****	***
9	New York	***	***	***
10	Maine	***	***	***
11	Pennsylvania	***	****	****
12	Iowa	***	***	****
13	South Dakota	***	****	****
14	Missouri	***	***	****
15	Nebraska	***	***	***
16	Nevada	***	***	***
17	Kentucky	***	**	***
18	Connecticut	***	**	**
19	Louisiana	***	**	***
20	Wyoming	***	***	***
21	Maryland	***	***	**
22	Washington	***	***	***
23	Minnesota	***	***	***
24	Delaware	***	***	**
25	Idaho	***	***	***
26	Virginia	***	***	***
27	Ohio	**	**	**
28	New Hampshire	**	***	**
29	New Jersey	**	**	****
30	North Carolina	**	***	***
31	Wisconsin	**	**	**
32	North Dakota	**	**	**
33	Utah	**	**	**
34	Oregon	**	**	**
35	Colorado	**	**	**
36	Arkansas	**	**	**
37	Arizona	**	**	**
38	**Michigan**	**	**	**
39	Kansas	**	**	**
40	West Virginia	**	**	**
41	Tennessee	**	**	**
42	South Carolina	**	**	**
43	Alabama	**	**	**
44	Indiana	**	*	*
45	Oklahoma	*	*	*
46	New Mexico	*	*	**
47	Illinois	*	*	*
48	Mississippi	*	*	**
49	Georgia	*	*	*
50	Texas	*	*	*

TIME TO WORK

Rank	State	Score	Average Minutes	Change, 2013-2016 (%)
	50-State Average		*24.2*	*1.7%*
1	South Dakota	131.0	16.7	-1.0%
2	North Dakota	129.1	17.2	-1.1%
3	Montana	126.7	17.8	-1.7%
4	Wyoming	125.0	18.2	1.1%
5	Nebraska	123.9	18.5	2.0%
6	Alaska	123.8	18.5	-3.1%
7	Iowa	122.0	18.9	0.7%
8	Kansas	120.9	19.2	1.1%
9	Idaho	115.3	20.6	2.8%
10	Oklahoma	112.0	21.4	0.8%
11	Utah	111.5	21.5	-0.5%
12	Arkansas	110.8	21.7	1.2%
13	New Mexico	110.3	21.8	1.9%
14	Wisconsin	109.7	21.9	0.2%
15	Vermont	106.4	22.7	1.0%
16	Kentucky	104.6	23.2	1.6%
17	Ohio	104.0	23.3	1.0%
18	Indiana	103.7	23.4	0.4%
19	Minnesota	103.6	23.4	1.9%
20	Missouri	103.4	23.5	1.6%
21	Oregon	103.1	23.5	3.7%
22	Maine	101.9	23.8	1.9%
23	Nevada	101.1	24.0	0.6%
24	North Carolina	100.4	24.2	2.1%
25	Mississippi	100.1	24.3	1.5%
26	South Carolina	99.9	24.3	3.1%
27	Michigan	99.6	24.4	1.7%
28	Rhode Island	99.2	24.5	2.1%
28	Alabama	99.2	24.5	1.2%
30	Tennessee	97.9	24.8	1.6%
31	Arizona	97.3	25.0	1.1%
32	Colorado	96.4	25.2	2.3%
33	Louisiana	96.2	25.2	0.9%
34	West Virginia	94.9	25.5	-0.3%
35	Delaware	94.8	25.6	0.3%
36	Connecticut	92.9	26.0	3.7%
37	Texas	92.5	26.1	3.7%
38	Pennsylvania	90.2	26.7	2.7%
39	Florida	89.2	26.9	3.6%
40	New Hampshire	88.2	27.2	2.1%
41	Washington	88.0	27.2	5.6%
42	Hawaii	86.6	27.6	5.2%
43	Georgia	84.7	28.0	3.8%
44	Virginia	83.7	28.3	1.7%
45	Illinois	81.7	28.8	2.4%
46	California	81.5	28.8	4.7%
47	Massachusetts	79.2	29.4	3.8%
48	New Jersey	71.0	31.4	2.2%
49	Maryland	66.1	32.6	1.1%
50	New York	64.2	33.0	3.9%

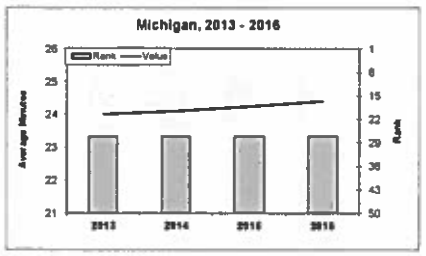
Average travel time to work of workers 16 years and over who did not work at home, 2016

Striking work–life balance has become of increased concern to workers today. Take-home work, via mobile devices, exacerbates demands from the workplace. One solution is to reduce commute time. States with less than average travel time to work are considered to have higher quality of life.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	Average Minutes	Rank
Wisconsin	21.9	14
Ohio	23.3	17
Indiana	23.4	18
Michigan	**24.4**	**27**
Illinois	28.8	45



HISTORICAL PRESERVATION

Rank	State	Score	Projects per 1 mill. residents	Change, 2013-2016 (%)
	50-State Average		*4.5*	*69.3%*
1	Vermont	204.9	20.9	-34.7%
2	Louisiana	196.8	19.4	23.1%
3	Rhode Island	183.3	17.0	99.1%
4	Missouri	176.2	15.8	32.2%
5	Kentucky	150.9	11.3	115.6%
6	Virginia	141.0	9.5	6.1%
7	Nebraska	140.6	9.4	193.7%
8	Maine	138.2	9.0	8.9%
9	Ohio	136.9	8.8	26.9%
10	Iowa	132.4	8.0	-33.3%
11	Arkansas	130.8	7.7	62.6%
12	Maryland	126.7	7.0	42.6%
13	Oklahoma	123.3	6.4	250.6%
14	Massachusetts	120.4	5.9	45.7%
15	Kansas	116.5	5.2	-35.1%
16	Montana	114.5	4.8	21.8%
17	Connecticut	114.1	4.7	469.0%
18	Mississippi	113.8	4.7	16.8%
19	New York	111.6	4.3	30.0%
20	Delaware	111.1	4.2	-22.3%
21	North Carolina	109.6	3.9	10.8%
22	Wisconsin	105.0	3.1	37.6%
23	West Virginia	102.8	2.7	1.3%
24	Minnesota	101.7	2.5	52.5%
25	Alabama	100.2	2.3	118.5%
26	Oregon	99.8	2.2	331.7%
27	Georgia	99.4	2.1	-26.6%
28	Indiana	99.3	2.1	26.0%
29	Pennsylvania	98.4	2.0	-16.7%
30	Michigan	97.1	1.7	12.9%
31	Wyoming	97.1	1.7	-50.2%
32	South Carolina	95.4	1.4	100.0%
33	Washington	95.2	1.4	378.2%
34	Alaska	95.0	1.3	-0.6%
35	Illinois	94.0	1.2	201.3%
36	South Dakota	94.0	1.2	-2.2%
37	Arizona	93.9	1.2	666.1%
38	New Jersey	93.1	1.0	346.8%
39	Colorado	92.5	0.9	19.0%
40	New Hampshire	91.6	0.7	-50.5%
41	Utah	91.1	0.7	100.0%
42	Tennessee	90.0	0.5	-58.2%
43	Florida	89.6	0.4	89.6%
44	Texas	89.4	0.4	216.3%
45	Nevada	89.3	0.3	100.0%
46	California	88.1	0.1	-55.6%
47	Hawaii	87.4	0.0	-100.0%
47	Idaho	87.4	0.0	-100.0%
47	New Mexico	87.4	0.0	-100.0%
47	North Dakota	87.4	0.0	-100.0%

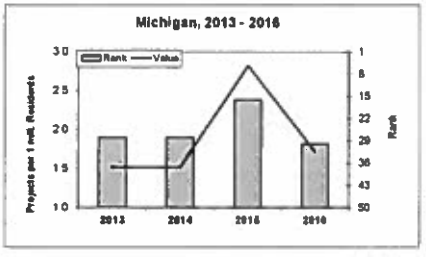
Number of certified projects per one million residents, 2016

For many, part of the richness and quality of contemporary life is sharing in history and heritage. Historic preservation becomes part of the character and 'feel' of community. It helps create a sense and continuity of place. This metric uses federal historic preservation tax credit information relative to the size of the resident population to provide a measure of ongoing historic preservation activity.

Source: National Park Service

Midwest Performance, 2016

State	Number of certified projects	Rank
Ohio	8.8	9
Wisconsin	3.1	22
Indiana	2.1	28
Michigan	**1.7**	**30**
Illinois	1.2	35



LEISURE INDUSTRY EMPLOYMENT

Rank	State	Score	Percent	Change, 2013-2016 (%)
	50-State Average		*2.56%*	*2.7%*
1	Hawaii	144.4	4.04%	-3.5%
2	Montana	141.4	3.94%	2.7%
3	Florida	140.1	3.89%	0.6%
4	Colorado	129.5	3.52%	5.0%
5	Nevada	128.6	3.49%	1.2%
6	Alaska	127.4	3.45%	5.1%
7	Delaware	124.0	3.33%	8.3%
8	New York	116.0	3.05%	2.5%
9	New Hampshire	115.4	3.02%	-0.2%
10	Maryland	114.2	2.98%	2.6%
11	California	112.9	2.94%	1.6%
12	Utah	110.2	2.84%	6.1%
13	Washington	110.2	2.84%	5.3%
14	Massachusetts	108.8	2.79%	7.1%
15	New Jersey	107.8	2.76%	5.2%
16	Vermont	104.4	2.64%	3.1%
17	Connecticut	103.7	2.61%	4.0%
18	Arizona	103.4	2.60%	3.5%
19	Idaho	102.9	2.59%	4.9%
20	North Carolina	102.4	2.57%	4.2%
21	Virginia	102.1	2.56%	5.2%
22	Maine	102.0	2.55%	-1.1%
23	Minnesota	101.8	2.55%	5.0%
24	Pennsylvania	101.4	2.53%	1.9%
25	Louisiana	101.0	2.52%	-1.5%
26	South Carolina	99.0	2.45%	0.2%
27	South Dakota	98.8	2.44%	2.4%
28	Missouri	98.7	2.44%	-5.0%
29	Oregon	98.0	2.41%	4.4%
30	New Mexico	98.0	2.41%	2.4%
31	Illinois	97.9	2.41%	4.3%
32	Rhode Island	95.1	2.31%	-13.5%
33	Ohio	94.8	2.30%	1.2%
34	Nebraska	94.5	2.29%	3.4%
35	Wisconsin	92.8	2.23%	5.9%
36	Wyoming	92.7	2.23%	0.3%
37	Indiana	92.4	2.22%	-3.4%
38	Iowa	89.9	2.13%	7.4%
39	**Michigan**	**89.0**	**2.10%**	**3.0%**
40	Tennessee	88.7	2.08%	6.9%
41	Kansas	88.6	2.08%	4.7%
42	Oklahoma	88.4	2.07%	14.1%
43	Texas	88.2	2.07%	7.4%
44	Kentucky	87.6	2.05%	0.7%
45	Georgia	85.5	1.97%	1.1%
46	West Virginia	84.2	1.93%	2.6%
47	Mississippi	82.3	1.86%	-3.0%
48	Alabama	79.7	1.77%	8.8%
49	Arkansas	79.6	1.77%	4.2%
50	North Dakota	69.9	1.42%	-4.7%

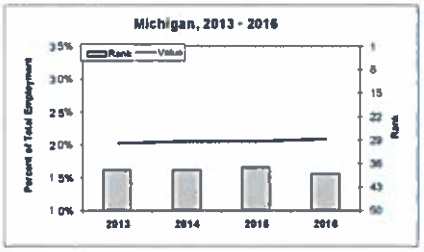
Employment in leisure-related industries as a percentage of all employment 2016

There is a growing body of literature on the lifestyle preferences of the young knowledge workers who drive economic growth in places like Silicon Valley, or the Research Triangle in North Carolina. The research concludes that these workers are attracted to arts, cultural, leisure, and sports offerings to a greater extent than the generations that preceded them. The table above shows the employment in industries related to arts, culture, leisure and sports activities as a percentage of all employment.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Percent of Total Employment	Rank
Illinois	2.41%	31
Ohio	2.30%	33
Wisconsin	2.23%	35
Indiana	2.22%	37
Michigan	**2.10%**	**39**



PARKLAND

Rank	State	Score	Acres per 10 sq. miles	Change, 2012-2015 (%)
	50-State Average		*13.5*	*-1.0%*
1	Alaska	250.0	101.1	0.0%
2	Hawaii	203.7	60.3	0.1%
3	Florida	191.0	53.9	0.1%
4	California	182.6	49.6	0.3%
5	Washington	145.9	31.0	-0.3%
6	New Jersey	144.0	30.0	-53.0%
7	Arizona	144.0	30.0	0.0%
8	Nevada	131.5	23.6	0.2%
9	Utah	126.5	21.1	0.0%
10	Maryland	122.4	19.0	0.0%
11	**Michigan**	**116.3**	**16.0**	**0.5%**
12	Idaho	114.8	15.2	0.0%
13	Massachusetts	112.9	14.2	0.0%
14	Tennessee	111.8	13.7	0.7%
15	Wyoming	110.5	13.0	0.0%
16	Montana	110.1	12.8	0.0%
17	North Carolina	107.6	11.5	1.1%
18	Virginia	107.0	11.2	0.4%
19	New Hampshire	106.3	10.8	-2.0%
20	Delaware	105.5	10.5	0.4%
21	Vermont	103.2	9.3	0.5%
22	Pennsylvania	102.9	9.1	-0.9%
23	New York	102.0	8.7	0.7%
24	Rhode Island	102.0	8.7	3.6%
25	Colorado	100.8	8.1	-0.5%
26	Minnesota	99.2	7.3	0.0%
27	West Virginia	98.8	7.0	0.0%
28	Texas	98.2	6.8	-0.7%
29	Ohio	94.9	5.1	-0.2%
30	South Dakota	94.6	4.9	0.2%
31	Connecticut	94.4	4.8	0.3%
32	New Mexico	94.3	4.8	0.0%
33	South Carolina	92.7	4.0	0.0%
34	Kentucky	92.6	3.9	0.0%
35	Maine	91.9	3.5	0.2%
36	Wisconsin	91.9	3.5	1.1%
37	Missouri	91.4	3.3	2.4%
38	Oregon	90.3	2.7	0.7%
39	Mississippi	90.2	2.7	-1.3%
40	Arkansas	89.8	2.5	0.0%
41	Georgia	89.7	2.4	-2.7%
42	Indiana	89.2	2.2	0.9%
43	Illinois	87.7	1.4	-2.0%
44	Louisiana	87.6	1.4	-0.1%
45	Alabama	87.5	1.3	0.0%
46	North Dakota	87.4	1.3	0.0%
47	Oklahoma	87.1	1.1	-0.9%
48	Nebraska	87.1	1.1	0.0%
49	Iowa	86.5	0.8	1.6%
50	Kansas	86.0	0.5	0.0%

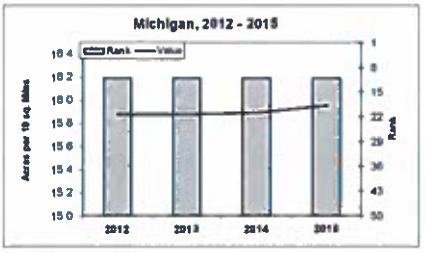
Acres of state and national parkland per 10 square miles of land, 2015

Access to the natural environment is a key component of quality of life. Young knowledge workers also report a strong attraction to natural amenities. The metric measures the acreage of national and state parkland in each state per 10 square miles of land. Please note that this data includes only land under the management of the National Park Service and thus excludes national forests.

