

18TH ANNUAL SCORE CARD

Produced by the SBAM Foundation



2022

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About the SBAM Foundation

It will focus its work on:

- Research and publications in connection with entrepreneurship
- Training and education on entrepreneurship including those that benefit disadvantaged individuals and economically challenged communities
- In-depth analysis of the entrepreneurial environment in Michigan via the Michigan Entrepreneurship Score Card

The Score Card analytics and methodology were developed in 2004.

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. In 2018 MiQuest became Michigan Celebrates Small Business. Michigan Celebrates Small Business (MCSB) is on the forefront of championing small business and fostering the entrepreneurial spirit in Michigan. The MCSB's role is to serve as a catalyst for creating an entrepreneurial culture while inspiring the next generation of entrepreneurs. This edition is now produced by the newly-formed SBAM Foundation.

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

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Our family of organizations share one purpose: We are committed to inspiring positive economic change, one person, one business and one community at a time. Kinexus Group, a statewide non-profit, headquartered in southwest Michigan, created a family of organizations that are aligned with the organizational vision and purpose to solve the complex economic, workforce, and community challenges facing Michigan. The family of organizations are independently governed, diversely funded, and serve unique geographical footprints across the state.

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We provide a comprehensive and analytical look at the region's economic activity with daily coverage of the industries that drive Michigan business: manufacturing, healthcare, agribusiness, real estate, finance, energy, nonprofits and professional services. We offer unparalleled coverage of the region's merger, acquisition, venture capital, private equity and capital formation public activities.

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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.

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Our services include:

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Who We Are:

The Michigan Small Business Development Center (MI-SBDC) is a statewide network funded in part through cooperative agreements with the U.S. Small Business Association, the Michigan Economic Development Corporation and Regional Hosts. The statewide host of the MI-SBDC is the Seidman College of Business at Grand Valley State University. The MI-SBDC is nationally accredited by the Association of SBDCs.

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 is the only statewide and state-based association that focuses solely on serving the needs of Michigan's small business community. We have been successfully serving small businesses like yours in all 83 counties of Michigan since 1969. We're located in Lansing, just one block from the Capitol.

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Executive Summary

This 2022, 18th Annual Edition, of the Michigan Entrepreneurship Score Card reports a Michigan entrepreneurial economy that continues to grow, and with resilience through the early post-COVID recovery of 2021, into 2022. The Michigan economy has held up well in 2021-22 given a very fluid national and global economy. The state remains a solid entrepreneurial performer among its Industrial Midwest neighbors.

Our Data Challenge

For a second year, the work of the Score Card team has been particularly challenging. Paradoxically while data and visualization tools have become more available and helpful, post-pandemic data has become less complete at the state and local levels, more erratic, and less useful for determining trends. In many situations, next trends are not yet discernable. For example, with women having left the workforce or the office in early 2020, the patterns of return to work remain unclear and variable.

For a number of data sources in late 2022, data sets for the past two years will be reset/recalibrated once more complete and reliable data is available from all states. SBAM will have a better handle on 2020-2022 cross-state metrics in next year's Score Card. The analysis and presentation of these data could well shape state economic growth policies and strategies going forward.

The Michigan Economy 2021-2022

The 2020 COVID recession continues to affect the national economy in various ways. Americans and their policy-makers continue to discover how far-reaching the pandemic interruptions have been in the way we work, learn, and live. Most notable as this report goes to press, the nation is wrestling with inflationary effects in part aggravated by unprecedented pandemic stimulus measures in 2020 and 2021.

The 2021 Score Card noted Michigan's economy gained back significantly lost ground after the COVID recession of 2020. Relatively quick recoveries in certain industries, such as Manufacturing and Construction, resulted in stronger topline economic performances in many categories. However, Michigan's recovery has not been even. Several industries still face extraordinary challenges that will likely continue as the pandemic aftermath slowly recedes.

Michigan's economic progress summary, 2021-2022, is as follows:

- In 2021-22, the Michigan economy has been holding up well. In 7 out of the last 9 months, Michigan places in the top states for three-month economic improvement. In most cases, 2021 monthly commercial and industrial electricity use was up from the equivalent month the previous year, and likewise in 2022, except for July.
- However, growth has slowed since the recovery began in mid-2020 and Michigan job postings growth has been somewhat below the U.S. average.
- Aggregate state rankings for the economy and business climate place Michigan around mid-point among the states.
- State of Small Business rankings are much improved from 20 years ago.
- According to the statistics from Economy Tracker, Michigan small business has been outperforming the U.S. since 2020 (measured in percent growth in businesses open and in business revenue).
- Both Michigan's percent employed and labor force participation have declined since before the pandemic, while spending and consumption has remained strong and state sales tax collections exceptionally strong.

- While exports have been looking stronger in 2022 and have long been an important part of Michigan's economy, the lack of a clear recovery of exports is an indication that pandemic-related trade interruptions persist. Trade restrictions and global manufacturing supply chain disruptions continue.

Entrepreneurial Trend Watch Indicators

This Score Card reports recently published quarterly data for five specific "Trend Watch Indicators" that can give a "more current" sense of how Michigan's entrepreneurial economy is changing.

The purpose of Trend Watch Indicators is to use the most current business growth /expansion data, mostly from the Bureau of Economic Analysis, to paint, as near term as possible, an overall picture of trends in Michigan's entrepreneurial economy relative to high and low state performance.

Overall, the story from these data is a positive one: the MI entrepreneurial economy has been growing since the COVID recession. While many Michigan small businesses were set back by the 2020 recession, several metrics, including new business startups, provide a strong indication that the pandemic has not stopped entrepreneurship in Michigan.

Michigan Small Business/Entrepreneur Issues

The most pressing issues facing Michigan small businesses and entrepreneurs in 2022 are:

- Michigan small business vitality has been moving in the right direction in 2021-22, especially small business starts.
- While the pandemic economy of 2020-21 severely disrupted Michigan small businesses, their uptake since has outpaced the nation in number of open businesses and small business revenue. Small business Job Openings have kept pace with nation, but have slowed in 2022.
- Inflation is the top issue facing small business in 2022. 41.9% of Michigan small businesses are experiencing large/severe price increases (U.S. 40.6%).
- However, for major cost factors, labor, electric energy and health care, Michigan is not hurting quite as badly as the U.S. as a whole.
- Workforce remains a major issue. This year attention has focused on availability of workers. While skill levels are remain a big issue, the problem has shifted to supply of workers, regardless of skill. Labor supply has become acute.
- Michigan small business labor supply is constrained by a decline in available prime working age population, women leaving the workforce with slow return after the pandemic and low rates of in-state migration, foreign migration and college student retention after graduation.
- Affordable housing in safe, pleasant communities becomes part of the challenge. While Michigan ranks in the top five states for home ownership, housing has become an important factor in stabilizing and improving low/moderate income neighborhoods and quality of life (see Statewide Housing Plan (SHP), Michigan State Housing Development Authority (MSHDA)).

The condition Michigan's current entrepreneurial economy is difficult to summarize given the significant cross winds and dynamic nature of the situation. But it is safe to say that Michigan has experienced significant improvement since the beginning of pandemic and over the 18 years since this Score Card was developed. While challenges such as high inflation and worker shortages threaten future prospects, new business startup trends and small business revenue growth give reason for optimism.



Our family of organizations share one purpose: We are committed to inspiring positive economic change, one person, one business and one community at a time.



OUR FAMILY OF ORGANIZATIONS



Kinexus Group, a statewide non-profit, headquartered in southwest Michigan, created a family of organizations that are aligned with the organizational vision and purpose to solve the complex economic, workforce, and community challenges facing Michigan. The family of organizations are independently governed, diversely funded, and serve unique geographical footprints across the state.

Kinexus.org

Chapter 1

Introduction

This publication marks the 18th edition of the Michigan Entrepreneurship Score Card. At the time of the first Score Card, Michigan was in the midst of a long-term economic slowdown. The Small Business Association of Michigan set an ambitious goal to start the long and difficult climb of becoming a “Top Ten” state for entrepreneurs. However, to get there, we had to understand how Michigan performed against other states in a variety of areas.

At the time, SBAM had no ready reference with which to know how well its entrepreneurial economy was doing; no comprehensive data reference to determine progress. In response, we set about designing and publishing annual progress. The resultant Score Card became nationally recognized as one of the most complete assessments of a state’s ‘state of small business and entrepreneurship’. The usual 50-state scoring of over 120 metrics could not be completed in 2021, due to data unavailability in the aftermath of COVID. Last year’s report turned to get a handle on near-term small business recovery. This year’s report continues with tracking the near-term trends and issues related to the post-recovery. Next year, a much-anticipated full 50-state database comparison will be available again.

Small Business Outlook in a Post-COVID Recovery

SBAM has become familiar with many ‘ups and downs’ of the Michigan economy but none quite so disruptive as the one we now find ourselves in. We realized we must come up with a variant Score Card for 2021. To do so we needed to understand better what might lie ahead. We took two approaches: First, what are economic forecasters and business strategists saying about the U.S. economy in 2021 and 2022? Second, what could we learn from past major economic recoveries?