Source: National Association of State Park Directors, National Park Service

Midwest Performance, 2015

State	Acres per 10 sq. miles	Rank
Michigan	**16.0**	**11**
Ohio	5.1	29
Wisconsin	3.5	36
Indiana	2.2	42
Illinois	1.4	43



GOLF COURSES

Rank	State	Score	Courses per 100,000 residents	Change, 2013-2016 (%)
	50-State Average		*4.3*	*-2.8%*
1	Iowa	146.9	9.7	-2.8%
2	South Dakota	141.9	9.1	-7.8%
3	Maine	140.4	8.9	5.3%
4	North Dakota	140.4	8.9	-8.3%
5	Nebraska	128.2	7.3	-2.7%
6	Montana	128.0	7.3	-2.3%
7	Vermont	124.7	6.9	-3.9%
8	Wisconsin	122.0	6.6	-2.1%
9	New Hampshire	120.5	6.4	1.5%
10	Minnesota	118.0	6.1	-5.6%
11	Wyoming	117.4	6.0	12.5%
12	Michigan	117.2	6.0	-4.7%
13	Arkansas	113.2	5.5	0.2%
14	South Carolina	111.0	5.2	-7.8%
15	Rhode Island	109.7	5.0	-0.4%
16	Ohio	107.8	4.8	-6.8%
17	Idaho	106.7	4.6	-0.2%
18	Massachusetts	106.0	4.6	-1.1%
19	Kansas	105.9	4.5	-2.0%
20	Indiana	104.8	4.4	-5.5%
21	Florida	104.6	4.4	-3.1%
22	Pennsylvania	104.6	4.4	-0.2%
23	North Carolina	100.9	3.9	-4.3%
24	Hawaii	100.4	3.8	0.3%
25	Kentucky	100.1	3.8	-4.7%
26	Connecticut	99.9	3.8	3.3%
27	West Virginia	99.8	3.8	4.4%
28	Missouri	99.2	3.7	-3.8%
29	Mississippi	98.5	3.6	0.2%
30	Illinois	96.7	3.4	-2.4%
31	New York	96.1	3.3	-1.4%
32	Oregon	95.7	3.3	-9.4%
33	Alabama	95.1	3.2	-3.1%
34	Georgia	94.0	3.0	2.0%
35	Delaware	94.0	3.0	0.6%
36	Washington	93.2	3.0	-6.9%
37	Nevada	91.9	2.8	-5.2%
38	Tennessee	91.2	2.7	-9.4%
39	Arizona	90.8	2.6	-10.9%
40	Oklahoma	90.6	2.6	-1.8%
41	Virginia	90.5	2.6	3.4%
42	New Jersey	90.0	2.6	-2.2%
43	Colorado	89.7	2.5	-6.8%
44	Alaska	88.0	2.3	-0.6%
45	Louisiana	85.7	2.0	-9.0%
46	Texas	85.7	2.0	-5.6%
47	New Mexico	85.0	1.9	0.0%
48	Maryland	84.7	1.9	2.1%
49	California	83.0	1.7	-2.6%
50	Utah	81.7	1.5	-18.8%

Number of golf courses and country clubs per 100,000 residents, 2016

Recreational resources are increasingly important to workers in the innovation economy. Golf courses and country clubs are an attractive asset to all age groups. The above table shows the proportion of golf courses and country club establishments relative to the number of residents.
Source: U.S. Bureau of Labor Statistics

TRAILS

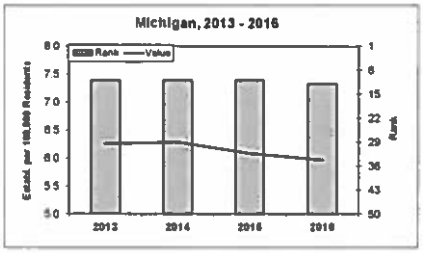
Rank	State	Score	Trail miles per 100,000 residents	Change, 2013-2016 (%)
	50-State Average		*10.8*	*18%*
1	Pennsylvania	183.1	44.8	0.9%
2	Massachusetts	155.5	32.5	6.9%
3	Alabama	148.5	29.4	0.9%
4	New York	144.3	27.6	9.1%
5	Florida	140.9	26.0	33.9%
6	West Virginia	138.3	24.9	0.0%
7	Connecticut	137.7	24.6	22.6%
8	Maryland	129.3	20.9	0.0%
9	New Jersey	125.1	19.0	0.0%
10	Oregon	120.2	16.8	15.5%
11	Kentucky	116.2	15.0	0.0%
12	Vermont	115.3	14.7	0.0%
13	Virginia	112.4	13.4	0.0%
14	Washington	111.8	13.1	5.3%
15	Wisconsin	110.6	12.5	28.7%
16	Rhode Island	109.3	12.0	0.0%
17	Illinois	108.2	11.5	30.8%
18	Delaware	107.2	11.0	0.0%
19	South Carolina	106.9	10.9	25.1%
20	North Carolina	106.1	10.6	4.2%
21	Ohio	104.9	10.0	243.6%
22	Georgia	104.5	9.8	9.6%
23	Indiana	104.0	9.6	63.0%
24	Minnesota	101.3	8.4	0.0%
25	Tennessee	101.2	8.3	9.0%
26	California	98.8	7.3	8.0%
27	New Hampshire	98.1	7.0	0.0%
28	Arkansas	97.8	6.9	0.0%
29	Missouri	97.5	6.7	0.0%
30	Iowa	97.3	6.6	0.0%
31	Idaho	97.1	6.5	0.0%
32	Kansas	97.0	6.5	260.0%
33	Michigan	96.4	6.2	9.1%
34	Hawaii	95.0	5.6	0.0%
35	North Dakota	95.0	5.6	59.6%
36	Mississippi	93.2	4.8	23.8%
37	Arizona	92.7	4.6	7.5%
38	Montana	92.0	4.3	0.0%
39	South Dakota	91.2	3.9	0.0%
40	Colorado	89.4	3.1	0.0%
41	Oklahoma	89.0	2.9	3.4%
42	Nebraska	87.8	2.4	0.0%
43	New Mexico	87.7	2.3	0.0%
44	Utah	86.7	1.9	0.0%
45	Nevada	86.5	1.8	20.4%
46	Louisiana	85.8	1.5	0.0%
47	Wyoming	85.6	1.4	0.0%
48	Texas	85.6	1.4	0.0%
49	Maine	84.8	1.1	11.9%
50	Alaska	84.0	0.7	0.0%

Number of national trails per 100,000 residents, 2016

A state's natural resources are important for recreation and enjoyment and provide additional financial resources from tourism. The above table shows the number of trails designated as national trails per 100,000 residents in the state.
Source: National Recrational Trails Program

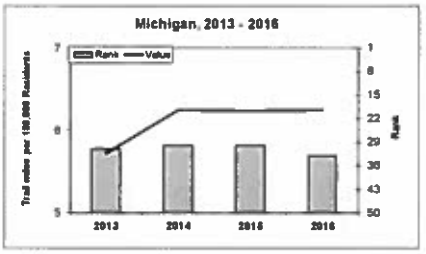
Midwest Performance, 2016

State	Establ. per 100,000 Residents	Rank
Wisconsin	6.6	8
Michigan	**6.0**	**12**
Ohio	4.8	16
Indiana	4.4	20
Illinois	3.4	30



Midwest Performance, 2016

State	Trail miles per 100,000 Residents	Rank
Wisconsin	12.5	15
Illinois	11.5	17
Ohio	10.0	21
Indiana	9.6	23
Michigan	**6.2**	**33**



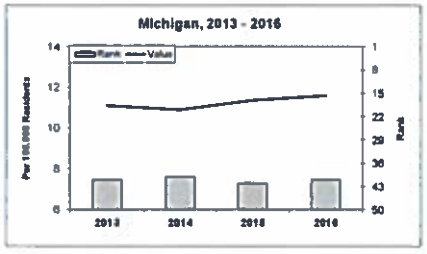
CULTURAL INSTITUTIONS

Rank	State	Score	Per Capita	Change, 2013-2016 (%)
	50-State Average		*17.8*	*4.7%*
1	New York	149.5	38.3	8.0%
2	California	145.7	36.5	10.5%
3	Montana	137.0	32.6	5.2%
4	Nevada	130.7	29.8	-2.6%
5	Vermont	129.8	29.4	4.6%
6	South Dakota	122.1	25.9	6.8%
7	Colorado	117.8	23.9	8.8%
8	Maine	117.3	23.8	12.7%
9	Tennessee	115.1	22.8	7.3%
10	Wyoming	114.7	22.6	-1.8%
11	Rhode Island	113.5	22.0	7.4%
12	Florida	113.5	22.0	-4.0%
13	New Mexico	113.4	22.0	14.3%
14	Minnesota	112.6	21.6	-0.8%
15	Utah	111.0	20.9	12.9%
16	Oregon	111.0	20.9	10.4%
17	Alaska	110.1	20.5	-10.0%
18	North Dakota	109.6	20.3	12.8%
19	Idaho	108.8	19.9	13.7%
20	Hawaii	108.1	19.6	-1.4%
21	Connecticut	108.1	19.6	4.6%
22	Massachusetts	105.9	18.6	3.6%
23	Illinois	105.8	18.5	0.6%
24	New Hampshire	105.4	18.4	2.4%
25	Iowa	100.0	15.9	0.4%
26	Kentucky	100.0	15.9	7.7%
27	Nebraska	99.1	15.5	-2.7%
28	Maryland	98.7	15.4	-5.5%
29	Delaware	97.7	14.9	-0.1%
30	Georgia	96.6	14.4	11.9%
31	North Carolina	96.2	14.2	4.3%
32	Pennsylvania	95.4	13.9	9.1%
33	Missouri	95.3	13.8	4.1%
34	Virginia	95.2	13.8	3.3%
35	Washington	94.6	13.5	-1.2%
36	New Jersey	94.2	13.3	-5.8%
37	Louisiana	94.1	13.3	8.0%
38	Arkansas	91.9	12.3	3.2%
39	Indiana	90.8	11.8	10.3%
40	South Carolina	90.5	11.7	13.5%
41	**Michigan**	**90.5**	**11.6**	**4.5%**
42	Wisconsin	90.5	11.6	3.7%
43	Arizona	88.9	10.9	-7.8%
44	Kansas	88.7	10.8	5.6%
45	Texas	87.1	10.1	7.1%
46	Ohio	87.1	10.1	4.2%
47	Oklahoma	86.4	9.8	3.9%
48	West Virginia	84.5	8.9	11.6%
49	Mississippi	80.8	7.3	7.1%
50	Alabama	80.3	7.0	7.0%

Number of cultural establishments per 100,000 residents, 2016
In today's economy, increasing numbers of residents can choose where to live first, and then do their work via telecommuting. Choice of residence, both state and locality, is being influenced by such factors as proximity to cultural amenities and outdoor recreation, especially for the young college educated generation. This metric captures the percentage of all establishments in the state classified as performing arts, spectator sports, & related industries as well as museums, historical sites, and similar institutions. *Source: U.S. Bureau of Labor Statistics*

Midwest Performance, 2016

State	Per 100,000 Residents	Rank
Illinois	18.5	23
Indiana	11.8	39
Michigan	**11.6**	**41**
Wisconsin	11.6	42
Ohio	10.1	46



POCKET BOOK INDICATORS

Midwest Performance

	2016	2014	2012
Indiana	*****	*****	*****
Michigan	*****	****	****
Wisconsin	****	****	****
Ohio	****	****	****
Illinois	***	***	***

Rank	State	2016	2014	2012
1	South Dakota	*****	*****	*****
2	Nebraska	*****	*****	*****
3	Iowa	*****	*****	*****
4	Idaho	*****	*****	*****
5	Tennessee	*****	*****	*****
6	North Dakota	*****	*****	*****
7	Indiana	*****	*****	*****
8	Kansas	*****	*****	*****
9	Arkansas	*****	****	****
10	Utah	*****	*****	*****
11	Wyoming	*****	*****	*****
12	Mississippi	*****	*****	*****
13	New Hampshire	*****	****	****
14	Missouri	*****	*****	*****
15	Kentucky	*****	*****	*****
16	Oklahoma	*****	*****	*****
17	Maine	*****	****	****
18	South Carolina	*****	*****	*****
19	**Michigan**	*****	****	****
20	Alabama	****	*****	*****
21	Montana	****	*****	****
22	Minnesota	****	****	****
23	North Carolina	****	****	****
24	Delaware	****	****	****
25	Wisconsin	****	****	****
26	Ohio	****	****	****
27	Virginia	****	****	****
28	Vermont	****	****	****
29	West Virginia	****	*****	*****
30	Louisiana	****	*****	*****
31	New Mexico	****	****	****
32	Texas	****	****	****
33	Colorado	****	****	****
34	Arizona	****	****	****
35	Georgia	****	****	****
36	Pennsylvania	****	****	****
37	Florida	****	****	****
38	Washington	***	***	***
39	Maryland	***	***	***
40	Alaska	***	***	****
41	Illinois	***	***	***
42	Oregon	***	***	***
43	Massachusetts	***	***	***
44	Nevada	***	***	***
45	Rhode Island	***	***	***
46	Connecticut	***	***	***
47	New Jersey	**	**	**
48	California	**	*	**
49	Hawaii	*	*	*
50	New York	*	*	*

URBAN COST OF LIVING

Rank	State	Score	Index	Change, 2011-2014 (%)
	50-State Average			*0.5%*
1	Mississippi	117.2	87.0	-9.9%
2	Nebraska	115.6	88.3	-1.2%
3	Tennessee	113.2	90.2	2.3%
4	Kansas	111.8	91.3	-1.0%
5	Alabama	111.6	91.5	3.2%
6	Kentucky	111.1	91.9	0.2%
7	Iowa	110.9	92.0	0.9%
8	New Mexico	110.4	92.4	-2.3%
9	Indiana	109.1	93.5	(n/a)
10	Missouri	108.8	93.7	2.9%
11	North Dakota	108.4	94.0	0.9%
12	Utah	107.9	94.4	-0.2%
13	Wyoming	107.8	94.5	-2.2%
14	Idaho	107.5	94.7	-1.5%
15	North Carolina	107.2	95.0	1.8%
16	**Michigan**	**107.0**	**95.1**	**1.5%**
17	South Carolina	106.9	95.2	-0.3%
18	Oklahoma	106.0	95.9	6.0%
19	Arizona	105.7	96.2	-0.3%
20	Louisiana	102.8	98.5	3.0%
20	Arkansas	102.8	98.5	2.9%
22	South Dakota	102.5	98.7	1.6%
23	Texas	102.1	99.0	10.2%
24	Georgia	101.4	99.6	2.4%
25	Virginia	100.0	100.7	-4.4%
26	Montana	99.9	100.8	-0.9%
27	Ohio	99.7	100.9	-0.5%
28	Wisconsin	98.2	102.1	2.8%
29	Nevada	93.3	106.0	5.9%
30	Colorado	91.4	107.5	2.4%
31	Minnesota	90.9	107.9	-2.4%
32	Delaware	90.6	108.2	-0.7%
33	Maryland	88.9	109.5	-8.1%
34	Maine	88.2	110.1	-2.6%
35	Florida	86.5	111.4	4.0%
36	New Hampshire	81.3	115.6	-3.5%
37	Illinois	79.9	116.7	1.7%
38	Vermont	77.0	119.0	-2.5%
39	Pennsylvania	76.4	119.5	-4.4%
40	Rhode Island	72.7	122.4	-2.5%
41	Connecticut	72.5	122.6	-1.0%
42	Oregon	69.3	125.1	10.1%
43	Washington	67.0	126.9	8.4%
44	New Jersey	66.7	127.2	-3.0%
45	Alaska	65.0	128.5	-1.6%
46	California	56.7	135.1	1.7%
47	Massachusetts	53.5	137.7	0.3%
48	Hawaii	6.7	174.9	4.2%
49	New York	-50.0	222.6	1.7%
(n/a)	West Virginia	(n/a)	(n/a)	(n/a)

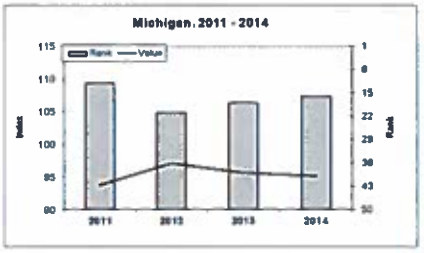
C2ER Cost of Living Index, 2014

As with housing, a low cost of living contributes strongly to quality of life. C2ER, a national economic-development research organization, maintains an extensive set of quarterly cost-of-living data. The above table is an index of the cost of living in each state. A lower index score corresponds to a lower cost of living; a value of 100 is equal to the United States cost of living.

Source: C2ER

Midwest Performance, 2014

State	Index	Rank
Indiana	93.5	9
Michigan	**95.1**	**16**
Ohio	100.9	27
Wisconsin	102.1	28
Illinois	116.7	37



URBAN HOUSING AFFORDABILITY

Rank	State	Score	Hourly wage needed	Change, 2013-2016 (%)
	50-State Average		*$19.0*	*10.6%*
1	Arkansas	114.0	$13.7	9.2%
2	Kentucky	113.0	$14.0	9.9%
3	South Dakota	112.2	$14.1	7.9%
4	West Virginia	110.6	$14.5	13.2%
5	Iowa	110.3	$14.6	9.9%
6	Idaho	109.9	$14.7	10.1%
7	Oklahoma	109.3	$14.8	11.5%
7	Alabama	109.3	$14.8	12.6%
9	Mississippi	109.1	$14.8	9.2%
10	Montana	108.8	$14.9	10.0%
11	Ohio	108.4	$15.0	8.4%
12	Indiana	107.6	$15.2	8.1%
13	Nebraska	107.4	$15.2	12.8%
14	Tennessee	106.9	$15.3	9.4%
15	Kansas	105.8	$15.6	8.7%
16	Missouri	105.4	$15.7	9.5%
17	New Mexico	104.9	$15.8	6.0%
18	North Carolina	104.9	$15.8	9.9%
19	Wyoming	104.9	$15.8	7.0%
20	South Carolina	104.7	$15.8	8.8%
21	Wisconsin	103.5	$16.1	9.1%
22	Louisiana	103.3	$16.2	4.6%
23	**Michigan**	**102.9**	**$16.2**	**7.7%**
24	North Dakota	102.4	$16.4	15.3%
25	Georgia	100.5	$16.8	7.8%
26	Utah	99.5	$17.0	11.5%
27	Arizona	97.1	$17.6	0.2%
28	Nevada	95.1	$18.0	-6.4%
29	Maine	95.0	$18.1	11.5%
30	Texas	93.5	$18.4	9.6%
31	Minnesota	92.5	$18.6	13.0%
32	Pennsylvania	92.2	$18.7	7.8%
33	Rhode Island	88.6	$19.5	9.1%
34	Oregon	87.4	$19.8	21.5%
35	Florida	83.4	$20.7	6.7%
36	Illinois	82.6	$20.9	20.4%
37	Delaware	79.3	$21.6	7.6%
38	New Hampshire	78.9	$21.7	7.6%
39	Vermont	78.0	$21.9	13.1%
40	Colorado	77.7	$22.0	24.8%
41	Virginia	71.9	$23.3	11.3%
42	Washington	70.4	$23.6	26.8%
43	Alaska	68.1	$24.2	11.7%
44	Connecticut	65.6	$24.7	7.4%
45	New Jersey	54.2	$27.3	9.6%
46	Massachusetts	53.9	$27.4	13.7%
47	New York	50.9	$28.1	12.9%
48	Maryland	50.0	$28.3	13.4%
49	California	38.4	$30.9	18.7%
50	Hawaii	19.5	$35.2	11.6%

Hourly wage needed to afford two-bedroom housing at fair-market rent, 2016

This affordability metric has been included since last year as a replacement for the CFED Urban Housing Index. It not only captures the cost of housing but its relationship to income. This table shows the hourly wage needed to afford two-bedroom housing at fair market rent.

Source: National Low Income Housing Coalition

Midwest Performance, 2016

State	Hourly Wage Needed	Rank
Ohio	$15.0	11
Indiana	$15.2	12
Wisconsin	$16.1	21
Michigan	**$16.2**	**23**
Illinois	$20.9	36

HOMEOWNERSHIP RATE

Rank	State	Score	Rates	Change, 2013-2016 (%)
	50-State Average		*66.0%*	*-2.3%*
1	West Virginia	127.4	74.8%	-2.6%
2	Delaware	121.2	73.0%	-1.5%
3	**Michigan**	**120.6**	**72.8%**	**-1.5%**
4	Maine	119.9	72.6%	-1.2%
5	Minnesota	119.2	72.4%	-1.4%
6	New Hampshire	117.2	71.8%	-3.1%
7	Vermont	115.5	71.3%	-2.3%
7	Utah	115.5	71.3%	0.6%
9	Indiana	114.1	70.9%	-1.1%
10	Idaho	112.7	70.5%	-1.4%
11	Wyoming	111.7	70.2%	-0.4%
12	Iowa	111.0	70.0%	0.3%
13	Mississippi	110.0	69.7%	-6.1%
13	Alabama	110.0	69.7%	-4.1%
15	South Dakota	109.0	69.4%	2.4%
16	South Carolina	107.3	68.9%	-4.8%
17	Pennsylvania	105.9	68.5%	-4.2%
18	Nebraska	104.2	68.0%	-0.3%
19	Kentucky	103.9	67.9%	0.6%
20	Wisconsin	103.2	67.7%	-1.2%
21	Arkansas	102.9	67.6%	3.4%
22	New Mexico	102.2	67.4%	0.1%
23	Montana	101.2	67.1%	-0.4%
23	Kansas	101.2	67.1%	5.7%
25	Oklahoma	100.2	66.8%	-4.4%
26	Missouri	99.8	66.7%	-6.5%
27	Maryland	99.2	66.5%	-0.6%
28	Tennessee	98.8	66.4%	-0.6%
29	Virginia	98.5	66.3%	-2.6%
30	Ohio	97.8	66.1%	-2.7%
31	North Carolina	96.4	65.7%	-2.4%
32	Illinois	95.1	65.3%	-2.8%
33	Alaska	94.7	65.2%	0.9%
34	Florida	91.7	64.3%	-2.7%
35	Louisiana	91.3	64.2%	-5.3%
35	Connecticut	91.3	64.2%	-6.3%
37	Oregon	85.9	62.6%	-2.5%
38	Colorado	85.2	62.4%	-3.1%
39	Georgia	84.9	62.3%	-3.0%
40	New Jersey	84.5	62.2%	-4.2%
41	Arizona	83.5	61.9%	-4.9%
42	Washington	82.5	61.6%	-1.8%
43	Texas	82.2	61.5%	-2.8%
44	North Dakota	81.8	61.4%	-9.7%
45	Massachusetts	76.0	59.7%	-8.6%
46	Hawaii	69.2	57.7%	0.7%
47	Rhode Island	64.5	56.3%	-8.5%
48	Nevada	58.4	54.5%	-2.7%
49	California	56.0	53.8%	-0.9%
50	New York	48.2	51.5%	-2.8%

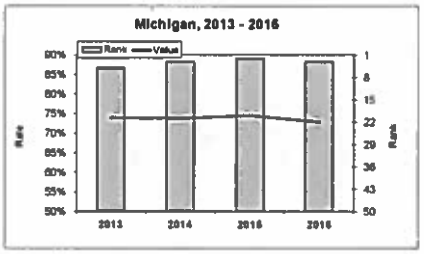
Homeownership rate, 2016

A variety of studies point to the benefits of homeownership: increased economic stability, community vitality, even child learning. Homeownership is also important for many startup businesses, allowing entrepreneurs to use home equity as a source of early-stage funding. The above table shows the percentage of households in each state that own their homes.

Source: U.S. Census Bureau.

Midwest Performance, 2016

State	Rate	Rank
Michigan	**72.8%**	**3**
Indiana	70.9%	9
Wisconsin	67.7%	20
Ohio	66.1%	30
Illinois	65.3%	32



UNEMPLOYMENT RATE

Rank	State	Score	Rate	Change, 2013-2016 (%)
	50-State Average		*4.6%*	*-29.4%*
1	South Dakota	131.4	2.8%	-26.3%
1	New Hampshire	131.4	2.8%	-45.1%
3	Hawaii	128.3	3.0%	-37.5%
4	North Dakota	125.2	3.2%	10.3%
4	Nebraska	125.2	3.2%	-15.8%
6	Vermont	123.6	3.3%	-25.0%
6	Colorado	123.6	3.3%	-51.5%
8	Utah	122.0	3.4%	-27.7%
9	Massachusetts	117.3	3.7%	-44.8%
9	Iowa	117.3	3.7%	-22.9%
11	Idaho	115.7	3.8%	-37.7%
12	Minnesota	114.1	3.9%	-20.4%
12	Maine	114.1	3.9%	-40.9%
14	Virginia	112.6	4.0%	-29.8%
14	Arkansas	112.6	4.0%	-45.9%
16	Wisconsin	111.0	4.1%	-39.7%
16	Montana	111.0	4.1%	-24.1%
18	Kansas	109.4	4.2%	-20.8%
19	Maryland	107.9	4.3%	-34.8%
20	Indiana	106.3	4.4%	-42.9%
20	Delaware	106.3	4.4%	-34.3%
22	Missouri	104.7	4.5%	-32.8%
23	Texas	103.1	4.6%	-25.8%
24	Tennessee	100.0	4.8%	-38.5%
24	South Carolina	100.0	4.8%	-36.8%
24	New York	100.0	4.8%	-37.7%
27	Oregon	98.4	4.9%	-38.0%
27	Oklahoma	98.4	4.9%	-7.5%
27	Ohio	98.4	4.9%	-34.7%
27	**Michigan**	**98.4**	**4.9%**	**-44.9%**
27	Florida	98.4	4.9%	-32.9%
32	New Jersey	96.9	5.0%	-39.0%
32	Kentucky	96.9	5.0%	-37.5%
34	North Carolina	95.3	5.1%	-35.4%
34	Connecticut	95.3	5.1%	-33.8%
36	Wyoming	92.1	5.3%	12.8%
36	Rhode Island	92.1	5.3%	-43.0%
36	Arizona	92.1	5.3%	-32.1%
39	Washington	90.6	5.4%	-22.9%
39	Pennsylvania	90.6	5.4%	-27.0%
39	Georgia	90.6	5.4%	-34.1%
39	California	90.6	5.4%	-39.3%
43	Nevada	85.9	5.7%	-40.0%
44	Mississippi	84.3	5.8%	-33.3%
45	Illinois	82.7	5.9%	-35.2%
46	West Virginia	81.1	6.0%	-10.4%
46	Alabama	81.1	6.0%	-16.7%
48	Louisiana	79.6	6.1%	-9.0%
49	Alaska	71.7	6.6%	-4.3%
50	New Mexico	70.1	6.7%	-2.9%

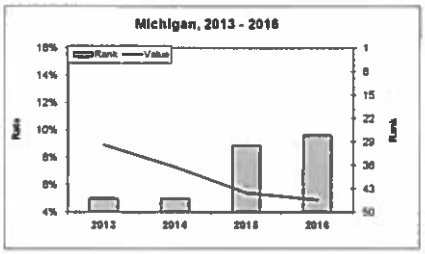
Unemployment rate, 2016

Although a dynamic economy will experience job churn, over the long run, high unemployment rates reflect a structural mismatch between employer needs and worker skills that can permanently damage the dynamism of the economy. A high rate of unemployment furthermore signals low job security to potential new residents and will therefore scare away many new skilled workers. The above table shows the official unemployment rate.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Rate	Rank
Wisconsin	4.1%	16
Indiana	4.4%	20
Michigan	**4.9%**	**27**
Ohio	4.9%	27
Illinois	5.9%	45



PER CAPITA DISPOSABLE PERSONAL INCOME

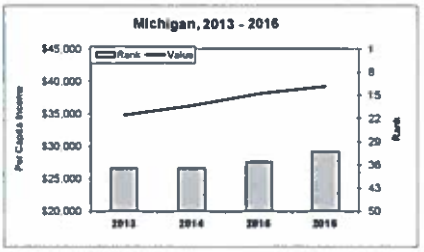
Rank	State	Score	Per Capita Income	Change, 2013-2016 (%)
	50-State Average		*$42,273*	*9.1%*
1	Connecticut	140.9	$58,465	8.4%
2	Massachusetts	130.8	$54,190	11.7%
3	New Jersey	128.0	$52,999	10.5%
4	Alaska	122.7	$50,747	8.3%
5	Maryland	121.4	$50,200	9.9%
6	New Hampshire	121.1	$50,077	7.3%
7	Wyoming	119.8	$49,545	5.8%
8	New York	119.7	$49,478	8.2%
9	North Dakota	119.5	$49,407	0.2%
10	Washington	117.7	$48,630	13.2%
11	California	116.8	$48,266	15.1%
12	Virginia	111.9	$46,191	8.8%
13	Colorado	110.1	$45,418	10.5%
14	Illinois	109.5	$45,171	11.2%
15	Hawaii	108.9	$44,927	12.1%
16	Nebraska	108.7	$44,823	9.0%
17	Vermont	108.6	$44,808	9.3%
18	Minnesota	108.5	$44,746	9.4%
19	Pennsylvania	108.4	$44,696	9.4%
20	Rhode Island	108.3	$44,662	8.6%
21	South Dakota	105.3	$43,415	6.5%
22	Delaware	103.2	$42,498	9.3%
23	Kansas	102.9	$42,379	3.0%
24	Texas	101.1	$41,606	6.6%
25	Wisconsin	100.2	$41,261	9.1%
26	Iowa	99.8	$41,052	6.1%
27	Florida	99.3	$40,854	11.6%
28	Ohio	96.5	$39,665	9.7%
29	Tennessee	96.4	$39,628	11.1%
30	Maine	96.0	$39,445	(n/a)
31	Oregon	95.9	$39,434	14.1%
32	**Michigan**	**95.4**	**$39,191**	**12.4%**
33	Nevada	94.9	$39,002	11.9%
34	Indiana	94.0	$38,619	9.8%
35	Oklahoma	94.0	$38,597	-0.1%
36	Louisiana	93.7	$38,498	6.2%
37	Montana	93.0	$38,181	8.2%
38	Missouri	92.7	$38,081	6.9%
39	North Carolina	91.2	$37,415	11.0%
40	Georgia	91.1	$37,387	13.0%
41	Utah	88.6	$36,335	12.9%
42	Arizona	88.5	$36,308	10.2%
43	Arkansas	87.4	$35,846	10.3%
44	South Carolina	86.7	$35,516	11.6%
45	Idaho	86.6	$35,490	9.8%
46	Alabama	85.8	$35,154	8.4%
47	New Mexico	85.5	$35,028	10.9%
48	Kentucky	84.7	$34,701	8.6%
49	West Virginia	80.9	$33,088	5.7%
50	Mississippi	79.6	$32,531	6.4%

Per capita disposable personal income, 2016

The average disposable income of a resident in a state reflects economic opportunities as well as the successful participation of individuals in the economy. It is also a factor of attractiveness of a region that takes not just wages but the states' tax structure into account. The above table shows per capita personal income minus personal current taxes.
Source: U.S. Bureau of Economic Analysis

Midwest Performance, 2016

State	Per Capita Income	Rank
Illinois	$45,171	14
Wisconsin	$41,261	25
Ohio	$39,665	28
Michigan	**$39,191**	**32**
Indiana	$38,619	34