We reported that for a majority of economists in 2021, the following five factors would contribute to accelerating growth to varying degrees:

- Pent-up demand from households putting their savings to work - savings accumulated over 2020 and 2021 during the ‘stay-at-home’ regulations and continuing work-from-home trends. The U.S. savings rate clocked 20% in January of 2021, a rare occurrence, and remained high at over 9% in June of 2021.
- Accelerated spending boosted by stimulus from the American Rescue Plan and child tax payments.
- A pandemic waning by 2021.
- A friendly/accommodating Federal Reserve, keeping interest rates low in 2021, prior to more recent inflationary times.

Many of these factors played out positively for the Michigan economy in 2022, as presented in Chapters 2 and 4. What was not figured into many forecasts was a surge in inflation, increased international tensions with America’s major adversaries, Russia and China, mounting domestic controversies, and continuing supply chain disruptions. These have set up a more complex environment for small business, surveyed briefly in Chapter 3.

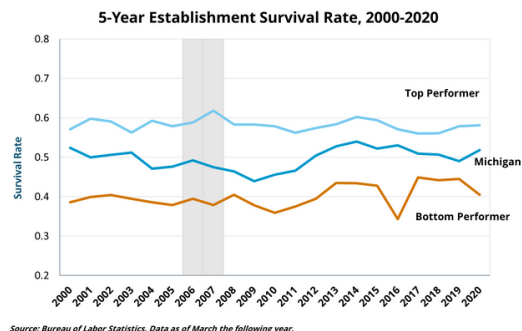
The past recoveries are no guarantee of small business take-off but...

Over the years, SBAM has performed an in-depth exploration of the Michigan entrepreneurial economy. We know much more about how Michigan small businesses respond to a variety of factors.

As reported in the 2021 Score Card the recession recoveries of 2001 and 2007-2009 showed similar patterns of recovery. The causes and circumstances of these two recessions were quite different, yet the paths Michigan small business growth tracked during and after each recession was similar. We noted,

that based on past recession recoveries, the 2021-2022 COVID recession recovery would pose promising growth rates for Michigan small business and entrepreneurial dynamism. Based on previous trends, Michigan would do well to prepare itself for another small business up-take. Indeed Chapter 3 shows that to have been the case so far. However, we also noted that early take-offs are followed by moderation and that period may have begun.

An implication for longer-term small business growth is that survival rates in these early years of economic recovery are critical for overall state business growth. A widely held rule of thumb is that within five years more than half of new businesses fail. Increasing survival success is particularly critical under tough or fast-changing economic conditions. The most available data through 2020 shows Michigan following a decline along with other states but at a faster rate than the top-performing states between 2014 and 2019. However, 2020 data showed a notable uptick in 5-year survival rates in Michigan. Further, for 2021 we do know Michigan business bankruptcy rates were the lowest in 20 years.



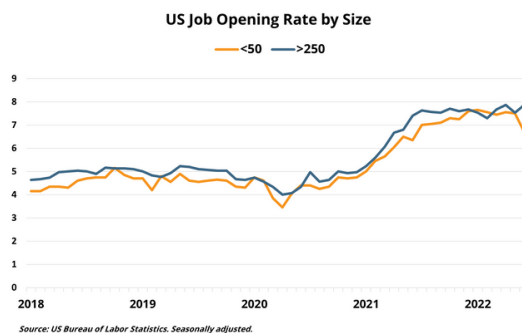
Keeping up such momentum is essential. The challenge for state leaders and policymakers is to implement growth-focused programs and policies that increase the likelihood of survival in the early years of post-recession.

Small Business Recovery May Be Slowing

On job openings and hiring, how are small businesses doing relative to larger businesses? Michigan data is unavailable as of yet, but national data points to larger businesses doing better at the rate of job openings and the rate of hiring over spring/summer.

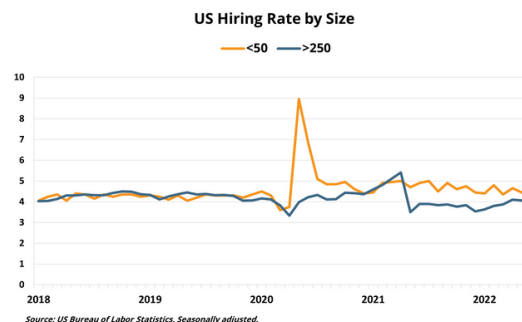
Job Opening Rates: Small vs Larger Businesses

The graph below shows that for the U.S., larger businesses have been doing slightly better than smaller ones on job openings except for a short period at the turn of 2021/2022. While the job openings rate for larger businesses has stabilized around 7.6% over the past half-year, small businesses have seen a decline in job openings rates for two consecutive months to June 2022 and have been on a downward trend in 2022.



Hiring Rates: Small vs Larger Businesses

The graph below shows that US hiring rates trending towards parity again after small businesses were notably outpacing larger businesses early after the COVID pandemic disruptions. As of mid-2022 hiring rates were trending down somewhat. Because of labor shortages, the hiring rate did not surge as dramatically as job openings in 2020-21.



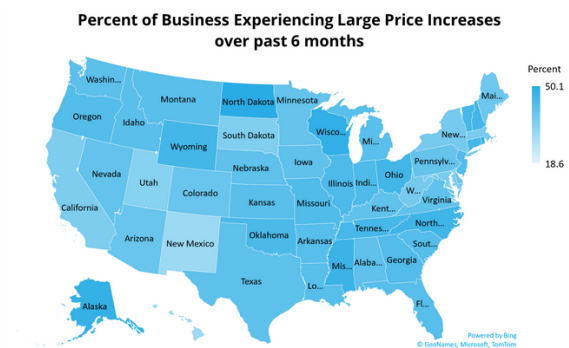
Inflation Concerns Elevated

The 2021 fall edition of the Score Card drew attention to inflation because it deserved a closer look into 2022-2023. See chapter 4.

The spring 2021 Score Card noted signs of inflation beginning to appear. At that time, the Federal Reserve Bank was confident that inflation was transitory and likely only affecting particular sectors of the economy. Since then, Chairman Jay Powell has recognized that inflation has become more widespread and stickier than expected. The Chairman's recent statements alert that inflation will likely be higher and with us for longer than originally anticipated. As of August 2022, national headline inflation was 8.3%, running at its highest levels since the early 1980s. Controversy surrounds when inflation might ease but many economists and investment analysts are now projecting today's supply-demand imbalances well into 2023. The 12-month inflation trend is pointing to an annualized rate well above the Federal Reserve target of two percent and as an effort to curb demand, the Federal Reserve has sharply increased the Federal Funds Rate with further rate hikes anticipated by the Fed into 2023.

According to the Q3 2022 U.S. Chamber's Small Business Index (MetLife and U.S. Chamber), 50% of small business owners say inflation is their top challenge, with 71% believing the worst is yet to come. According to SBAM's Fall 2022 survey of small businesses, 88% reported costs rising faster than normal with 42% saying costs were rising "substantially more than usual." Data on inflation's impact on Michigan's small business is not yet fully measurable, but the latest published date of the Census Bureau Small Business Pulse Survey was similar to SBAM's survey and paints a troubling picture. 40.6% of the nation's small businesses experienced large/severe price increases over the previous half year as of mid-April 2022. In Michigan, small businesses experienced even more hardship, with 41.9% experiencing large/severe price increases.

As quoted in the 2021 fall Score Card: "Then there's inflation. Not a problem as long as firms can pass rising input costs (including wages) on to customers at higher selling prices. But if consumers become price-shy, then profits will be squeezed and firms will have to adjust costs quickly, including labor costs." The future focus must be on small business worker shortages, delays in needed supplies, and rising costs (including labor).



This year the Score Card concludes with a framework we intend to expand upon in future Score Cards called, "In an Entrepreneurial State", Chapter 5. There we have highlighted Critical Foundations for Entrepreneurial Success (CFES). The selection of six CFES categories stems from preparing state entrepreneurial score cards for 18 years and our review of economic growth literature. Our methodology is still developing and will be refined in time, but we have concluded that as SBAM strives to become a lead entrepreneurial state, this is a good place to start for mapping a state's entrepreneurial economy profile post-COVID.

Chapter 2

Michigan Economic Snapshot

The experiences and policy responses of the past few years continue to affect the state and national economy in various ways. Most notable as this report goes to press, the nation is wrestling with inflationary effects in part aggravated by unprecedented pandemic stimulus measures in 2020 and 2021, international instability, and shortages in many goods and services.

The 2021 Score Card noted Michigan's economy gained back significant lost ground after the COVID recession of 2020. Relatively quick recoveries in certain industries, such as Manufacturing and Construction, resulted in stronger topline economic performances in many categories. However, Michigan's recovery has not been even. Several industries still face extraordinary challenges that will likely continue as the pandemic aftermath slowly recedes.