STATE AND LOCAL TAX BURDEN

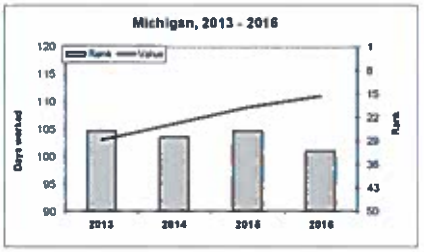
Rank	State	Score	Number of Worked Days	Change, 2013-2016 (%)
	50-State Average		*109*	*5.8%*
1	Mississippi	124.3	94	6.8%
2	Tennessee	122.5	95	4.4%
3	Louisiana	120.7	96	9.1%
4	Alabama	118.9	97	3.2%
4	South Dakota	118.9	97	4.3%
6	New Mexico	117.1	98	6.5%
7	Alaska	115.3	99	4.2%
8	Kentucky	113.5	100	5.3%
8	Oklahoma	113.5	100	5.3%
8	South Carolina	113.5	100	8.7%
8	Washington	113.5	100	-8.3%
12	Missouri	111.7	101	4.1%
13	Arkansas	109.9	102	6.3%
14	Iowa	108.1	103	5.1%
14	North Carolina	108.1	103	4.0%
16	Arizona	106.3	104	10.6%
16	Idaho	106.3	104	6.1%
16	Maine	106.3	104	7.2%
19	Nebraska	104.5	105	4.0%
20	Georgia	102.7	106	8.2%
20	Montana	102.7	106	7.1%
20	Texas	102.7	106	7.1%
20	Virginia	102.7	106	-2.8%
24	Delaware	100.9	107	3.9%
24	Indiana	100.9	107	4.9%
26	Hawaii	99.1	108	4.9%
26	Kansas	99.1	108	10.2%
26	Ohio	99.1	108	6.9%
29	Florida	97.3	109	4.8%
30	North Dakota	95.5	110	2.8%
30	Utah	95.5	110	7.8%
32	**Michigan**	**93.7**	**111**	**7.8%**
32	New Hampshire	93.7	111	6.7%
32	Pennsylvania	93.7	111	4.7%
32	Vermont	93.7	111	7.8%
36	Wyoming	91.9	112	6.7%
37	Colorado	90.1	113	6.6%
37	Oregon	90.1	113	8.7%
39	Nevada	86.5	115	11.7%
40	West Virginia	84.7	116	7.4%
40	Wisconsin	84.7	116	6.4%
42	Massachusetts	82.9	117	2.6%
42	Rhode Island	82.9	117	8.3%
44	Illinois	81.1	118	3.5%
45	California	79.3	119	5.3%
45	Minnesota	79.3	119	6.3%
47	Maryland	70.4	124	12.7%
48	New York	59.6	130	4.0%
49	New Jersey	57.8	131	6.5%
50	Connecticut	41.6	140	6.1%

Number of days worked to pay tax bill, 2016

The ultimate measure of a state or local government's influence on economic competitiveness is the amount of residents' private income that is consumed by government in the form of taxes. The table above shows the number of days that a state resident has to work in order to pay a typical tax bill, including federal, state and local taxes.
Source: Tax Foundation

Midwest Performance, 2016

State	Number of Days Worked	Rank
Indiana	107	24
Ohio	108	26
Michigan	**111**	**32**
Wisconsin	116	40
Illinois	118	44



HEALTH AND SAFETY

Midwest Performance

	2016	2014	2012
Michigan	****	****	****
Wisconsin	****	****	*****
Indiana	***	****	****
Ohio	***	****	****
Illinois	**	****	****

Rank	State	2016	2014	2012
1	Massachusetts	*****	****	*****
2	Vermont	*****	*****	*****
3	West Virginia	*****	*****	****
4	Rhode Island	*****	***	****
5	Maine	*****	****	*****
6	Minnesota	*****	*****	*****
7	North Dakota	*****	*****	*****
8	South Dakota	*****	*****	*****
9	New Hampshire	****	****	****
10	Nebraska	****	****	****
11	Iowa	****	*****	*****
12	Mississippi	****	****	****
13	Alabama	****	****	****
14	**Michigan**	****	****	****
15	Hawaii	****	****	****
16	South Carolina	****	***	***
17	Kansas	****	*****	*****
18	North Carolina	****	****	****
19	Arkansas	****	****	***
20	Florida	****	****	****
21	Wyoming	****	****	****
22	Tennessee	****	****	****
23	Wisconsin	****	****	*****
24	Oregon	****	****	***
25	Idaho	****	****	****
26	Washington	***	***	***
27	Louisiana	***	****	****
28	Kentucky	***	****	****
29	New Mexico	***	***	***
30	Montana	***	****	****
31	Oklahoma	***	***	****
32	Nevada	***	***	***
33	Indiana	***	****	****
34	Virginia	***	****	****
35	New York	***	****	****
36	Missouri	***	****	****
37	Ohio	***	****	****
38	Alaska	**	***	***
39	Delaware	**	***	****
40	Maryland	**	***	****
41	Connecticut	**	***	****
42	Illinois	**	****	****
43	Pennsylvania	**	****	****
44	New Jersey	**	***	****
45	Georgia	*	***	***
46	Colorado	*	***	****
47	Texas	*	*	***
48	California	*	***	***
49	Arizona	*	***	***
50	Utah	*	*	***

LACK OF HEALTH INSURANCE

Rank	State	Score	Percent	Change, 2013-2016 (%)
	50-State Average		*8.0%*	*-40.7%*
1	Massachusetts	126.1	2.5%	-32.4%
2	Hawaii	121.4	3.5%	-47.8%
3	Vermont	120.4	3.7%	-48.6%
4	Minnesota	118.5	4.1%	-50.0%
5	Iowa	117.6	4.3%	-46.9%
5	Rhode Island	117.6	4.3%	-62.9%
7	Connecticut	114.7	4.9%	-47.9%
8	Kentucky	113.8	5.1%	-64.3%
9	West Virginia	112.8	5.3%	-62.1%
9	Wisconsin	112.8	5.3%	-41.8%
11	**Michigan**	**112.3**	**5.4%**	**-58.9%**
12	Ohio	111.4	5.6%	-49.1%
12	Pennsylvania	111.4	5.6%	-42.3%
14	Delaware	110.9	5.7%	-37.4%
15	New Hampshire	110.0	5.9%	-44.9%
16	Washington	109.5	6.0%	-57.1%
17	Maryland	109.0	6.1%	-40.2%
17	New York	109.0	6.1%	-43.0%
19	Oregon	108.5	6.2%	-57.8%
20	Illinois	107.1	6.5%	-48.8%
21	North Dakota	104.7	7.0%	-32.7%
22	California	103.3	7.3%	-57.6%
23	Colorado	102.4	7.5%	-46.8%
24	Arkansas	100.5	7.9%	-50.6%
25	Maine	100.0	8.0%	-28.6%
25	New Jersey	100.0	8.0%	-39.4%
27	Indiana	99.5	8.1%	-42.1%
27	Montana	99.5	8.1%	-50.9%
29	Nebraska	97.2	8.6%	-23.9%
30	Kansas	96.7	8.7%	-29.3%
30	South Dakota	96.7	8.7%	-23.0%
30	Virginia	96.7	8.7%	-29.3%
33	Utah	96.2	8.8%	-37.1%
34	Missouri	95.7	8.9%	-31.5%
35	Tennessee	95.3	9.0%	-35.3%
36	Alabama	94.8	9.1%	-33.1%
37	New Mexico	94.3	9.2%	-50.5%
38	Arizona	90.5	10.0%	-41.5%
38	South Carolina	90.5	10.0%	-36.7%
40	Idaho	90.0	10.1%	-37.7%
41	Louisiana	89.1	10.3%	-38.0%
42	North Carolina	88.6	10.4%	-33.3%
43	Nevada	83.9	11.4%	-44.9%
44	Wyoming	83.4	11.5%	-14.2%
45	Mississippi	82.0	11.8%	-31.0%
46	Florida	78.6	12.5%	-37.5%
47	Georgia	76.7	12.9%	-31.4%
48	Oklahoma	72.5	13.8%	-22.0%
49	Alaska	71.5	14.0%	-24.3%
50	Texas	59.2	16.6%	-24.9%

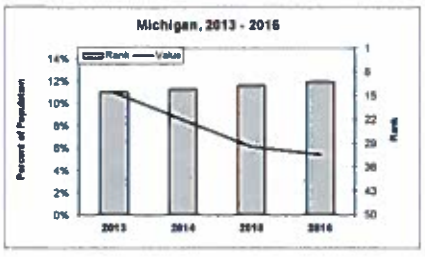
Percent of residents without health insurance coverage, 2016

The lack of health insurance has important health as well as financial consequences for individuals and their resident state. The inability to access care and partake in preventive-care measures has long-term impacts on the financial well-being of the health-care system. The above table measures the percentage of the population not covered by private or public health insurance.

Source: U.S. Census Bureau

Midwest Performance, 2016

State	Percent of Population	Rank
Wisconsin	5.3%	9
Michigan	**5.4%**	**11**
Ohio	5.6%	12
Illinois	6.5%	20
Indiana	8.1%	27



CRIME INDEX

Rank	State	Score	Crimes per 100,00 Residents	Change, 2013-2016 (%)
	50-State Average		*2,836*	*-7.0%*
1	New Hampshire	125.3	1,710	-28.5%
2	Maine	124.1	1,769	-26.7%
3	New Jersey	123.7	1,790	-17.5%
4	Vermont	122.4	1,856	-20.3%
5	New York	121.1	1,922	-13.2%
6	Massachusetts	120.8	1,938	-21.1%
7	Idaho	120.1	1,974	-4.6%
8	Connecticut	118.9	2,035	-8.7%
9	Pennsylvania	118.4	2,059	-13.7%
10	Virginia	118.1	2,077	-7.8%
11	Rhode Island	116.9	2,138	-20.4%
12	Wyoming	115.6	2,202	-8.1%
13	Wisconsin	114.9	2,239	-9.0%
14	**Michigan**	**112.3**	**2,369**	**-14.1%**
15	Minnesota	112.2	2,376	-10.1%
16	Iowa	112.2	2,377	-3.2%
17	South Dakota	111.7	2,399	8.4%
18	West Virginia	111.6	2,405	0.5%
19	Kentucky	111.3	2,422	-5.5%
20	Illinois	110.0	2,485	-6.1%
21	North Dakota	108.8	2,547	8.4%
22	Nebraska	108.7	2,554	-11.2%
23	Maryland	104.7	2,757	-12.0%
24	Ohio	102.3	2,878	-10.2%
25	Indiana	100.0	2,994	-6.5%
26	California	100.0	2,998	-1.8%
27	Mississippi	99.0	3,049	1.9%
28	Montana	98.9	3,052	9.1%
29	Kansas	98.4	3,076	-6.1%
30	Colorado	98.3	3,083	4.5%
31	North Carolina	97.8	3,110	-10.2%
32	Florida	97.6	3,117	-12.6%
33	Texas	96.1	3,194	-12.7%
34	Utah	96.1	3,194	1.1%
35	Oregon	95.4	3,229	-5.5%
36	Nevada	94.7	3,265	-4.8%
37	Delaware	94.5	3,275	-7.6%
38	Hawaii	94.0	3,302	0.1%
39	Missouri	93.7	3,318	-6.8%
40	Georgia	92.0	3,402	-8.2%
41	Oklahoma	91.4	3,433	-7.3%
42	Arizona	91.1	3,448	-9.4%
43	Alabama	90.5	3,480	-7.7%
44	Tennessee	90.3	3,487	-7.3%
45	South Carolina	85.3	3,746	-9.1%
46	Washington	84.3	3,796	-4.8%
47	Arkansas	83.8	3,819	-5.7%
48	Louisiana	82.9	3,864	-5.6%
49	Alaska	77.2	4,157	19.2%
50	New Mexico	73.1	4,353	4.7%

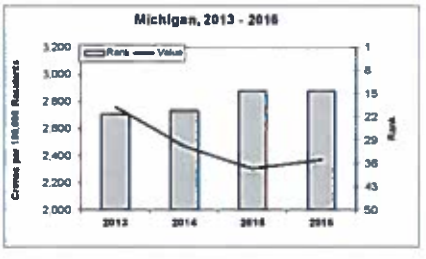
Reported Crimes per 100,000 residents, 2016

Relative freedom from the threat of violent crime is a minimum requirement of a good quality of life. High levels of crime are also often damaging to the business environment, particularly the commercial sector. The above table reports crime rates in the standard manner reported by the FBI: crimes committed per 100,000 residents in the state reporting area.

Source: Federal Bureau of Investigation

Midwest Performance, 2016

State	Crimes per 100,000 Residents	Rank
Wisconsin	2,239	13
Michigan	**2,369**	**14**
Illinois	2,485	20
Ohio	2,878	24
Indiana	2,994	25



LAW ENFORCEMENT EMPLOYEES

Rank	State	Score	Personnel per 100,000 residents	Change, 2013-2016 (%)
	50-State Average		*256*	*-18.1%*
1	New York	157.9	463	5.3%
2	Maryland	139.4	393	2.6%
3	Delaware	135.5	379	10.6%
4	South Carolina	128.2	351	10.1%
5	Louisiana	127.6	349	-40.4%
6	Mississippi	126.3	344	-9.4%
7	Illinois	120.4	322	-6.5%
8	Alabama	120.2	321	-3.5%
9	Georgia	116.0	306	-17.2%
10	Missouri	114.9	302	-10.9%
11	Tennessee	111.3	288	-29.7%
12	New Mexico	111.0	287	-7.8%
13	Florida	110.6	285	-25.5%
14	Virginia	110.1	283	-1.5%
15	West Virginia	108.9	279	14.3%
16	New Jersey	108.6	278	-30.7%
17	Arkansas	108.6	278	-12.0%
18	North Carolina	107.4	273	-20.6%
19	Nevada	103.8	260	-17.7%
20	Hawaii	102.5	255	-2.2%
21	Wyoming	102.2	254	-37.3%
22	Alaska	101.4	251	-5.1%
23	Rhode Island	100.9	249	-14.4%
24	Connecticut	100.7	248	-13.8%
25	Ohio	100.2	246	-21.9%
26	Massachusetts	99.8	245	-19.2%
27	Kentucky	99.2	243	-2.5%
28	Wisconsin	98.6	240	-23.9%
29	Colorado	97.8	237	-28.6%
30	Oklahoma	97.4	236	-25.7%
31	Texas	97.2	235	-32.9%
32	Maine	95.4	228	8.0%
33	New Hampshire	95.3	228	-19.9%
34	Vermont	95.0	227	-10.1%
35	Arizona	94.5	225	-31.5%
36	Kansas	94.5	225	-43.3%
37	Indiana	93.4	221	-18.5%
38	Pennsylvania	93.1	220	-28.5%
39	Nebraska	88.1	201	-25.7%
40	Montana	88.0	200	-23.9%
41	South Dakota	86.5	195	-38.2%
42	California	85.9	192	-46.1%
43	Michigan	85.8	192	-16.7%
44	North Dakota	85.6	192	-30.5%
45	Idaho	85.5	191	-27.9%
46	Washington	84.1	186	-11.6%
47	Oregon	82.2	179	-28.9%
48	Iowa	81.8	177	-32.7%
49	Minnesota	81.3	175	-30.0%
50.0	Utah	74.8	150.9	-0.3

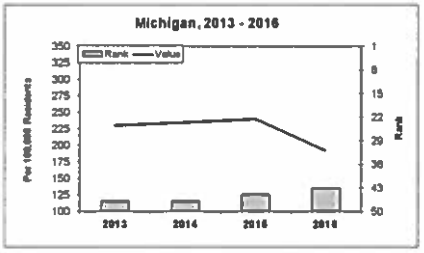
Number of law enforcement personnel per 100,000 residents, 2016

The size of the police force in a state is a two-edged measure. On the one hand, a high number of officers can indicate public safety. On the other hand, it can reflect a high demand for officers due to substantial crime rates. This measure is therefore to be taken in combination with the crime-rate measures to determine whether the state has an effective number of law-enforcement personnel. The above table shows the number of law enforcement personnel per 100,000 residents.