This Chapter reports on the general state of Michigan's economic progress in 2021-2022 with indications to the challenges and risks that lie ahead. We pay attention to the overall condition of the Michigan economy because in general, small business growth does better when the overall Michigan economy is in a 'growth mode'.

In summary:

- In 2021-22, the Michigan economy has been holding up well. In 7 out of the last 9 months, Michigan places in the top states for three-month economic improvement. In most cases, 2021 monthly commercial and industrial electricity use was up from the equivalent month the previous year, and likewise in 2022, except for July.
- However, growth has slowed since the recovery began in mid-2020 and job postings growth in Michigan has been below the U.S. average.
- Aggregate state rankings for the economy and business climate place Michigan around mid-point among the states.
- State of Small Business rankings are much improved from 20 years ago – two reports in 2022 ranked Michigan at 10 and 28 out of the 50 states. According to statistics from Economy Tracker, Michigan small businesses have been outperforming the U.S. averages since 2020 (measured in percent growth in businesses open and in business revenue).
- Both Michigan's percent employed and labor force participation have declined since pre-COVID while spending and consumption has remained strong and state sales tax collections exceptionally strong.
- While exports have been looking stronger in 2022 and have long been an important part of Michigan's economy (given global manufacturing supply chains) the lack of a clear recovery of exports is an indication that pandemic-related trade interruptions are not yet fully overcome.

State Score Card Snapshots

A quick scan of state business and economy scorecards below shows Michigan ranking in the 10 to 30 range out of 50 states. While the focus and methodologies of these reports vary considerably, they offer



a starting point for understanding where Michigan stacks up overall. One high ranking of note is Zippia's ranking of Michigan #1 on its scale of 'Best States for an Entrepreneur to Live and Work'. This is a very encouraging indication of many significant improvements made to the Michigan entrepreneurial economy over the past 18 years of Score Card reporting.

How good is Michigan as a State to do Business?

- CNBC: America's Top States for Business, 2022
Michigan #16
- US News and World Report: Michigan's Economy, 2021
Michigan #29
- Chief Executive Magazine: Best and Worst States for Business, 2022
Michigan #18

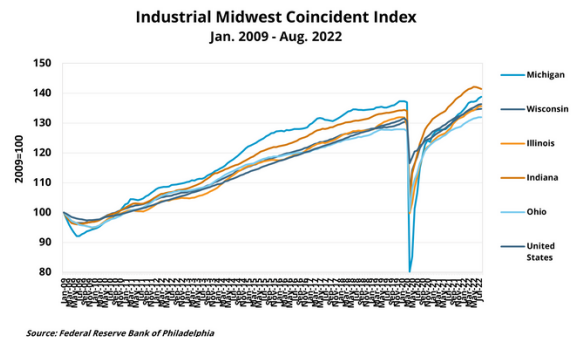
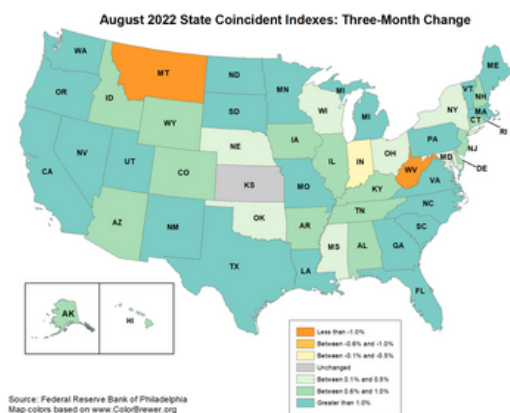
How good is Michigan as a State for Small Business?

- The Ascent: Top States to Start a Small Business, 2022
Michigan #28

Overall Economy Snap Shot

The Federal Reserve Coincident Index

- The Coincident Index is a widely recognized measure of near-term state economic growth from the Federal Reserve Bank of Philadelphia; the chart to the right is for August 2022.
- From the chart below, over the previous three months, Michigan placed in the best category of greater than 1% three-month economic improvement among the 50 states.
- Michigan has placed in this top category 7 out of the last 9 monthly reports.
- The graph to the right from January 2009 Michigan led the industrial Midwest states in economic growth through to the COVID recession of March 2022. Since then, Indiana has taken the lead, with Michigan now in second place.



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Our focus on building community wealth is driven by successful communities that are growing, and in the process, are making their states more prosperous.

Community wealth building encourages innovations that will assist our communities—large and small—to grow, become stronger, and transform into even better places for their residents, businesses, and visitors.



Small Business Activity

According to the statistics from Economy Tracker below, Michigan small business has been outperforming the U.S. since 2020.

Small Business Open, Jan 2020 to Feb 6, 2022:

U.S. 3.1%

MI 8.5%

Percent Change in Small Business Revenue, Jan 2020 to Feb 06, 2022:

U.S. 8%

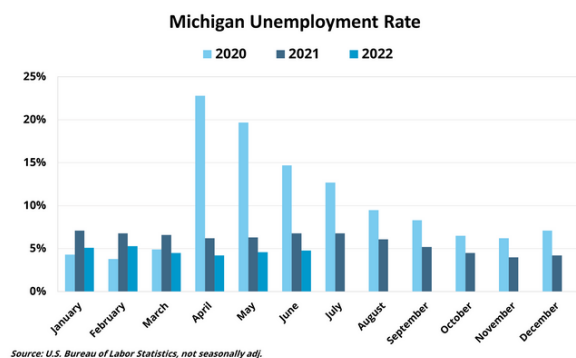
MI 24.2%

Unemployment Rate and Labor Force Participation

Nationally, the Labor Force Participation Rate is slowly recovering from an extraordinary reduction in the spring of 2020. Similarly, the unemployment rate has clearly improved but that rate somewhat overstates the true recovery when you consider how many people exited the labor force and have not returned.

Between January 2020 and June 3, 2022, the Percent Change in Employment dropped 7.0% for the US as a whole and slightly less so for Michigan at 6.1% (not seasonally adjusted, Economic Tracker). The Michigan Labor Force Participation Rate (the number of all employed and unemployed workers divided against the state's civilian population) dropped from 61.4 in Jan. 2020 to 60.1 in Aug. 2022. These data reflect what all small business owners know: Like most other states, Michigan is experiencing a workforce decline resulting in labor shortages. However, across all states, Michigan's ranking is particularly acute - nearing the bottom at 39th in labor force participation as compared to other states.

The unemployment rate has declined significantly. As of September 10, 2022, Michigan's Initial Claims for Unemployment Benefits per 100 people in the labor force was 0.08 and 0.09 for the U.S.



- Unemployment Rate 4.8% - June 2022 (not seas.adj.)
- WARN notices YTD (July 2022) = 23 (Employers of 100 workers or more covered by Unemployment Insurance giving advance notice of plant closings or mass layoffs)
- Michigan's unemployment rate remains stubbornly high compared to the US at a current 3.8%.

Job Postings

In Michigan, as of the week ending Sept.16 2022, total job postings increased by 9.3% compared to January 2020 (12.1% for the U.S.) (Economy Tracker).

Personal Income & Consumer Spending

While overall employment remains depressed, Spending and Personal Income has been strong. Over the past two years, Federal unemployment benefits stacked on top of regular and extended state unemployment benefits, in addition to direct stimulus payments, provided substantial personal income support even in the face of major interruptions in employment.

Michigan's Consumer Spending recovered more quickly than that of the nation. From Jan 2020 to July 24, 2022 Percent change in All Consumer Spending increased by 21% for Michigan, while only 16.5 % for the nation (Economy Tracker).

Sales Tax Revenue

Sales Tax collections have been exceptionally strong and above forecast. July 2022 represents the second consecutive month sales tax collections have exceeded \$1.0 billion and the second highest month of sales tax collections ever received. According to state July revenue data, fiscal year-to-date sales tax collections were up 14.7%.

Exports

While exports have long been an important part of Michigan's economy (given global manufacturing supply chains) the lack of a clear recovery of exports is an indication that pandemic-related trade interruptions are not yet fully overcome. Exports have been looking stronger in 2022.

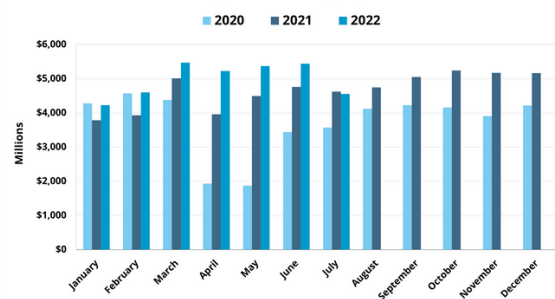
Commercial and Industrial Electricity Use

Beginning in March 2021, monthly business electricity use exceeded that of the same month in the prior year. Likewise, monthly electricity usage in 2022 has exceeded that of the same month the prior year, except for July.

Michigan Personal Income, 2005Q1–2024Q4

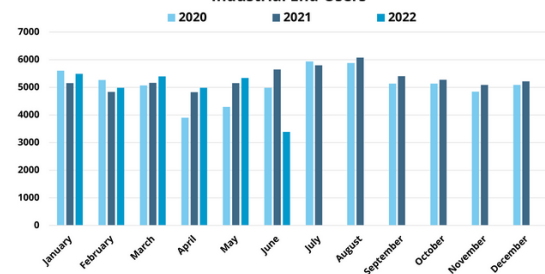


Michigan Commodity Exports



Source: U.S. Census Bureau

Michigan Retail Electricity Sales to Commercial & Industrial End-Users



Source: EIA



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"Thank you to the MI-SBDC for allowing entrepreneurs like me the opportunity to connect with professional consultants who really focus on getting to know who you are and truly care about your experience and the growth of your company."

– Re'Shane Lonzo, Owner, DRM International Learning Center

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Chapter 3

Entrepreneurial Trend Watch Indicators

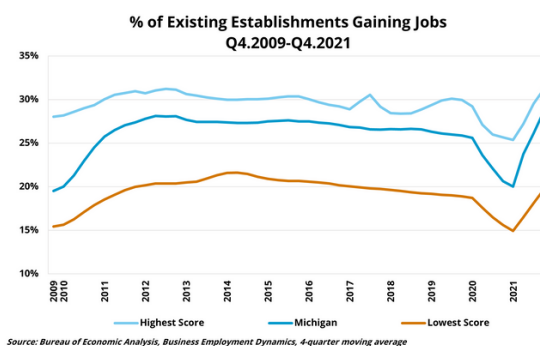
The purpose of Trend Watch Indicators is to use the most current business growth /expansion data, mostly from the Bureau of Economic Analysis, to paint, as near term as possible, an overall picture of trends in Michigan's entrepreneurial economy relative to high and low state performance.

Overall, the story from these data is a positive one: the Michigan entrepreneurial economy has been doing well, in spite of remaining and new challenges since the COVID recession. While many Michigan small businesses were set back by the 2020 recession, several metrics below, including new business startups, provide a strong indication that the pandemic has not dampened entrepreneurship in Michigan.

Trend Watch Indicator #1: 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 finds at least 25% of existing businesses creating net new 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 Q4 2021.

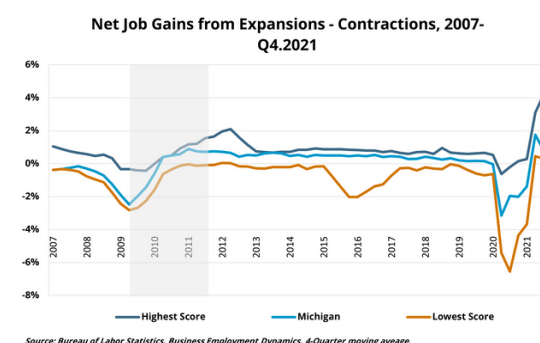
With a rapid improvement starting in 2010 after the Great Recession, the Michigan job-creating engine plateaued in late 2012. Along with the highest and lowest performers, Michigan presented a slight but noticeable downward trend, from 2014-2020. Since the COVID economic shock of 2020 Michigan shows a nice rebound, now exceeding the 25% threshold.



Trend Watch Indicator #2: Net Job Gains from Business Expansions minus Contractions

This metric shows the net jobs created from expansions minus lost from contractions relative to the total number of jobs. The metric is an aggregate indicator of the degree to which existing businesses are taking on risks. In general, a higher rate implies a stronger entrepreneurial economy, wherein businesses are embracing the challenge of success and failure.

With the share of existing Michigan business creating jobs slowing down 2014-2020, quite expectedly, the net job contribution rate of Michigan was flat, similar to high performing states. Following the COVID recession of 2020, Michigan's performance has improved and settled midway between the high and low performing states.



Trend Watch Indicator #3: Business Expansion & Contraction Rates

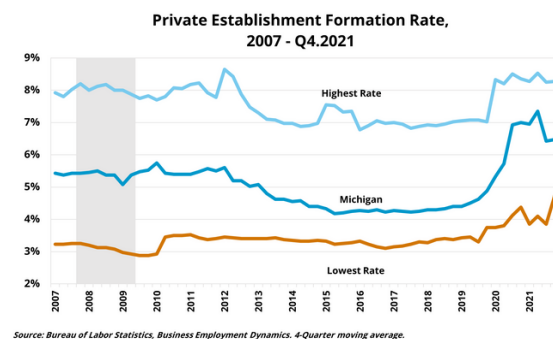
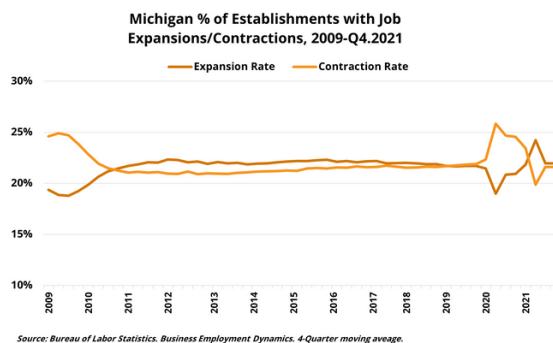
One of the most conspicuous signs of a dynamic and strong business economy is a business expansion rate outperforming the contraction rate, with expansion and contraction rates measured in terms of net jobs.

Michigan's expansion rate of existing business turned above the contraction rate in Q3 2010 and remained above it through mid-2019. After the COVID recession, Michigan business expansion took off. It has settled back to just above the contraction rate.

Trend Watch Indicator #4: Michigan's Private Establishment Formation 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, showed a significant trend decline from 2010 to 2015, with stabilization through late 2018. Small business formation rates have been on an upward trend since Q4 2018.

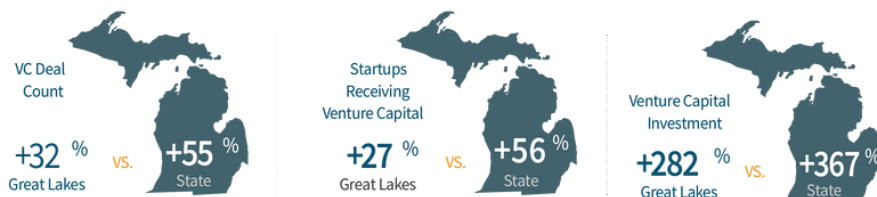
The formation of new businesses is part of the "life blood" of any state's entrepreneurial economy. As stated in last year's Score Core Card, there is reason for optimism with the current establishment formation rate now higher than the pre-Great Recession establishment formation rate.



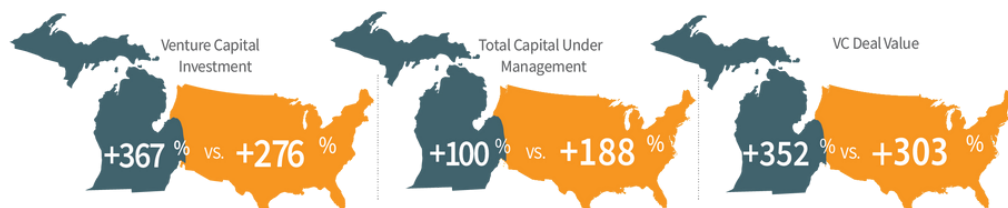
Trend Watch Indicator #5: Expansion/Later Stage Venture Capital

A relatively small proportion of U.S. small businesses per year receive venture capital, and VC 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 debatable. However, local access to later stage funding rounds 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. The data below from the Michigan Venture Capital Association shows Michigan VC investment quite healthy relative the US average, especially for growth in venture capital investment and deal values. Compared to the Great Lakes Region, the share of startups receiving venture capital in Michigan grew twice as fast over the past five years.

Five-Year Trends: Michigan vs. Great Lakes



Five-Year Trends: Michigan vs. U.S.



Chapter 4

Select Small Business & Entrepreneur Issues (2022)

Given the fluid nature the today's economy, the purpose of this chapter is to address briefly several of the most pressing issues facing Michigan small businesses and entrepreneurs in 2022.

In summary, this Chapter finds:

- Michigan small business vitality has been healthy in 2021-22, especially small business starts.
- While the pandemic economy of 2020-21 severely disrupted Michigan small businesses, their uptake since has outpaced the nation in the number of open businesses and small business revenue. Small business Job Openings have kept pace with the nation, but have slowed in 2022.
- Inflation is the top issue facing small business in 2022. 41.9% of Michigan small businesses are experiencing large/severe price increases (U.S. 40.6%).
- However, for major cost factors, labor, electric energy and health care, Michigan is not hurting quite as badly as the U.S. as a whole.
- Workforce remains a major issue. This year attention has focused on the availability of workers. While skill levels remain a big issue, the problem has shifted to 'warm bodies. The labor supply has become acute.
- Michigan small business labor supply is constrained by a decline in the available prime working-age population, women leaving the workforce with a slow return after the pandemic, and low rates of in-state migration, foreign migration and college student retention after graduation.