Source: Federal Bureau of Investigation

Midwest Performance, 2016

State	Personnel per 100,000 Residents	Rank
Illinois	322	7
Ohio	246	25
Wisconsin	240	28
Indiana	221	37
Michigan	192	43



HEALTH CARE ACCESS

Rank	State	Score	Per 1,000 Residents	Change, 2013-2016 (%)
	50-State Average		*26.9*	*4.8%*
1	Massachusetts	131.9	35.2	2.5%
2	South Dakota	129.5	34.6	3.2%
3	North Dakota	125.5	33.5	2.9%
4	West Virginia	120.3	32.2	9.5%
5	Delaware	118.3	31.7	9.3%
6	Minnesota	117.9	31.5	7.9%
7	Nebraska	116.7	31.2	3.5%
8	Ohio	116.0	31.0	4.9%
9	Maine	114.1	30.6	1.6%
10	Pennsylvania	112.7	30.2	7.9%
11	Missouri	112.7	30.2	0.6%
12	Vermont	111.0	29.7	-4.0%
13	Rhode Island	110.4	29.6	2.4%
14	Tennessee	109.6	29.4	2.6%
15	New Hampshire	107.7	28.9	9.7%
16	Kentucky	107.5	28.8	7.5%
17	Connecticut	106.0	28.4	1.1%
18	Montana	105.5	28.3	1.9%
19	Maryland	105.3	28.2	9.3%
20	Wisconsin	105.0	28.2	4.0%
21	Indiana	104.5	28.0	1.8%
22	Louisiana	104.2	27.9	7.3%
23	Kansas	103.6	27.8	3.7%
24	Iowa	101.5	27.2	0.6%
25	Michigan	100.7	27.0	1.9%
26	New York	99.3	26.7	4.6%
27	Illinois	99.2	26.6	5.9%
28	Alabama	98.7	26.5	6.8%
29	North Carolina	97.5	26.2	3.9%
30	Mississippi	97.3	26.1	5.6%
31	Arkansas	96.1	25.8	3.6%
32	Oklahoma	92.6	24.9	3.8%
33	New Jersey	92.5	24.9	5.0%
34	Florida	92.3	24.8	4.4%
35	Colorado	91.6	24.6	8.7%
36	Wyoming	90.9	24.4	5.2%
37	Virginia	90.2	24.3	5.3%
38	South Carolina	89.7	24.1	1.4%
39	Oregon	89.7	24.1	10.5%
40	Texas	86.0	23.1	6.6%
41	Georgia	85.0	22.9	5.3%
42	New Mexico	84.1	22.7	8.8%
43	Alaska	82.6	22.3	1.2%
44	Utah	81.6	22.0	6.4%
45	Arizona	81.4	21.9	6.5%
46	Hawaii	80.9	21.8	8.2%
47	Washington	80.2	21.6	-0.6%
48	Idaho	79.5	21.4	0.1%
49	California	75.2	20.3	6.8%
50	Nevada	70.6	19.1	10.4%

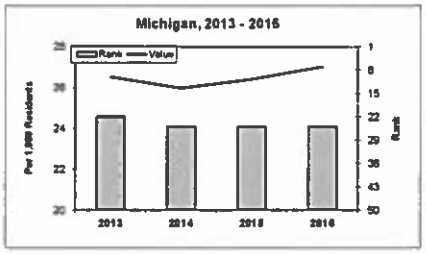
Employed in health care practitioner and technician occupations per 1,000 Residents, 2016

While the national debate rages about health care affordability and coverage, of related importance is access. Are health care facilities and services available when needed? A good proxy for this is the number employed in health care occupations relative to a state's population.

Source: U.S. Bureau of Labor Statistics

Midwest Performance, 2016

State	Per 1,000 Residents	Rank
Ohio	31.0	8
Wisconsin	28.2	20
Indiana	28.0	21
Michigan	27.0	25
Illinois	26.6	27



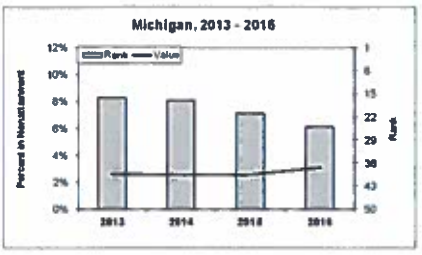
CLEAN AIR

Rank	State	Score	Percent in Nonattainment	Change, 2013-2016 (%)
	50-State Average		*23.4%*	*-24.0%*
1	Arkansas	111.3	0.0%	-100.0%
1	Hawaii	111.3	0.0%	0.0%
1	Maine	111.3	0.0%	0.0%
1	Mississippi	111.3	0.0%	-100.0%
1	Nebraska	111.3	0.0%	0.0%
1	Nevada	111.3	0.0%	-100.0%
1	North Carolina	111.3	0.0%	-100.0%
1	North Dakota	111.3	0.0%	0.0%
1	Oklahoma	111.3	0.0%	0.0%
1	Rhode Island	111.3	0.0%	-100.0%
1	South Carolina	111.3	0.0%	-100.0%
1	South Dakota	111.3	0.0%	0.0%
1	Vermont	111.3	0.0%	0.0%
1	Washington	111.3	0.0%	-100.0%
15	Kansas	111.3	0.0%	-0.5%
16	Alabama	111.2	0.0%	-44.0%
17	Florida	111.0	0.1%	-5.2%
18	New Mexico	110.9	0.1%	0.0%
19	Minnesota	110.8	0.2%	-2.0%
20	Massachusetts	110.6	0.2%	-99.8%
21	Oregon	107.8	1.3%	-4.1%
22	Idaho	107.5	1.4%	-4.2%
23	Iowa	107.4	1.4%	-1.3%
24	West Virginia	105.2	2.2%	-90.6%
25	**Michigan**	**102.6**	**3.1%**	**19.9%**
26	Wyoming	97.4	4.9%	-0.4%
27	New Hampshire	85.1	9.3%	-0.9%
28	Tennessee	81.8	10.5%	-65.3%
29	Alaska	78.1	11.8%	-0.6%
30	Montana	74.2	13.2%	-2.6%
31	Louisiana	65.1	16.4%	-1.3%
32	Indiana	62.7	17.2%	-16.0%
33	Wisconsin	54.3	20.3%	-45.1%
34	Kentucky	37.2	26.3%	-0.8%
35	Virginia	36.7	26.5%	-1.8%
36	Missouri	16.2	33.8%	-0.8%
37	Ohio	2.1	38.8%	-28.9%
38	Texas	-18.0	45.9%	-5.1%
39	Georgia	-18.4	46.1%	-18.6%
40	Arizona	-50.0	61.9%	-4.2%
40	California	-50.0	84.3%	-3.2%
40	Colorado	-50.0	60.2%	-4.8%
40	Connecticut	-50.0	99.6%	0.4%
40	Delaware	-50.0	77.2%	-20.4%
40	Illinois	-50.0	70.7%	1.2%
40	Maryland	-50.0	84.1%	-4.3%
40	New Jersey	-50.0	97.9%	-0.7%
40	New York	-50.0	62.5%	-25.3%
40	Pennsylvania	-50.0	64.5%	-11.7%
40	Utah	-50.0	75.5%	-4.7%

Percent of population in air non-attainment areas, 2016
States with poor environmental records or conditions face an extra challenge in attracting the best, most-skilled workers. Workers and businesses also face the threat of punitive action from the federal government for failing to meet environmental requirements such as air-quality standards. The above table shows the percentage of the population in reported areas, whole or partial, where air pollution levels persistently exceed the national ambient air quality standards.
Source: U.S. Environmental Protection Agency

Midwest Performance, 2016

State	Percent in Nonattainment	Rank
Michigan	**3.1%**	**25**
Indiana	17.2%	32
Wisconsin	20.3%	33
Ohio	38.8%	37
Illinois	70.7%	44



APPENDIX A: Entrepreneurship Score Card Methodology and Sources

Introduction

The statistical methodology of the *Entrepreneurship Score Card* was developed and is prepared by the GrowthEconomics, Inc. team comprised of Dr. Graham Toft (Founder/President) and Dr. Nadine Jeserich (ROI – Research on Investment).

Methodology design for this Score Card has been motivated by pursuit of the following objectives:

1) Develop a methodology that is well-reasoned, taking advantage of state-of-the-art in benchmark scoring, both in the U.S. and abroad.
2) Use the most recent data checked for credibility and reliability.
3) Explain the methods and post the data in such a way as to make the calculation process transparent and replicable.
4) Encourage further examination of the topic of state entrepreneurship using complementary methodologies and compare results.
5) Where comparisons are possible, check the findings of this Score Card with other state competitiveness benchmarking reports, learning from similarities and differences.

General Description of Methodology

The foundation of good state benchmarking is the selection and qualification of sound metrics, indicators that provide comparable measures for all states on an annual or biennial basis. This approach requires valid, reliable data sources that are either public or proprietary, including the creative exploration of data not previously used for this kind of application.

The Score Card makes use of these multiple sources to obtain specific measures for 130 metrics. Where possible the data is obtained for the past 10 years. Where data is not yet available for 2016, data from 2015 or 2014 is used. There were 108 metrics with 2016 data, 20 with 2015 data, and just two with 2014 data.

All data is the most current available as of February 10, 2018. As new data becomes available, the measures for previous years are revised. In this way, the annual Score Card provides the most up-to-date data set for both current and previous years. If a new metric is added, measures are obtained for all back years available to 2005. The sections that follow explain in greater detail how metrics are obtained and aggregated, and how the five-star performance rating is derived.

Metric Calculation Methods

In order to compare metrics with different units of measurement such as dollars or number of residents, the data for the Score Card has to be normalized, i.e. the raw data must be converted into a score that allows an apple-to-apple comparison. Many popular benchmarking reports use a z-score or standardized score, which is the raw value of the metric minus the mean of all the raw values, divided by the standard deviation of the values (a measure of how dispersed the values are around the mean). The resulting z-scores have a mean of zero and a standard deviation of one, or what is called a standard normal distribution, and allow an easy comparison across metrics. **This is today's "state of the practice."**

A major drawback of this method, however, is that it imposes a normal distribution on all metrics where 50 percent of the values lie to the right of the mean and 50 percent lie to

the left. However, often socio-economic data is skewed to the left or the right, e.g. a few states might score very well, followed by a cluster near the mid-point, with the rest gradually declining in a long tail. Forcing scores into a normal distribution can introduce substantial biases when combining metrics into indices. The z-score method also gives significant weight to unusually high or low scores. An unusual score could merely represent an exceptional year for a state rather than the general trend, which the *Score Card* is trying to uncover. Even with these shortcomings, the z-score method is the most widely used today, partly because nothing better has come along, until recently.

The Score Card uses a sophisticated method that is robust to outlier scores so that one extreme value is not going to change the normalized scores of the other states for a particular metric, and it does not impose an artificial structure on the distribution of state values. **The modified median method used herein is "state of the art."** It does not bias data that is not normally distributed.

The method takes the differences between the raw value and the median rather than the mean. This allows for less comparison to the top performance, but rather to the performance of the majority of states and therefore being robust to outliers. It is then normalized with the following method: for each state, get the difference between its raw score and the raw score of every other state; from these 49 numbers, get the median and repeat for the next state, resulting in 50 medians; then take the median of these medians as the measure of central tendency (instead of the standard deviation). The "modified median" method of normalizing scores is a frontier methodology, which likely will become common practice in the future.

A normalized score enables multiple metrics to be added together to give sub-index and index composite scores. The normalized score also serves as a means to convey a state's performance relative to the "middle state(s)." **For easier readability, the normalized score is scaled so that the median is 100 for each metric, denoted by a dotted line across the table.** Consequently, the reader can get a quick sense of how far a particular state is from the mid-point by observing how far it is above or below 100 (See Metrics tables in Section 3).

Since metrics are averaged into sub-indexes and indexes, one state's exceptional performance in one year can still affect the sub-index and index results. An additional adjustment is used to avoid situations where such values completely bias aggregate results. A cap is put on the maximum value a median score can take. If a state's median score reaches that limit, its actual value is replaced with the limit value. A limit value of 150 either side of the mid-point of 100 has been found to work satisfactorily, based on over 10 years of experience with these data: the top score cannot exceed 250 and the bottom score cannot fall below -50.

Another issue that might confound performance trends the Score Card is trying to uncover is the fact that metrics measured in growth rates can have very high year-to-year variability. In order to provide a bigger picture of where the growth rates are headed, all metrics expressed as growth measures are converted to three-year moving averages, i.e. each new annual growth rate is averaged with the two previous annual growth rates.

In the metric tables, each metric is reported by raw score, normalized score, rank and recent change. If a state's raw value changed from or to a value of zero, a growth rate of +100 percent or -100 percent was reported. For metrics with many zero values across the years or those expressed in terms of growth rates, the absolute rather than relative change over the recent years is reported.

Further, the reader will find it helpful to know how a particular state clusters with other states of like scores. This is shown by three shadings, or ranges, on the metrics table. The full range of scores from top state to bottom state is divided into three equal parts and each shading represents one part. While a state might change somewhat in ranking,

if it stays in the same performance/shading group, one can conclude little change relative to competitors and comparators. Alternatively, if a state ranking stays fairly stable over several years but it moves up a shading category, one can conclude improvement.

To put this in another way: ranking tells you where you are placed, while shadings (and star ratings for sub-indexes and indexes, see below) tell you how well you are performing. A male athlete might do better than the four-minute mile, putting him in 'best of class,' but he may not place in the top three in a race. For most economic and social issues, state leaders and decision makers want their state to be among the top performers but worry less about being number one. **For this reason, the reader is encouraged not to rely singularly on rankings to judge a state's competitive position. Although widely used, rankings alone can lead to erroneous judgments.**

Sub-index and Index Calculation

Once the metric scores have been calculated for those metrics making up a sub-index, the modified median scores are averaged to produce a sub-index score. The sub-index page displays the state scores in the form of star performances associated with those average scores. For example, five stars means the state performed in the top 20 percent of the range of averaged scores, similar to the shadings on the metric pages. Index star performance is calculated from the original metric scores in the same way as for sub-indexes.

This Score Card also uses an innovative method of updating data. Typically, benchmarking studies use the most recent data available when a report is released. In most instances, these data are one to three years behind the actual release date. Report issuing organizations/authors seldom go back to adjust the scores/grades of previous years when revised data becomes available for a previous release year. Past results might then erroneously show facts/trends that have already long changed. **This *Score Card* method actually recalculates previous years' results based on new data available for earlier years.**

However, if there is no new data available in the most current year, last year's data will be reused when the metrics are aggregated (though the metric pages will still show the most current actual data year). Hence, in a few cases where sub-indexes have not much new data in recent years, there could be hardly any change between the 2016 and 2017 Score Card raw scores. Each edition of the Score Card results can therefore be viewed as an "update," reflecting only new scores where the underlying data actually changed. Every effort was made to include the most recent data updates published to the end of 2017.

Another related procedure is the response to missing data points. Whenever a single state has a missing value for a year, the linear trend from the previous and next year is substituted for the missing value. When a following year is not available, only the previous year's raw value is used as a best estimate of that year, making an effort to always compare all states over the same number of metrics (except when a particular state's metric information is missing for all years).