Small Business. Big Impact.

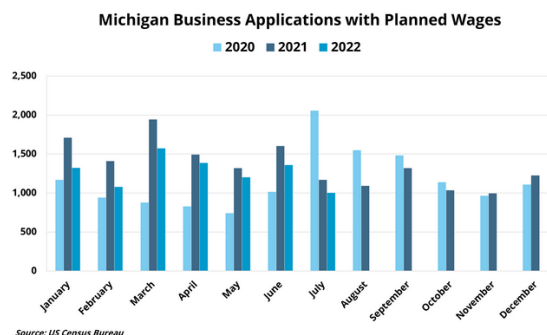
- ✓ Networking at regional events
- ✓ Comprehensive benefits
- ✓ Pro-small business advocacy work
- ✓ Valuable compliance resources

- One promising strategy for all businesses is remote work arrangements and office/home-based hybrids. Successful introduction of these work arrangements will call for innovations from owners and managers, especially since a greater percentage of small businesses involve customer face-to-face transactions.
- Affordable housing in safe, pleasant communities is part of the challenge. While Michigan ranks in the top five states for home ownership, housing has become an important factor in stabilizing and improving low/moderate income neighborhoods and quality of life (see Statewide Housing Plan (SHP), Michigan State Housing Development Authority (MSHDA)).

Business Starts; Existing Business Vitality

Small Business Applications

One surprising and hopeful statistic is the substantial increase in business startups indicated by the number of new business filings during the pandemic and into 2022. This trend has occurred in Michigan and nationally but has been particularly strong in Michigan while softening a little after summer 2021. Through June 2022, month-by-month business applications with planned wages have been higher than in 2020, while lower than the initial surge in 2021. July saw some slow down.

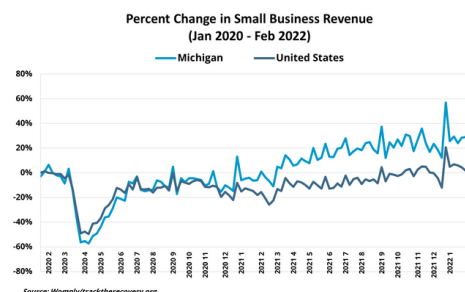
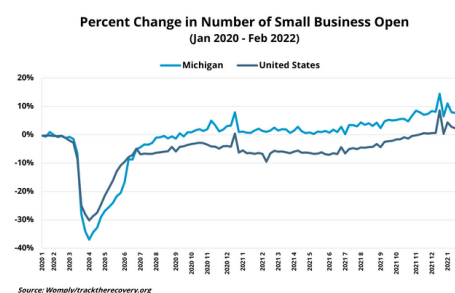


There are many conceivable reasons for the surge in new business startups during this time. During difficult economic times, the relative risk of an individual starting a new business may be lower because other employment opportunities may have evaporated or are less desirable. As the pandemic disrupts business and so many other aspects of life, it would not be a surprise to see entrepreneurs meet those disruptions with innovations advanced through new businesses. More remote work may be leading to an increase in independent contractors. Some might be starting side businesses because a more flexible remote work schedule makes it feasible. It will take some time to understand the drivers and long-term sustainability of these new enterprises, but it is clear that a significant increase in entrepreneurship has occurred during this pandemic and is continuing.

Small Business Trends and Recovery

Pandemic extended closures and restrictions impacted small businesses more substantially than larger businesses. The makeup of the most restricted business sectors (restaurants, entertainment, bars, movie theaters, bowling centers, banquet facilities, etc.) is largely comprised of small businesses. However, the recent small business uptake is evidenced by the following data.

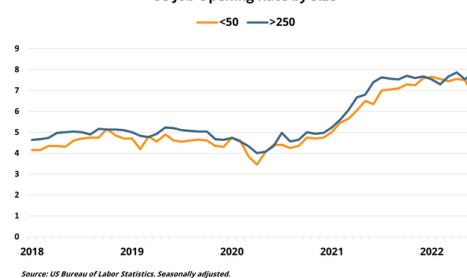
In the United States, as of February 6, 2022, the number of small businesses open increased by 3.1% compared to January 2020. In Michigan, as of February 6, 2022, the number of small businesses open increased by 8.5% compared to January 2020. In the United States, as of February 6, 2022, total small business revenue increased by 8% compared to January 2020. In Michigan, as of February 6, 2022, total small business revenue increased by 24.2% compared to January 2020.



Existing Business: Job Opening Rates, Small vs Larger Businesses

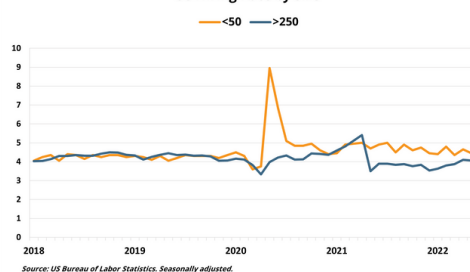
While small business starts and recovery trends do appear strong in the past 2 years, larger businesses have also been doing well. The graphs to follow show that for the U.S., larger businesses have been doing slightly better than smaller ones on job openings except for a short period at the turn of 2021/2022. While the job openings rate for larger businesses has stabilized around 7.6% over the past half year, small businesses have seen a decline in job openings rates for two consecutive months to June 2022. They have been on a downward trend in 2022.

US Job Opening Rate by Size



The graph to the right shows the US hiring rate seems to trend towards parity again after small businesses were notably outpacing larger businesses since COVID pandemic disruptions.

US Hiring Rate by Size



Inflation Concerns Elevated; Rising Business Costs

The 2021 fall edition of the Score Card drew attention to inflation because it deserved a closer look into 2022/2023.

The spring 2021 Score Card noted signs of inflation beginning to appear. At that time, the Federal Reserve Bank was confident that inflation was transitory and likely only affecting particular sectors of the economy. Since then, Chairman Jay Powell has recognized that inflation has become more widespread and stickier than expected. The Chairman's recent statements alert that inflation will likely be higher and with us for longer than originally anticipated. As of August 2022, national headline inflation was 8.3%, running at its highest levels since the early 1980s. Controversy surrounds as to when inflation might ease but many economists and investment analysts are now projecting today's supply-demand imbalances well into 2023. The 12-month inflation trend is pointing to an annualized rate well above the Federal Reserve target of two percent and as an effort to curb demand the Federal Reserve has sharply increased the Federal Funds Rate with further rate hikes anticipated by the Fed into 2023.

According to the Q3 2022 U.S. Chamber's Small Business Index (MetLife and U.S. Chamber) 50% of small business owners say inflation is their top challenge, with 71% believing the worst is yet to come. According to SBAM's Fall 2022 survey of small businesses, 88% reported costs rising faster than normal with 42% saying costs were rising "substantially more than usual." Data on inflation's impact on Michigan's small business is not yet fully measurable, but the latest published date of the Census Bureau Small Business Pulse Survey was similar to SBAM's survey and paints a troubling picture. 40.6% of the nation's small businesses experienced large/severe price increases over the previous half year as of mid-April 2022. In Michigan, small businesses experienced even more hardship, with 41.9% experiencing large/severe price increases.

Percent of Business Experiencing Large Price Increases over past 6 months



As quoted in the 2021 fall Score Card: "Then there's inflation. Not a problem as long as firms can pass rising input costs (including wages) on to customers in higher selling prices. But if consumers become price-shy, then profits will be squeezed and firms will have to adjust costs quickly, including labor costs." Future focus must be on small business worker shortages, delays in needed supplies, and rising costs (including labor).

Three Key Cost Considerations: Labor, Energy and Health Care

While facing rising costs in labor, energy and health care the quick data check below suggests Michigan's rate of increase in recent years falls below that of the U.S. Further in-depth analysis would determine what cost advantages Michigan small business may have, and against which states.

Labor costs

Michigan labor costs have been increasing but at a lower rate than in the U.S.

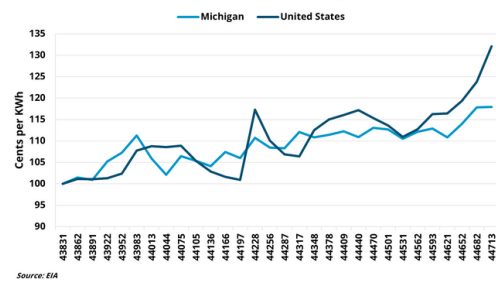
Energy Costs

Michigan's electricity rate trajectory has also been below the U.S. trend.

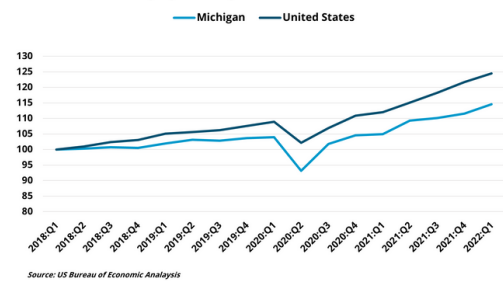
Health Care Costs

Healthcare premiums per employee have been tracking below the U.S. trend except for small businesses with less than 10 employees. Particular challenges facing very small businesses may deserve closer examination.

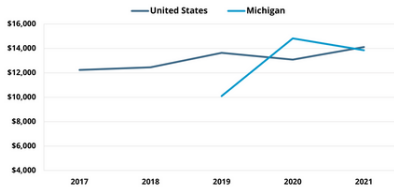
Commercial & Industrial Electricity Retail Price



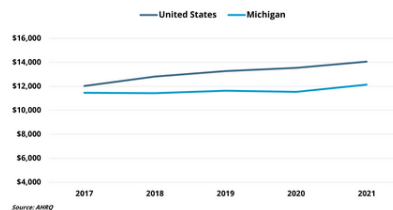
Employee Compensation (Q1 2018=100)



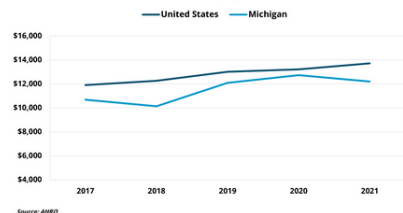
Average Healthcare Premiums per Employee
<10 Employees



Average Healthcare Premiums per Employee
10-24 Employees



Average Healthcare Premiums per Employee
25-99 Employees



GROW YOUR IDEA IN COLLEGE

Where do budding entrepreneurs learn skills,
take their first risk, and build a network for life?
At one of Michigan's 15 public universities.



Changing Workforce/Talent Issues

As covered in previous Score Cards, workforce issues have consistently been a top concern to small business. This year that concern takes a twist in that outright supply of workers in addition to skills plagues the viability of small business.

For Starters, Some Basic Statistics

As of the U.S. Census Jan 2022:

Michigan population: 10,050,811

Population change 2021-22: -0.3 % (U.S. + 0.1%)

College Graduation or higher: 29.1% (U.S. 32.1%)

Foreign Born (2019): 6.9% (U.S. 13.6 %)

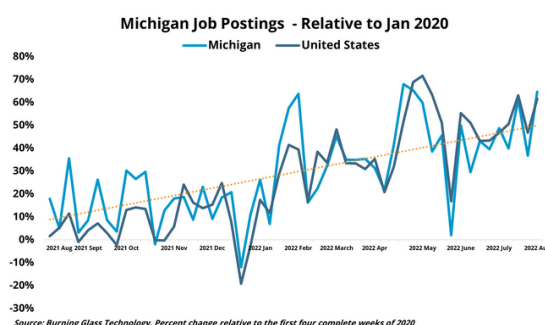
No Health Insurance: 6.9% (U.S. 10.2%)

In Poverty (2020): 12.6% (U.S. 11.4%)

Changing Labor Supply vs Demand (pre-COVID) - 2022

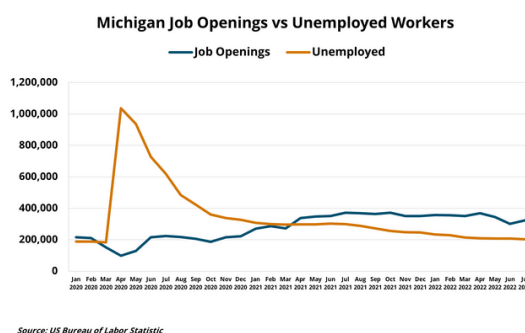
As of July 2022, there were 324,000 jobs open in Michigan, yet only 202,130 unemployed workers. Before COVID the primary work force challenge was 'skills: as in "where can I find the skilled workers I need?" Today the employer's dilemma is: "where can I find any workers and then how do I train them?"

Job Postings have continued to pick up, while they are still below 70% of January 2020 levels. By and large, Michigan's Job Postings have followed the national trend up since the pandemic outbreak. The Job Postings graph below shows Michigan's postings relative to pre-pandemic levels falling behind the nation's ratio in late 2021 but picking up steam during the first half of 2022. The summer months, as of August 2022 have seen again a slowdown in Michigan relative to the nation.



The uptake in small business vitality noted above does not translate into better overall job postings for all Michigan business. In July 2022 in the U.S. job postings were 11% up from the same month last year, compared to 4% in Michigan. However, the current 12 months job postings are much improved over the previous 12 months.

A good way to display the recent and current disconnects between job postings and worker supply is the graph to the right. A sharp drop in the number of unemployed workers followed a serious unemployment spike. By March 2021, Job Openings equaled the unemployed workforce. Since then, Michigan has had more job openings than workers to fill them. This inadequate labor supply has become a drag on the overall economy and a major stress factor for small businesses.



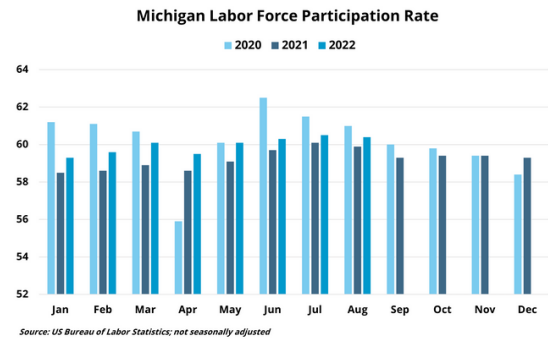
Changing Labor Force Participation Rate (pre-COVID) - 2022

Not surprisingly, the mismatch between job creation and labor supply shows up in labor force participation.

Due to the COVID recession labor force participation (a measure of the percentage of working-age adults either working or looking for work) declined markedly during the last half of 2020 and the first half of 2021. Since then it began to pick up and has exceeded 2021 rates through to August 2022.

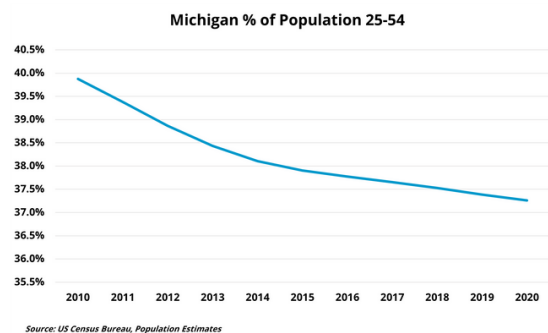
Changing Size of Workforce 2019 (pre-COVID) - 2022

The number employed in Michigan declined by 6.1% from Jan 2020 to June 2022 (U.S. -7%). The decline has been greatest in the low-wage category with job quality improving as shown by a gain of 6.4% in middle-wage employment (U.S. 1.3%).



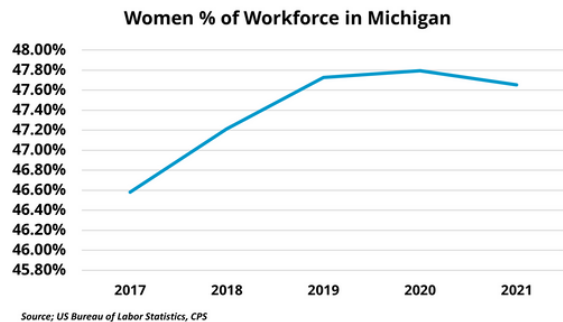
Changing Michigan Working Age 2010-2020

Michigan businesses face the challenge that workers of prime working age (ages 25-54) have been on the decline, as a percent of the population, with a 2.6 percentage point drop between 2010 and 2020. Where the graph below levels off is unknown. What is known increasingly to small business is that workers from different and varied demographics must be recruited and retained. These include older and younger workers, women returning to the workforce after the COVID years, and immigrants.



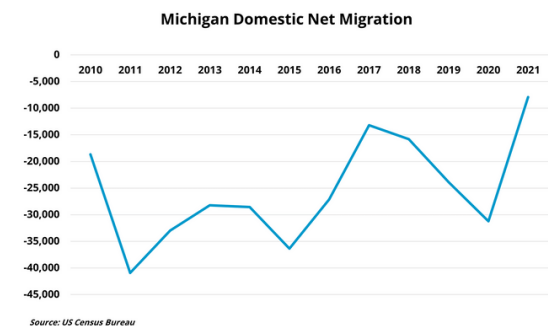
Changing Size of Female Workforce 2019 (pre-COVID) - 2022

Due to 'stay in place' orders and school closings in 2020, women in particular shifted work to home where possible. Quit rates increased as women reconnected to full-time family and community engagement. This has led to higher unemployment rates for women than men, a reverse from pre-COVID times. Further women have been slower returning to work, either full- or part-time. Key factors affecting a decision to return to work have been: access to quality child care; flexible work hours; and family leave arrangements.