For each sub-index score, the component metrics are weighted equally, with one exception. The Business Costs sub-index is weighted in approximation of the effect that each cost metric has on a typical business' total cost. The actual weighting is:

57 percent unit labor costs
6 percent business taxes
6 percent state business tax structure
12 percent industrial rents
7 percent energy costs

2.5 percent worker's compensation premiums
2.5 percent worker's compensation costs
5 percent health-care premiums
1 percent unemployment insurance costs
1 percent unemployment insurance tax structure

When a metric has to be excluded due to changes in methodology, the percentage for that metric used for the weighting in a sub-driver is set to zero, and the remaining metrics' percentages are adjusted equally to sum to one again.

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Growth in Establishment Formation Rate

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Growth in New Business Owners

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Source: see 'High Performance Firms Increase' entry above

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SBIR Awards

Sources: U.S. Small Business Administration. Retrieved from: https://www.sbir.gov/sbirsearch/award/all

U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

STTR Awards

Sources: U.S. Small Business Administration. Retrieved from: https://www.sbir.gov/sbirsearch/award/all

U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

SBIC Awards

Sources: U.S. Small Business Administration. "Financing Statistics, Program Statistical Package. SBIC Program Financing to Small Businesses." Obtained by request from SBA Investment Division.

U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

Five-year Establishment Survival Rate

Source: U.S. Bureau of Labor Statistics. "Business Employment Dynamics." Retrieved from: http://www.bls.gov/bdm/

Entrepreneurial Climate Index

Research and Innovations Sub-index

University Research and Development

Sources: National Science Foundation. Higher Education Research and Development Survey. Retrieved from: http://www.nsf.gov/statistics/surveys.cfm

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Patents per Innovation Worker

Sources: U.S. Patent and Trademark Office, Office. "Patent Statistics Reports Available For Viewing Statistics By Calendar Year, January 1 to December 31." Retrieved from: http://www.uspto.gov/web/offices/ac/ido/oeip/taf/reports.htm#by_geog

Methodology: Innovation workers are the sum of covered employment based on the definitions from the following metrics: Physical Science & Engineering Workers, Technology and Technician Workers, Other Innovation Workers. (see Workforce Preparedness Driver).

Patents per R&D Dollar

Sources: see 'Patents per Worker' entry above.

National Science Foundation. Science and Engineering Indicators. Retrieved from: http://www.nsf.gov/statistics/

University Licenses to Small Businesses

Sources: Association of University Technology Managers. "AUTM Licensing Survey." Licenses and options executed to small businesses (<500). www.autm.net

U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

Methodology: Three-year moving average.

NSF Proposal Funding Rate

Source: National Science Foundation. "Funding Rate by State and Organization." Retrieved from: http://dellweb.bfa.nsf.gov/awdfr3/default.asp

University Royalty/License Income

Sources: Association of University Technology Managers. "AUTM Licensing Survey." www.autm.net

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Methodology: Three-year moving average.

Industry Research and Development

Sources: National Science Foundation. Business Research and Development and Innovation Survey. Retrieved from: http://www.nsf.gov/statistics/surveys.cfm

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.nsf.gov/statistics/surveys.cfm

Federal Research and Development

Sources: National Science Foundation. Survey of Federal Funds for Research and Development. Retrieved from: http://www.nsf.gov/statistics/surveys.cfm

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Entrepreneurial Programs and Curricula

Source: Entrepreneur Magazine. Top 50 Entrepreneurial Colleges. Retrieved from: http://www.entrepreneur.com/topcolleges/index.html

Financial and Institutional Capital Sub-index

Seed Venture Capital Financing

Sources: PriceWaterhouseCoopers. "MoneyTree Survey: Historical Trend Data." Retrieved from: http://www.pwcmoneytree.com/HistoricTrends/CustomQueryHistoricTrend

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Methodology: Seed/Startup and Early Stage venture capital funding.

Expansion/Later Stage Capital Financing

Sources: PriceWaterhouseCoopers. "MoneyTree Survey: Historical Trend Data." Retrieved from: http://www.pwcmoneytree.com/HistoricTrends/CustomQueryHistoricTrend

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Methodology: Expansion and Later Stage venture capital funding.

IPO Financing

Sources: IPO Monitor. Retrieved from: https://www.ipomonitor.com/pages/ipo-filings.html

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

SBIC Financing

Sources: U.S. Small Business Administration. "Financing Statistics, Program Statistical Package. SBIC Program Financing to Small Businesses." Obtained by request from SBA Investment Division.

U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

SBIR Financing

Sources: U.S. Small Business Administration. Retrieved from: https://www.sbir.gov/reports/state-summary

U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

STTR Financing

Sources: U.S. Small Business Administration. Retrieved from: https://www.sbir.gov/sbirsearch/award/all

U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

Bank Commercial and Industrial Lending

Sources: Federal Deposit Insurance Corporation. "Statistics on Depository Institutions." Retrieved from: https://www5.fdic.gov/sdi/download_large_list_outside.asp

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Private Lending to Small Businesses

Sources: U.S. Small Business Administration. "Banking Studies: Small Business Lending in the U.S." Retrieved from: http://www.sba.gov/advo/research

U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

Business Incubators

Source: National Business Incubation Association. Membership Directory. By request.

General Growth Sub-index

Gross Domestic Product Growth

Source: U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Manufacturing Capital Investment Growth

Source: U.S. Census Bureau. "Annual Survey of Manufacturers, Geographic Area Statistics." Retrieved from: https://www.census.gov/programs-surveys/asm.html

Foreign Business Employment Growth

Source: U.S. Bureau of Economic Analysis. Survey of Current Business. "U.S. Affiliates of Foreign Companies, Operations." Retrieved from: http://www.bea.gov/iTable/index_MNC.cfm

Export Intensity Growth

Sources: The Brookings Institution "Export Monitor." Retrieved from: http://www.brookings.edu/rese arch/interactives/2015/export-monitor#10420

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Export-Related Jobs

Source: The Brookings Institution "Export Monitor." Retrieved from: http://www.brookings.edu/rese arch/interactives/2015/export-monitor#10420

Large Business Payroll Growth

Source: U.S. Census Bureau. "Statistics of U.S. Businesses." Business Information Tracking Series. Retrieved from: https://www.census.gov/programs-surveys/susb.html

Building Permits Growth

Sources: U.S. Census Bureau. "SOCDS Building Permits Database. Retrieved from: http://socds.huduser.org/permits/index.html?

U.S. Census Bureau. Population Estimates. "State population datasets." Retrieved from: http://www.census.gov/popest/

Fortune 500 Headquarters

Source: Fortune Magazine.

Private Business Profit Growth

Source: U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Renewable Energy

Source: U.S. Energy Information Administration. "Electric Power Annual." Retrieved from: http://www.eia.doe.gov/cneaf/electricity/epa/epa_sum.html

Green Industries

Source: U.S. Bureau of Labor Statistics. Quarterly Census of Employment and Wages. Retrieved from: http://www.bls.gov/cew/

Methodology: The following NAICS industry codes were included in the category, based on a simplified version of the definition in the Michigan Green Jobs Report 2009, http://www.michigan.gov/documents/nwlb/GJC_GreenReport_Print_277833_7.pdf. The definition does not include industries that use/resell energy technologies such as construction, wholesale, or utilities. NAICS: 1111 – Oilseed and grain farming; 1114 – Greenhouse and nursery production; 1119 – Other crop farming; 1131 – Timber tract operations; 1132 – Forest nursery and gathering forest products; 1133 – Logging; 1151 – Support activities for crop production; 1153 – Support activities for forestry; 3112 – Grain and Oilseed Milling; 3211 – Sawmills and wood preservation; 3219 – Other wood product manufacturing; 3221 – Pulp paper and paperboard mills; 3251 – Basic chemical manufacturing; 3252 – Resin, rubber and artificial fibers mfg; 3253 – Agricultural chemical manufacturing; 3259 – Other chemical product and preparation mfg; 3261 – Plastics product mfg; 3272 – Glass and glass product mfg; 3279 - Other nonmetallic mineral products; 3323 – Architectural and structural metals mfg; 3329 – Other fabricated metal product mfg; 3332 – Industrial Machinery mfg; 3334 – HVAC and commercial refrigeration equip; 3336 – Turbine and power transmission equip. mfg; 3344 – Semiconductor and electronic component mfg; 3345 – Electronic instrument mfg; 3351 – Electric lighting-equip. mfg; 3352 – Household appliance mfg; 3353 – Electrical equip. mfg; 3359 – Other electrical equip. and component mfg; 3361 – Motor vehicle mfg; 3363 – Motor vehicle parts mfg; 3364 – Aerospace product and parts mfg; 3369 – Other transportation equip. mfg; 4851 – Urban transit systems; 4852 – Interurban and rural bus transportation; 4859 – Other ground passenger transportation; 5413 – Architectural and engineering services; 5414 – Specialized design services; 5416 – Management and technical consulting services; 5417 – Scientific research and development services; 5621 – Waste collection; 5622 – Waste treatment and disposal; 5629 – Remediation and other waste services;

Education Driver

K-12 Education Sub-driver

AP Overall

Source: The College Board. "AP Exam Grades: Summary Report." Retrieved from: https://research.collegeboard.org/programs/ap/data/archived

High School Graduation Rate

Source: U.S. Department of Education. ED Data Express. Retrieved from: http://eddataexpress.ed.gov/

Methodology: The four-year adjusted cohort graduation rate is the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class. From the beginning of 9th grade (or the earliest high school grade), students who are entering that grade for the first time form a cohort that is "adjusted" by adding any students who subsequently transfer into the cohort and subtracting any students who subsequently transfer out, emigrate to another country, or die.

SAT

Source: The College Board. State and National Reports. Retrieved from: https://research.collegeboard.org/programs/sat/data

Methodology: Participation rates are plotted on a graph against average scores for all 50 states. A best-fit power regression is found for the data points, and the equation for the regression function is applied to each state's participation rate to "predict" a score based on participation. These predicted scores are subtracted from the actual average scores received by each state to produce the metric value.

ACT

Source: ACT, Inc. "ACT National and State Scores." Retrieved from: http://www.act.org/content/act/en/research.html

Methodology: Identical to SAT metric methodology.

NAEP Mathematics

Source: National Center for Education Statistics. "The Nation's Report Card: Mathematics." State Results for the NAEP 2006 Mathematics Assessment. Retrieved from: http://www.nationsreportcard.gov/#/

NAEP Reading

Source: National Center for Education Statistics. "The Nation's Report Card: Reading." State Results for the NAEP 2006 Reading Assessment. Retrieved from: http://www.nationsreportcard.gov/#/

Postsecondary Education Sub-driver

Four Year+ Tech Credentials

Sources: National Center for Education Statistics. Integrated Postsecondary Education Data System. "Completions Survey, Fall." Retrieved from: WebCASPAR https://ncsesdata.nsf.gov/webcaspar/index.jsp?subHeader=WebCASPARHome

Methodology: The following certified instructional programs (CIP) were included for each institution that was judged to award bachelor's level or higher or four-year certificates: Architecture; Architecture & related programs, other; Behavioral sciences; Biological and biomedical sciences; Biological and physical sciences; Biopsychology; Cognitive science; Computer and information sciences, general; Computer programming; Computer science; Engineering; Environmental design/architecture; Environmental science; Food science and technology; Information science/studies; Mathematics and computer science; Mathematics and statistics; Natural sciences; Neuroscience; Nutrition sciences; Physical sciences; Plant sciences; Science, technology and society; Soil sciences; Systems science and theory; Medical Scientists, Agricultural business technology; Forest technology/technician; Architectural technology/technician; Communications technologies/technicians and support services; Data processing; Computer systems analysis; Data entry/microcomputer applications; Computer software and media applications; Computer systems networking and telecommunications; Computer/information technology administration and management; Computer and information sciences and support services, other; Engineering technologies/technicians; Military technologies; Science technologies/technicians; Mechanic and repair technologies/technicians; Precision production; Accounting and computer science; Allied health diagnostic, intervention, and treatment profession; Clinical/medical laboratory science and allied professions; Clinical/medical laboratory technician/assistant.

Pre-BA Tech Credentials

Sources: National Center for Education Statistics. Integrated Postsecondary Education Data System. "Completions Survey, Fall." Retrieved from: WebCASPAR https://ncsesdata.nsf.gov/webcaspar/index.jsp?subHeader=WebCASPARHome

Methodology: The same instructional programs (CIP) were included for each institution as for the previous metric but only those degrees and certificates with Associate degrees or 2 years or less of college were included.

'Knowledge' degrees excluding Tech fields

Sources: National Center for Education Statistics. Integrated Postsecondary Education Data System. "Completions Survey, Fall." Retrieved from: WebCASPAR https://ncsesdata.nsf.gov/webcaspar/index.jsp?subHeader=WebCASPARHome

Methodology: The following certified instructional programs (CIP) were included for each institution that was judged to award degrees in fields relevant to the innovation economy not covered by the purely scientific and technical areas: Public relations, advertising, and applied communication; Teacher education and professional development, specific subject areas; Technical and business writing; Economics; Business, management, marketing, and related support services.

College Migration

Source: National Center for Education Statistics. Integrated Postsecondary Education Data System. "Enrollment Survey, Fall." Retrieved from: WebCASPAR https://ncsesdata.nsf.gov/webcaspar/index.jsp?subHeader=WebCASPARHome

U.S. News Top-Ranked Undergraduate Programs

Source: U.S. News and World Report Magazine. "America's Best Colleges." Premium Online Edition. Retrieved from: http://www.usnews.com/rankings

U.S. News Top-Ranked Graduate Programs

Source: U.S. News and World Report Magazine. "America's Best Graduate Schools." Premium Online Edition. Retrieved from: http://www.usnews.com/rankings

Two-Year College Tuition Growth

Source: National Center for Education Statistics. Digest of Education Statistics. Retrieved from: http://nces.ed.gov/programs/digest/

U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements. Retrieved from Dataferret software.

Methodology: Differential between growth in two-year college tuition costs and growth in state real median household income.

Four-Year College Costs Growth

Source: National Center for Education Statistics. Digest of Education Statistics. Retrieved from: http://nces.ed.gov/programs/digest/

U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements. Retrieved from Dataferret software.

Methodology: Differential between growth in four-year college costs and growth in state real median household income.

Workforce Preparedness Driver

High School Only Diploma Attainment

Source: U.S. Census Bureau. "Current Population Survey, Annual March Supplement." Retrieved from Dataferret software.

Post-Secondary Pre-BA Attainment

Source: U.S. Census Bureau. "Current Population Survey, Annual March Supplement." Retrieved from Dataferret software.

Bachelor's Degree Attainment

Source: U.S. Census Bureau. "Current Population Survey, Annual March Supplement." Retrieved from Dataferret software.

Physical Sciences and Engineering Workers

Source: U.S. Bureau of Labor Statistics. "Occupational Employment Survey." Retrieved from: http://www.bls.gov/oes/

Methodology: The following Standard Occupational Classifications were identified as physical science and engineering jobs: Actuaries; Aerospace engineers; Agricultural and food scientists; Agricultural engineers; All other architects, surveyors, and cartographers; All other engineers; All other life scientists; All other physical scientists; Architects, except landscape and naval; Astronomers; Atmospheric and space scientists; Biochemists and biophysicists; Biological scientists, all other; Biomedical engineers; Chemical engineers; Chemists; Civil engineers; Computer and information scientists, research; Computer hardware engineers; Computer programmers; Electrical engineers; Electronics engineers, except computer; Environmental engineers; Health and safety engineers, except mining safety engineers and inspectors; Industrial engineers; Marine engineers and naval architects; Materials engineers; Materials scientists; Mathematicians; Mechanical engineers; Medical scientists, except epidemiologists; Microbiologists; Mining and geological engineers, including mining safety engineers; Miscellaneous mathematical science occupations; Nuclear engineers; Operations research analysts; Petroleum engineers; Physicists; Statisticians.

Technology and Technician Workers

Source: U.S. Bureau of Labor Statistics. "Occupational Employment Survey." Retrieved from: http://www.bls.gov/oes/

Methodology: The following Standard Occupational Classifications were identified as technology and technician jobs: Aerospace engineering and operations technicians; All other computer specialists; All other drafters, engineering, and mapping technicians; All other life, physical, and social science technicians; Architectural and civil drafters; Biological technicians; Cardiovascular technologists and technicians; Cartographers and photogrammetrists; Chemical technicians; Civil engineering technicians; Computer software engineers, applications; Computer software engineers, systems software; Computer support specialists; Computer systems analysts; Database administrators; Diagnostic medical sonographers; Electrical and electronic engineering technicians; Electrical and electronics drafters; Electro-mechanical technicians; Emergency medical technicians and paramedics; Environmental engineering technicians; Environmental science and protection technicians, including health; Forensic science technicians; Geological and petroleum technicians; Industrial engineering technicians; Mechanical drafters; Mechanical engineering technicians; Medical and clinical laboratory technicians; Medical and clinical laboratory technologists; Network and computer systems administrators; Network systems and data communications analysts; Nuclear medicine technologists; Nuclear technicians; Occupational health and safety specialists and technicians; Radiologic technologists and technicians; Respiratory therapy technicians; Semiconductor processors; Surgical technologists; Surveyors.

Innovation Workers Outside High Tech Employment

Source: U.S. Bureau of Labor Statistics. "Occupational Employment Survey." Retrieved from: http://www.bls.gov/oes/

Methodology: The following Standard Occupational Classifications were identified as other key innovation jobs: Architecture Teachers, Postsecondary; Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary; Biological Science Teachers, Postsecondary; Business and Financial Operations ; Business Teachers, Postsecondary; Chemistry Teachers, Postsecondary; Communications Teachers, Postsecondary; Computer Science Teachers, Postsecondary; Economics Teachers, Postsecondary; Economists; Engineering Teachers, Postsecondary; Health Specialties Teachers, Postsecondary; Management ; Market Research Analysts; Mathematical Science Teachers, Postsecondary; Physics Teachers, Postsecondary; Public Relations Specialists; Survey Researchers; Technical Writers; Vocational Education Teachers, Postsecondary.

High-tech Manufacturing Employment

Sources: U.S. Bureau of Labor Statistics. Quarterly Census of Employment and Wages. Retrieved from: http://www.bls.gov/cew/

Chapple, K., Markusen, A., Schrock, G., Yamamoto, D., & Yu, P. (2004). Gauging metropolitan "high-tech" and "I-tech" activity. Economic Development Quarterly, 18(1), 10-29

Center for Economic Development and STTI. (2004). "Technology Industries and Occupations for NAICS Industry Data"

Methodology: The following manufacturing industries were defined as high-tech manufacturing based on a combined industry list based on Chapple et.al. (2004) and CED/STTI (2004) but aggregated to the three-digit level due to many data suppression: Chemical Manufacturing; Machinery Manufacturing; Computer and Electronic Product Manufacturing; Transportation Equipment Manufacturing.

High-tech Services Employment

Source: See "High-tech Manufacturing Employment" immediately above

Methodology: The following manufacturing industries were defined as high-tech manufacturing based on a combined industry list based on Chapple et.al. (2004) and CED/STTI (2004) but aggregated to the 3-digit level due to many data suppression: Professional and commercial equipment and supplies merchant wholesalers; Software publishers; Internet publishing and broadcasting; Telecommunications; Internet service providers and web search portals; Data processing, hosting and related services; Architectural, engineering and related services; Computer systems design and related services; Management, scientific and technical consulting services; Scientific research and development services.

Adult Education

Source: National Center for Education Statistics. Integrated Postsecondary Education Data System. "Enrollment Survey, Fall." Retrieved from: WebCASPAR https://ncsesdata.nsf.gov/webcaspar/index.jsp?subHeader=WebCASPARHome

U.S. Census Bureau. "American Community Survey." Summary Tables. Retrieved from: https://www.census.gov/programs-surveys/acs/

Skilled Immigrants

Source: U.S. Census Bureau. "Current Population Survey." Retrieved from: DataFerrett software.

Methodology: Number non-citizens or naturalized citizens with a bachelor's degree or above per 1,000 residents. The current and previous two years were averaged to balance out any small sample fluctuations associated with this survey data, i.e. 2014 data reflects the average of 2012 to 2014 survey results.

Business Costs Driver

Unit Labor Costs

Source: U.S. Bureau of Labor Statistics. Quarterly Census of Employment and Wages. Retrieved from: http://www.bls.gov/cew/

Methodology: Wages per employment relative to output per employment adjusted for the industry employment concentration at the 3-digit NAICS level and relative to the US average set at 100.

Energy Costs

Source: Energy Information Administration. Electric Power Annual. Retrieved from: http://www.eia.gov/electricity/data.cfm

Workers' Compensation Premiums

Source: Oregon Department of Consumer and Business Services. "Oregon Workers' Compensation Premium Rate Ranking, Calendar Year." Retrieved from: http://www.oregon.gov/dcbs/cost/Pages/ranking-by-state.aspx

Workers' Compensation Costs

Source: National Academy of Social Insurance. "Workers' Compensation: Benefits, Coverage, and Costs." Retrieved from: https://www.nasi.org/research/workers-compensation

Unemployment Insurance Costs

Source: U.S. Department of Labor. Employment and Training Administration, Unemployment Insurance Data Summary. "U.S. Summary Tables, Wage and Tax Rate Data." Retrieved from: http://workforcesecurity.doleta.gov/unemploy/avg_employ.asp

Unemployment Insurance Tax Structure

Source: Tax Foundation. "Effective State and Local Tax Burdens by State and Ranking." Retrieved from: http://workforcesecurity.doleta.gov/unemploy/finance.asp

Business Tax Burden

Sources: Ernst & Young. "Total State and Local Business Taxes: 50-State Estimates for Fiscal Year." Prepared in conjunction with The Council on State Taxation. Retrieved from: http://www.ey.com/IE/EN/home/library

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

State Business Tax Structure

Source: Tax Foundation. "State Business Tax Climate Index, Corporate Tax Index." Retrieved from: http://www.taxfoundation.org

Metro Office Rents

Source: Colliers International, Industrial Highlights, Quarterly Reports. By request.

Small Business Health Care Premiums

Source: U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. "Medical Expenditure Panel Survey: Insurance Component." Retrieved from: http://www.meps.ahrq.gov/mepsweb/data_stats/quick_tables.jsp

Productivity and Labor Supply Driver

Net Domestic Migration Rate

Source: U.S. Census Bureau. Population Estimates. "State population datasets." Retrieved from: http://www.census.gov/popest/

Prime Working Age Residents

Sources: U.S. Census Bureau. "American Community Survey." Summary Tables. Retrieved from: https://www.census.gov/programs-surveys/acs/

U.S. Census Bureau. Population Estimates. "State population datasets." Retrieved from: http://www.census.gov/popest/

Gross domestic Product per Job

Source: U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Service Sector Productivity

Source: U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Methodology: Includes the following industries: 10 – Utilities; 34 – Wholesale trade; 35 – Retail trade; 36 – Transportation and warehousing, excluding Postal Service; 45 – Information; 50 – Finance and insurance; 55 – Real estate, rental and leasing; 58 – Professional and technical services; 62 – Management of companies and enterprises; 63 – Administrative and waste services; 66 – Educational services; 67 – Health care and social assistance; 71 – Arts, entertainment and recreation; 74 – Accommodation and food services; 77 – Other services, except government.

Manufacturing Value Added per Hour

Source: U.S. Census Bureau. "Annual Survey of Manufacturers, Geographic Area Statistics." Retrieved from: https://www.census.gov/programs-surveys/asm.html

Labor Force Participation Rate

Source: U.S. Bureau of Labor Statistics. "Local Area Unemployment Statistics." Retrieved from: http://www.bls.gov/lau/rdscnp16.htm

Legal Environment Driver

Malpractice Costs

Source: Medical Liability Monitor. "Rate Survey of Three Medical Specialties." Trends in Rates for Physicians' Medical Professional Liability Insurance.

Methodology: Malpractice rates depend highly on the medical specialty that the insured practices. To accurately compare rates within three different specialties, internal medicine, general surgery and OB/GYN, the average rates for each specialty are normalized across all the states. The normalized scores for each profession in a state are then totaled to produce the index score.

Business Liability Costs

Sources: Insurance Information Institute. "The Insurance Information Institute Fact Book." Direct Premiums Written, Property/Casualty Insurance, By State By Line.

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Methodology: Premiums totals for products liability and other liability insurance are averaged and divided by the gross domestic product.

Liability System Reputation

Source: Harris Interactive. "State Liability Systems Ranking Study." Conducted for U.S. Chamber of Commerce, Institute for Legal Reform. Retrieved from: http://www.instituteforlegalreform.com/states

Physical Infrastructure Driver

Highway Quality

Source: Federal Highway Administration. "Highway Statistics." Retrieved from: https://www.fhwa.dot.gov/policyinformation/statistics.cfm

Transit Use

Source: U.S. Census Bureau. "American Community Survey." Summary Tables. Retrieved from: https://www.census.gov/programs-surveys/acs/

Bridge Quality

Source: Federal Highway Administration. "Bridge Technology: Deficient Bridges by State and Highway System." Retrieved from: www.fhwa.dot.gov/bridge/deficient.htm

Major Market Air Access

Sources: U.S. Bureau of Transportation Statistics. "T-100 Domestic Segment." Retrieved from: http://www.transtats.bts.gov

U.S. Census Bureau. Population Estimates. "State Population Datasets." Retrieved from: http://www.census.gov/popest/

Methodology: To develop this metric, 20 cities were chosen as "major markets" in terms of commercial or new technology centers based on their 2012 venture capital funding:

1. San Francisco-Oakland: $6.896 billion (25.6% of the top 100 cities)
2. Where is #2?
3. Boston: $3.101 billion (11.5%)
4. New York City: $2.269 billion (8.4%)
5. Los Angeles: $1.677 billion (6.2%)
6. San Diego: $1.134 billion (4.2%)
7. Seattle: $886 million (3.3%)
8. Austin: $626 million (2.3%)
9. Chicago: $547 million (2.0%)
10. Washington, D.C.: $484 million (1.8%)
11. Philadelphia: $347 million (1.3%)
12. Denver: $264 million (1.0%)
13. Atlanta: $262 million (1.0%)
15. Minneapolis-St. Paul: $256 million (0.9%)
17. Phoenix: $214 million (0.8%)
18. Raleigh-Cary, N.C.: $184 million (0.7%)
19. Pittsburgh: $167 million (0.6%)
20. Provo-Orem, Utah: $162 million (0.6%)

Total nonstop departures from each state to the destination cities were summed by state. Then the state total enplanement figures were divided by state populations. The BWI Baltimore airport was allocated to MD, and IAD Dulles Airport outside Washington, DC and DC Reagan National Airport were allocated to Virginia.

Airport Performance

Source: Bureau of Transportation Statistics. Airline On-Time Statistics and Delay Causes. Retrieved from: http://www.transtats.bts.gov/Fields.asp?table_id=236

Water Quality

Source: U.S. Environmental Protection Agency. Office of Ground Water and Drinking Water. Retrieved from: https://obipublic11.epa.gov/analytics/saw.dll?PortalPages

Energy Reliability

Source: Energy Administration Information. Electric Disturbance Events - Monthly and Annual Summaries. Retrieved from: http://www.eia.doe.gov/cneaf/electricity/page/disturb_events.html

Digital Connectivity Driver

Broadband Connections

Sources: Federal Communications Commission. "High-Speed Services for Internet Access. Status as of December." Table 7: High-Speed Lines by Technology. Retrieved from: http://www.fcc.gov/wcb/iatd/comp.html

U.S. Census Bureau. "American Community Survey." Summary Tables. Retrieved from: https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

Broadband Coverage

Source: Federal Communications Commission. "High-Speed Services for Internet Access". Retrieved from http://www.fcc.gov/wcb/iatd/comp.html

Internet Speed

Source: Akamai. "State of the Internet Report." By request. http://www.akamai.com/stateoftheinternet/?WT.mc_id=soti_banner

Next Generation Internet

Sources: Abilene Network. Retrieved from: http://www.internet2.edu/communities-groups/members/

Rural Internet Access

Source: U.S. Department of Agriculture. "Farm Computer Usage and Ownership Report." Retrieved from: http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1062

Quality of Life Driver

Civic Energy and Harmony Sub-driver

Charitable Giving

Sources: Internal Revenue Service. Individual Tax Statistics. "SOI Tax Stats. Historical Data Tables. Individual Income and Tax Data by State and Size of Adjusted Gross Income." Retrieved from: https://www.irs.gov/uac/soi-tax-stats-historical-data-tables

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Voter Turnout

Source: The United States Elections Project. George Mason University. Retrieved from http://www.electproject.org/home/voter-turnout/voter-turnout-data

Methodology: Percent of eligible voters' turnout for highest office votes at general elections.

Gender Equity

Source: U.S. Bureau of Labor Statistics. "Current Population Survey." Retrieved from: DataFerrett software

Methodology: The current and previous two years were averaged to balance out any small sample fluctuations associated with this survey data, i.e. 2014 data reflects the average of 2012 to 2014 survey results.

Racial/Ethnic Equity

Source: U.S. Bureau of Labor Statistics. "Current Population Survey." Retrieved from: DataFerrett software

Methodology: see 'Gender Equity' entry above.

Hate Crimes

Source: Federal Bureau of Investigation. "Uniform Crime Reports." Retrieved from: https://ucr.fbi.gov/

Generational Creative Class

Source: U.S. Bureau of Labor Statistics. "Current Population Survey." Retrieved from: DataFerrett software.

Methodology: Ratio of 20-34 year old and 55-79 year old with a college degree relative to total population 20 years and above.

Number of Nonprofits

Sources: National Center for Charitable Statistics. All Registered Nonprofits Table Wizard. Retrieved from: http://nccs.urban.org/sites/all/nccs-archive/html//tablewiz/tw.php

U.S. Census Bureau. Population Estimates. "State Population Datasets." Retrieved from: http://www.census.gov/popest/

Lifestyle and Play Sub-driver

Time to Work

Source: U.S. Census Bureau. "American Community Survey." Summary Tables. Retrieved from: https://www.census.gov/programs-surveys/acs/

Leisure Industry Employment

Source: U.S. Bureau of Labor Statistics. "Covered Employment and Wages Program." Retrieved from: http://www.bls.gov/cew/

Methodology: Refers to NAICS codes 487, 711, 712, 713, 6116, 5322, and 4539.

Parkland

Sources: National Association of State Park Directors. "The Annual Information Exchange." Retrieved by request.

National Park Service. "Listing of Acreages by Park." Retrieved from: https://irma.nps.gov/Stats/Reports/National

Golf Courses

Source: U.S. Bureau of Labor Statistics. "Covered Employment and Wages Program." Retrieved from: http://www.bls.gov/cew/

Methodology: Number of establishments under NAICS 71391.

Trails

Source: National Recreational Trails Program. Retrieved from: http://www.americantrails.org

U.S. Census Bureau. Population Estimates. "State Population Datasets." Retrieved from: http://www.census.gov/popest/

Cultural Institutions

Source: U.S. Bureau of Labor Statistics. "Covered Employment and Wages Program." Retrieved from: http://www.bls.gov/cew/

Methodology: Number of establishments under NAICS 711 and 712.