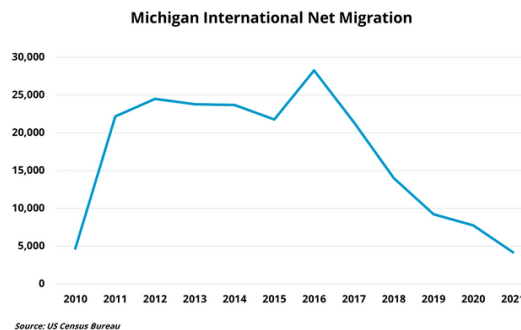
Changing Domestic Migration (pre-COVID) - 2022

The net domestic migration rate measured per 1000 residents as the difference between in-migration to Michigan and out-migration from Michigan during each year since 2010. 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. Net domestic migration for Michigan has improved through the past decade but remains negative, indicating that worker supply from out of state does not look promising in aggregate.



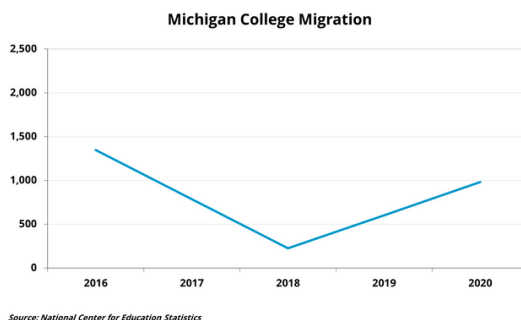
Changing Foreign Migration (pre-COVID) - 2022

Silicon Valley has proven that highly skilled foreign workers can be an integral part of an innovation network. With states facing inevitable demographic shifts, attracting well-educated workers from beyond the U.S. becomes increasingly relevant. In recent years, this has become all the more critical due to the federal curtailment of the entry quota for holders of H1B visas. Michigan has become home to many endeavors of entrepreneurial immigrants, especially from the Middle East and South Asia. It ranks in the lower middle of the states in percent foreign-born. From the graph to the right, international net migration has been falling since 2016.



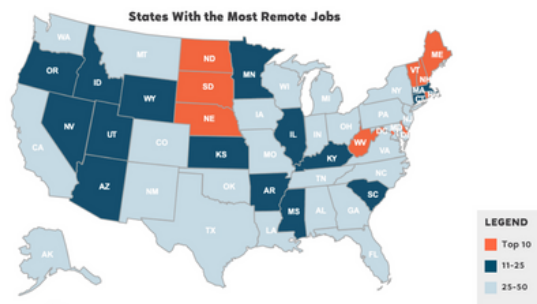
Changing College Migration (pre-COVID) - 2022

A net student inflow into a state to attend college signals a quality perception of a state's higher education institutions and helps reduce pressure on the tax rolls and keep in-state tuition increases in line. As some of these students remain after graduation, they add to the higher-skill or better-educated workforce. Michigan is a net receiver of students, but only modestly. Improvement has occurred between 2018 and 2020.



Changes in Remote Work - Working from Home and hybrids (pre-COVID) - 2022

Enabled by mobility advancements in computing and communications, remote work accelerated quite dramatically over the pandemic. Compared with the other states, Michigan ranks low for 'remote jobs'.



Housing and Remote Work: an Emerging Issue

The Score Card has repeatedly observed how high Michigan ranks on Home Ownership. For much of the Score Card's 18 years, Michigan has ranked among the top five states on home ownership. Earlier Score Cards have observed: "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."

Today homeownership has become all the more important for social equity and quality of life for low/moderate-income households. The Michigan State Housing Development Authority (MSHDA) recently released its first-ever Michigan Statewide Housing Plan in which it points out that Michigan will have a deficit of more than 150,000 affordable housing units by 2045. The plan sets as goals building and rehabbing at least 75,000 units of housing, more than half of which will be affordable.

The Score Card has long made the connection between community, sense of place, and entrepreneurship. Quality communities are a breeding ground for the entrepreneurial spirit. Often, the home or garage is the initial locale of the next business start. Today, the boundaries between work and home become even more blurred. The shift to remote work received a major boost from the pandemic. So much so that some workers are reluctant to return to the traditional office.

Employees at Apple recently petitioned the company for more say over work arrangements “that work for each of us”. This adds to the demand for quality housing. A recent National Bureau of Economic Research paper posits that the future of housing depends critically on the path of remote work. Recent research by economists at the Federal Reserve Bank of San Francisco estimates that the shift to remote work explains over half the 23.8 % house price increase, in 2019-2021.

Housing, journey to work, and remote work set up a new set of considerations for small business owners or managers already dealing with a complex array of fast-changing issues.



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Chapter 5

Critical Foundations for Entrepreneurial Success

In seeking to become one of the nation's leading entrepreneurial states, SBAM has sought, through this Score Card, to know where Michigan stacks up against the other U.S. States. Looking forward we want to know if the state has the right ingredients for small business and entrepreneurial success. In the Spring Score Card of 2021, we presented a forward-looking framework for assessing the building blocks for an entrepreneurial state. We called these "Post-COVID Key Entrepreneurial Metrics to Watch." The text below uses these to present six categories of Critical Foundations for Entrepreneurial Success (CFES) as a way to profile Michigan's position as "an entrepreneurial state" in the post-COVID economic environment. Our selection of the CFES categories stems from preparing state entrepreneurial score cards for 18 years and our review of economic growth literature. Below, for each CFES, we have selected one or two key metrics that highlight Michigan's current situation.

This methodology will continue to be refined over time, but we have concluded this is a good place to start to map a state entrepreneurial economy profile, post-COVID.

The updated graphs for this year confirm our finding from last year that:

While more strategic analysis is required, this preliminary scan of Critical Foundations for Entrepreneurial Success suggests Michigan possesses sound building blocks for post-COVID entrepreneurial growth. However, over the next 2-3 years, supportive policy and program actions will be necessary.

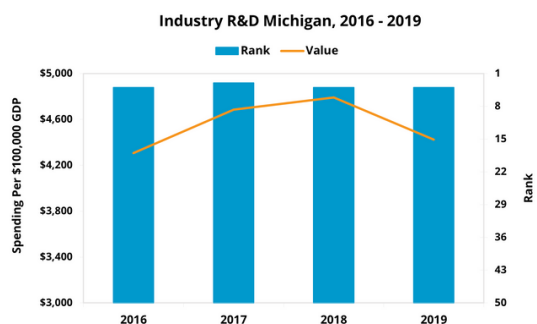
(Note: for several charts in this section, complete 2020 data for all states is not available as of the date of publishing)

1. Private Sector Innovation: Metric - Industrial Research and Development

Michigan has historically had a strong technology R&D and talent base. Previous Score Cards have shown how the state 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 in a post-COVID economy. The chart shows how industrial R&D spending in Michigan has maintained a top five ranking despite a drop in spending in 2019.

Michigan's strong position here is in part because Michigan's public and private sectors invest heavily relative to most other states in several 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
- STEM and related 'knowledge' credentialing programs
- Excellence in graduate programs
- High-tech employment (both mfg. and services high-tech)

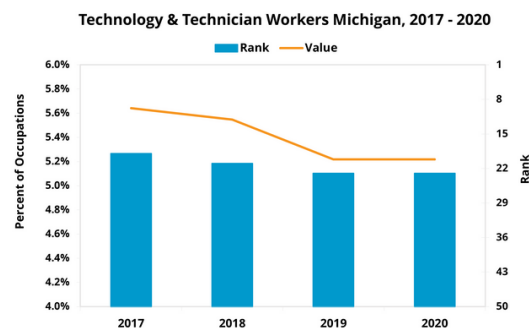
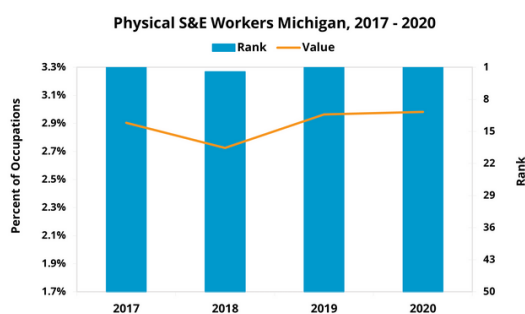


2. Technology Workforce: Metrics - Physical Science and Engineering Workers; Technology and Technician Workers

Information, knowledge, and ideas are critical assets for success in the innovation economy. Having a strong technology-oriented human capital base will be a necessity in the post-COVID economy. The graphs below demonstrate that Michigan can capitalize on respective strong human capital assets as means to economic progress.

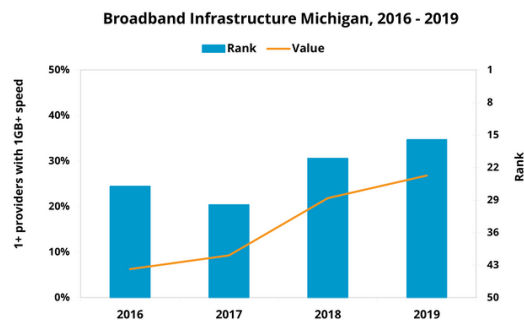
As shown in the graph, over the last four years, after a drop in 2018, Michigan's Physical Science and Engineering workers as a percentage of all workers have been gradually increasing, with the state maintaining a #1 ranking.