Historical Preservation

Source: National Park Service. Federal Preservation Tax Credit data. Retrieved from: http://www.nps.gov/tps/tax-incentives.htm

Pocketbook Indicators Sub-driver

Urban Cost of Living

Source: C2ER. "Annual Cost of Living Index"

Methodology: The C2ER survey is metropolitan area-based, and does not include data for some cities. For this metric, the largest city in each state for which cost of living data is available was chosen as the metric value.

State and Local Tax Burden

Sources: Tax Foundation. "Tax Freedom Day by State." Retrieved from: https://taxfoundation.org/publications/facts-and-figures/#previous-publications

U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Urban Housing Affordability

Source: National Low Income Housing Coalition. "Out of Reach." Retrieved from: http://nlihc.org/oor

Homeownership Rates

Source: U.S. Census Bureau. "Housing Vacancies and Homeownership Annual Statistics." Retrieved from: http://www.census.gov/housing/hvs/

Unemployment Rate

Source: U.S. Bureau of Labor Statistics. "Local Area Unemployment Statistics." Retrieved from: http://www.bls.gov/lau/home.htm

Per Capital Disposable Income

Source: U.S. Bureau of Economic Analysis. "Regional Economic Accounts." Retrieved from: http://www.bea.gov/regional/index.htm

Health and Safety Sub-driver

Lack of Health Insurance

Source: U.S. Census Bureau. "American Community Survey." Retrieved from: https://www.census.gov/data/tables/time-series/demo/health-insurance/acs-hi.html

Crime Index

Source: Federal Bureau of Investigation. "Uniform Crime Reports." Retrieved from: https://ucr.fbi.gov/

Law Enforcement Personnel

Source: Federal Bureau of Investigation. "Uniform Crime Reports." Retrieved from: https://ucr.fbi.gov/

Healthcare Access

Source: U.S. Bureau of Labor Statistics. "Occupational Employment Survey." Retrieved from: http://www.bls.gov/oes/

Methodology: Percent of people employed in healthcare practitioners and technician occupations.

Clean Air

Source: U.S. Environmental Protection Agency. "AirData by Geography." Retrieved from: https://www.epa.gov/green-book/green-book-data-download

APPENDIX B:
Michigan Entrepreneurship Score Card Indices/Drivers and Metrics Rankings (2006-2016)

Notes:

* Rankings in this table are updated as of 3/5/18.
* Greener/lighter shading indicates ranking as a "Top 10" state.
* Redder/darker shading indicates ranking as a "Bottom 10" state.
* 2016 data year rankings that are higher than 2015 rankings are **bolded**.
* Data years that are blank reflect lack of data as of 3/5/18. Where 2016 year data was not available as of 3/5/18, data from the last available prior data year was carried forward to calculate ranks for indices and drivers.
* Data sources and methods are provided in Appendix A.
* Rankings for the State Entrepreneurial Sensitivity Index are not includes as they are considered too variable to be usefully tracked.

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ENTREPRENEURIAL CHANGE	**50**	**50**	**49**	**42**	**38**	**10**	**10**	**6**	**13**	**47**	**32**
Net Establishment Entrants Increase	39	39	41	3	15	5	5	9	44	49	28
Increase in High Performance Firms	41	44	43	42	28	8	11	3	4	19	21
Proprietor's Income Growth per Proprietor	41	42	44	44	42	38	16	6	2	21	30
Small Business Payroll Growth	50	49	49	46	38	27	10	22	28	22	(n/a)
Small Business Growth	47	48	49	46	41	34	41	30	32	34	(n/a)
ENTREPRENEURIAL VITALITY	**38**	**39**	**46**	**33**	**39**	**30**	**15**	**27**	**33**	**30**	**36**
Net Establishment Entrants	49	50	48	13	46	14	2	22	41	41	20
Establishment Turnover	16	15	20	13	22	24	18	18	23	33	40
5-Year Establishment Survival	38	45	41	45	25	25	9	10	11	11	11
High Performance Firms	27	34	35	30	35	30	26	31	30	19	41
IPO Awards	21	31	38	30	29	26	28	32	27	26	25
SBIC Awards	31	29	35	38	38	37	39	36	37	30	26
SBIR Awards	24	20	21	21	17	17	17	21	20	18	20
Nonfarm Self-Employment	39	37	34	36	30	28	30	32	32	32	33
STTR Awards	20	25	20	18	15	17	16	17	20	17	21
University/Research Institutions Spinoffs	15	17	12	26	29	34	30	34	35	33	31
ENTREPRENEURIAL CLIMATE	**39**	**40**	**42**	**39**	**14**	**12**	**10**	**25**	**25**	**22**	**24**
Research & Innovation	***17***	***20***	***21***	***20***	***20***	***20***	***18***	***21***	***17***	***15***	***13***
Federal R&D	34	32	19	18	17	20	19	21	20	21	(n/a)
Industry R&D Performance	2	2	5	7	7	5	5	5	4	5	(n/a)
NSF Funding Rate	19	26	15	26	26	21	22	26	9	13	**24**
Patent per Worker	9	9	8	9	9	9	9	9	9	8	7
Patents Per R&D Dollar	45	43	33	31	36	37	38	38	39	38	35
Research Institutions Licenses to Small Businesses & startups	16	19	18	18	18	18	17	22	17	18	14

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
University R&D Performance	18	17	13	9	8	7	7	5	5	5	6
Research Institutions Royalty/License Income	12	14	13	14	12	15	17	30	28	12	11
Entrepreneurial Programs	22	23	13	17	14	14	14	9	9	8	9
Financial & Institutional Capital	***32***	***36***	***36***	***36***	***8***	***10***	***10***	***33***	***35***	***33***	***32***
Bank Commercial and Industrial Lending	10	11	19	29	37	36	37	42	42	41	43
Business Incubators	37	33	36	29	26	21	13	12	11	(n/a)	(n/a)
2nd/3rd Stage Venture Capital	28	30	29	25	18	32	24	33	29	27	22
IPO Financing	16	35	35	30	1	1	1	30	13	15	14
Private Small Business Lending	18	22	20	22	21	18	18	25	29	28	16
SBIC Financing	40	38	33	34	31	29	28	23	26	28	37
SBIR Financing	22	21	21	22	21	21	20	22	22	22	22
Seed/Early Stage Venture Capital	29	32	24	23	12	29	16	24	20	16	30
STTR Financing	30	32	26	25	18	18	17	19	29	27	29
General Business Growth	***50***	***48***	***48***	***49***	***32***	***9***	***12***	***20***	***20***	***16***	***15***
Manufacturing Capital Investment Growth	27	33	13	14	8	26	18	22	30	45	46
Export Growth	39	9	14	15	27	37	35	42	34	13	26
Foreign Business Employment Growth	(n/a)	(n/a)	32	17	17	4	18	8	29	12	(n/a)
Fortune 500	8	8	7	9	7	9	9	9	9	10	11
Green Industries	32	36	36	35	36	36	30	28	29	31	33
Private Business Profit Growth	49	39	49	48	35	9	5	12	11	5	(n/a)
Gross Domestic Product Growth	50	50	50	50	47	35	10	16	19	14	13
Building Permits Growth	50	50	49	44	8	3	5	13	19	11	18
Large Business Payroll Growth	49	49	49	49	47	34	10	16	19	14	(n/a)
Export-related Jobs	13	13	16	18	18	18	19	17	17	17	16
Renewable Energy Use	35	34	35	37	35	35	34	32	29	30	31
EDUCATION	**21**	**27**	**34**	**37**	**30**	**27**	**23**	**27**	**26**	**25**	**31**
K-12 Education	***33***	***31***	***38***	***39***	***39***	***39***	***40***	***41***	***37***	***36***	***31***
ACT Score	32	21	49	47	46	43	44	41	40	40	6
Advanced Placement Score	24	25	25	26	28	28	28	28	28	28	28
Public High School Graduation Rate	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	37	35	36	36	36	40
NAEP Mathematics	31	35	34	35	36	36	40	40	36	32	(n/a)
NAEP Reading	31	32	34	34	34	33	34	36	34	34	(n/a)
SAT Performance	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	43
Postsecondary Education	***15***	***20***	***21***	***28***	***14***	***12***	***9***	***12***	***12***	***17***	***28***
College Migration	41	(n/a)	44	(n/a)	42	(n/a)	35	(n/a)	38	(n/a)	(n/a)
Four-Year College Costs vs Household Income Growth	32	36	39	47	29	36	6	17	15	21	36
Top Ranked Graduate Program	(n/a)	(n/a)	(n/a)	(n/a)	7	6	11	11	10	7	7

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
4Y Knowledge Degrees (excl. tech fields)	8	7	7	9	10	13	13	15	16	18	(n/a)
4Y+ Tech Credentials	10	10	8	7	7	7	6	5	6	6	(n/a)
Pre-BA Tech Credentials	21	22	18	24	24	28	21	26	28	30	(n/a)
Two-Year College Costs vs Household Income Growth	18	14	20	28	38	31	27	36	30	30	48
Top Ranked Undergraduate Program	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	14	16	13	16	15	15
WORKFORCE PREPAREDNESS	**14**	**12**	**12**	**13**	**13**	**9**	**10**	**10**	**12**	**12**	**13**
High School Diploma Attainment	29	30	28	28	28	25	23	21	24	28	25
Adult Education	16	18	18	19	21	20	24	29	32	37	(n/a)
Post-secondary pre-BA Attainment	16	12	11	10	11	7	4	3	4	8	11
Bachelor's Degree Attainment	21	24	26	28	28	27	28	29	32	30	24
High Tech Manufacturing Employment	1	1	1	4	4	4	3	2	1	2	1
High Tech Services Employment	13	13	14	16	14	13	12	12	12	12	12
Other Innovation Workers	21	24	22	25	27	25	23	26	25	30	30
Physical Science and Engineering Workers	8	5	5	4	6	2	4	4	1	1	2
Skilled Immigrants	20	20	21	21	21	16	17	18	20	21	21
Technologist and Technician Workers	23	24	22	22	22	17	14	16	16	19	20
BUSINESS COSTS	**46**	**39**	**43**	**43**	**36**	**39**	**24**	**24**	**23**	**23**	**31**
Business Taxes	16	28	27	30	19	13	9	8	5	4	1
State Business Tax Structure	50	48	48	48	48	49	8	9	9	7	8
Energy Costs	31	32	29	30	34	34	39	38	37	34	35
Small Business Health Care Premiums	39	32	20	38	29	22	16	16	22	25	43
Metro Industrial Rents	(n/a)	(n/a)	(n/a)	(n/a)	7	5	2	13	13	14	14
Unemployment Insurance Costs	49	49	50	49	49	49	48	49	47	47	46
Unemployment Insurance Structure	42	45	46	45	45	45	44	44	47	48	47
Unit Labor Cost	43	38	42	42	36	37	30	31	29	31	34
Workers Compensation Premiums	(n/a)	19	13	24	9	11	8	7	7	7	(n/a)
Workers' Compensation Costs	(n/a)	20	(n/a)	28	(n/a)	19	(n/a)	17	(n/a)	17	(n/a)
PRODUCTIVITY & LABOR SUPPLY	**44**	**43**	**44**	**49**	**48**	**40**	**42**	**40**	**41**	**40**	**42**
Prime Working Age Population	29	29	34	41	41	43	45	46	45	46	44
Gross State Product per Job	21	22	29	30	29	31	32	31	32	29	29
Laborforce Participation	35	37	41	39	40	43	43	40	39	40	37
Net Domestic Migration Rate	45	47	50	50	50	47	43	42	38	39	30
Service Sector Productivity	22	23	26	26	27	29	32	33	31	32	31
Manufacturing Value Added per Hour	38	31	34	33	30	39	41	39	41	40	39

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
LEGAL ENVIRONMENT	**29**	**35**	**35**	**37**	**32**	**30**	**29**	**24**	**27**	**24**	**26**
Business Liability Costs	17	17	27	31	21	22	20	17	18	10	(n/a)
Liability System Reputation	23	33	30	30	28	27	26	26	24	21	21
Malpractice Costs	46	47	46	46	46	42	40	40	42	42	40
PHYSICAL INFRASTRUCTURE	**18**	**22**	**20**	**31**	**32**	**27**	**29**	**25**	**26**	**32**	**38**
Airport Performance	33	29	27	16	43	31	23	14	14	17	22
Bridge Quality	27	27	29	29	27	27	24	25	35	36	37
Energy Reliability	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	20	24	20	17
Highway Quality	43	40	40	40	41	40	36	35	38	37	47
Major Market Air Access	36	36	36	35	35	35	34	34	33	31	30
Transit Use	28	31	28	31	32	29	29	28	28	28	29
Water Systems	2	6	9	3	13	13	6	6	4	3	5
DIGITAL CONNECTIVITY	**36**	**27**	**30**	**39**	**43**	**45**	**44**	**44**	**45**	**47**	**46**
Broadband Connection	34	35	41	41	36	34	30	28	39	42	42
Broadband Coverage	(n/a)	(n/a)	(n/a)	34	36	37	34	35	36	37	38
Internet Speed	(n/a)	14	18	16	21	19	13	14	12	14	16
Next Generation Internet	34	35	33	38	43	47	47	47	47	47	47
Rural Internet Access	(n/a)	24	(n/a)	26	(n/a)	26	(n/a)	22	(n/a)	25	(n/a)
QUALITY OF LIFE	**40**	**33**	**34**	**31**	**35**	**31**	**35**	**27**	**29**	**16**	**16**
Civic Energy & Harmony	***42***	***37***	***34***	***29***	***29***	***36***	***41***	***37***	***39***	***29***	***30***
Charitable Giving	23	23	22	21	22	22	30	31	32	30	(n/a)
Generational Creative Class	(n/a)	(n/a)	(n/a)	35	37	38	39	40	36	32	26
Gender Equity	45	37	39	37	38	41	41	37	36	31	26
Hate Crimes	45	48	46	33	35	39	49	42	41	31	33
Nonprofits	34	34	34	33	32	33	33	36	34	33	33
Racial Equity	22	17	18	11	9	12	20	14	34	26	23
Voter Turnout	8	(n/a)	7	(n/a)	21	(n/a)	10	(n/a)	15	(n/a)	13
Lifestyle & Play	**34**	**33**	**29**	**31**	**34**	**35**	**36**	**37**	**34**	**32**	**38**
Cultural Institutions	43	45	43	42	42	42	42	41	40	42	41
Golf Courses	12	11	10	10	10	11	10	11	11	11	12
Historical Buildings	21	23	24	19	24	22	21	28	28	16	30
Leisure Sector Employment	29	29	28	29	36	39	40	38	38	37	39
Parkland	10	10	10	10	10	10	11	11	11	11	(n/a)
Time to Work	25	28	26	30	28	28	28	27	27	27	27
Trails	29	31	33	33	33	29	29	31	30	30	33
Pocket Bock Indicators	***40***	***39***	***36***	***37***	***33***	***21***	***19***	***27***	***22***	***9***	***19***
Homeownership Rates	5	2	3	4	6	6	2	5	3	2	3
Per Capita Disposable Income	37	39	38	41	37	36	38	37	37	35	32
State and Local Tax Burden	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	24	26	28	26	32
Unemployment Rate	50	50	50	50	49	46	43	46	46	30	27
Urban Cost of Living	30	20	24	26	21	13	22	18	16	(n/a)	(n/a)

Metrics	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Urban Housing Affordability	27	26	24	22	22	24	22	23	22	19	23
Health & Safety	***36***	***31***	***34***	***35***	***37***	***36***	***33***	***15***	***13***	***13***	***14***
Clean Air	39	32	32	32	32	32	32	16	17	21	25
Crime Index	26	26	24	27	25	24	21	21	20	14	14
Healthcare Access	26	26	25	26	26	24	24	22	25	25	25
Lack of Health Insurance	8	11	17	13	19	16	14	14	13	12	11
Law Enforcement Personnel	42	44	43	46	46	47	48	47	48	46	43

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