Many mistakenly focus exclusively on bachelor's 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 high-skilled tradesmen, technicians, and technologists. While still strong, Michigan has experienced continuous slippage in Technology and Technician workers since 2017. Any weakening of this talent pool raises talent supply risks for Michigan's many future tech and non-tech growth companies.



3. Digitization /Broadband: Metric – Population with 1+ GB internet Speed

Earlier Score Cards have reported that, relative to other states, Michigan's poorer highways, broadband, and air access, are all creating constricting drags on both Michigan's entrepreneurial and broader business sectors. Indeed, one could argue that the impacts on the entrepreneurial economy of Michigan's deteriorating infrastructure should be increasingly prominent in policy discussions, especially those discussions related to digital infrastructure, energy and financing road repairs and international crossings. 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 metric below, percentage of the population that has access to 1GB internet speed providers with at least 1 provider, is a shorthand measure to show Michigan's situation is improving.



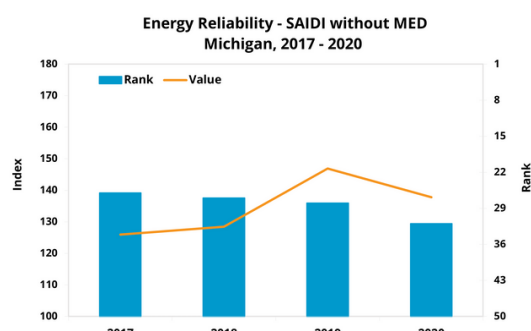
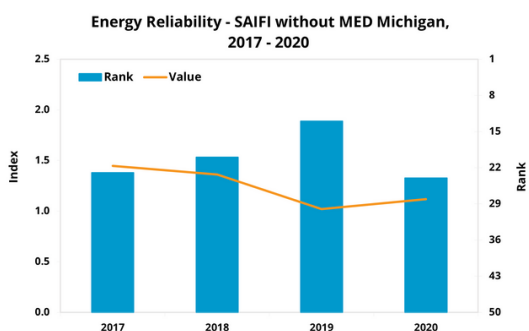
A good geographic coverage of broadband makes sure that all parts of the state have the opportunity to be part of digital and mobile technology transformations. At the same time, the access has to be at a reasonable cost and service, and some extent of competition (more than one provider) is more likely to assure such an outcome.

Michigan's broadband infrastructure has improved considerably in recent years.

4. Electrification (High Reliability): Metrics - System Average Interruption Frequency and System Average Interruption Duration

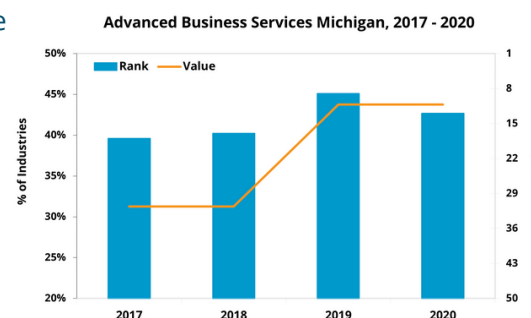
In an information technology world, reliable power distribution has become an increasingly important consideration in business attraction and retention. With the expansion of artificial intelligence, advanced logistics and remote work the foundation is not only supply but also reliability. Electrical reliability is measured with two charts. First, the System Average Interruption Frequency (SAIFI) Index across all utility providers, represents the average number of interruptions per customer. The second is SAIDI, System Average Interruption Duration Index, commonly measured as the total time duration of interruptions for the average customer across the state electric system during a predefined period. Both measures are widely used in the industry.

As shown below, Michigan's Interruption Frequency metric ranks well while Interruption Duration deserves improvement.



5. Advanced Business Services: Metric – Percent of Advanced Business Services

Advanced economies are characterized by the degree to which specialty small and mid-size businesses provide specialized 'producer services' to support complex production processes. Their lines of business range from specialized tech-intensive financial services (fintech) to frontier research labs to computer and cloud support. These businesses meet the needs of local or in-state larger business clients as well as those out of state.



A Key CFES metric in this regard is the concentration and diversity of Advanced Business Services. This is measured as the percent of 16 different advanced business service categories that show a location quotient above one, i.e., that have a higher job concentration in Michigan than what is typical for the nation. As shown in the graph, this number is increasing in Michigan, along with the state's rank improving in 2018 and 2019, while slipping somewhat in 2020. Overall, these data indicate Michigan is growing a more diversified, robust mix of businesses for its next leg up.

6. Internationalization: Metric – Workforce Share from Foreign Direct Investment

International business is a catalyst for growth. While global trade has softened in very recent years the world's economy becomes increasingly interdependent. The impact is not just increased trade. Large multinational firms locate production facilities across the globe including foreign direct investment

(FDI) in Michigan. Foreign investment can be an important source of well-paying jobs. The chart gives a measurement of the share of employment in foreign-owned firms as a percentage of total employment. The chart shows year-to-year increases in the percentage of workers in Michigan who work for bank and non-bank foreign-majority-owned companies. Michigan now ranks in the top five U.S. states.

Composite of all eight CFES Metrics

The aggregated scores of all eight CFES Metrics above provide a composite 'Summary Index' as shown below. Michigan's improvement in rank from 16 in 2017 to 13 in 2020 indicates positive improvement.

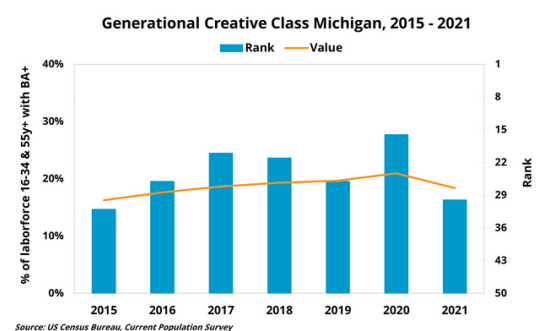
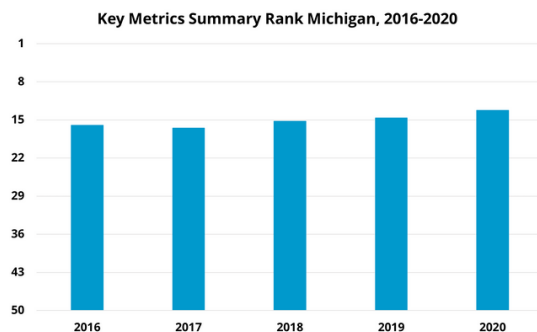
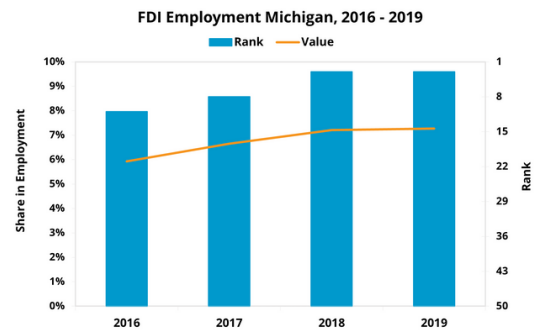
While more strategic analysis is required, this preliminary scan of Critical Foundations for Entrepreneurial Success suggests that Michigan possesses sound building blocks for post-COVID economic growth. However, supportive policy and program action will be required over the next 2 or 3 years.

Special Note: Quality of Life that continues to support and attract entrepreneurs.

Previous Score Cards have noted that Michigan's Quality of Life attributes have been and continue to be impressive for an industrial state. Several Place-Making/'Pure Michigan' strengths conducive to tech/entrepreneurial growth tie closely to community economic vitality. Michigan's Place-Making is grounded on the principle that entrepreneurs and the talent they need tend to locate in places that offer the amenities, social and professional networks, resources and opportunities that support thriving lifestyles. In short, growth businesses prosper in vibrant communities where entrepreneurs prefer to live.

Prior Score Card metrics point to a number of Michigan "Quality of Life" attributes that have held up well even through recessions, such as parkland and golf courses consistently scoring in the Top 15 states over the past decade. Also, Michigan residents enjoy relatively high homeownership rates and urban cost of living. However, declines in water systems and clean air deserve watching. One sees the results of successful Place-Making most readily in urban centers like Detroit and Grand Rapids where young, skilled workers have been returning to find job opportunities and to live.

To sustain and strengthen an entrepreneurial economy some scholars agree for a strong presence of the 'creative class'. Generational Creative Class is defined as the percent of the labor force 16-34 and 55 years plus with bachelor's degree or higher. This metric gets at the breadth of talent of a state by combining educational attainment at both ends of the age spectrum. The 2020 Score Card reported Michigan moving up in rank to 21 in 2018 from a low rank of 40 in 2013 for the metric Generational Creative Class – indicating that efforts in Place-Making have been paying off. However, a closer look at the attached bar chart may be showing slippage since 2017, except for 2020, which could be an aberration due to COVID year data. Now at rank 30 (2021) Michigan ranks close to what it was in 2015. For Michigan this and related metrics deserve closer examination in 2023.



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