

BLUEPRINT FOR OHIO'S ECONOMIC FUTURE

OCTOBER 2022



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Letter from the CEO

Dear Ohioan,

The Ohio Chamber of Commerce operates with a simple and compelling vision: Making Ohio the best place in which to do business anywhere in the world. It has never been a better time in history to be an Ohioan. As a state, we have an abundance of resources and variables working in our favor, including a low cost of living and a high quality of life. Our Gross Domestic Product in 2019 totaled \$698.5 billion, the 7th largest in the United States. In fact, If Ohio were a separate country, it would be the world's 21st largest economy ahead of Poland, Sweden and Belgium. We have plenty to leverage. We know what we're capable of as Ohioans, we have a grasp of the resources and assets at our disposal, and we have everything we need within our state's borders to prosper – including higher education options, transportation systems, ample sources of low-cost electricity and a mild climate.

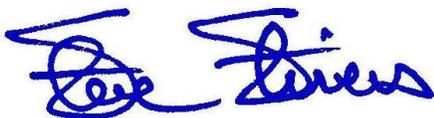
Ohio is now entering into a manufacturing renaissance unlike anything witnessed by any other state in our country. Our state's manufacturing is responsible for 17.5% of Ohio's GDP and contributes more than 650,000 jobs for Ohio workers and an annual payroll of \$42 billion. This already makes our manufacturing sector GDP 4th in the nation, and we rank 3rd in total manufacturing employees and total payroll. But the best is yet to come.

Additionally, Intel has now broken ground, in Licking County, on the most ambitious economic development project in the free world: the private investment of up to \$100 billion to manufacture semiconductors. Not only will this project add an estimated \$2.8 billion to Ohio's annual gross state product, it will also bring more than 20,000 good-paying jobs to Ohio and create enormous opportunity to businesses, communities and families in all corners of the state for generations to come.

Across the entire spectrum of our economy, Ohio is breaking records. In 2021, Ohio added more than 99,000 private sector jobs – the most private job growth since 1997. The state shattered previous business filing records with 197,010 new businesses created in 2021, a 15% increase over the previous record in 2020.

Thankfully, Ohio's business climate benefits from traditionally strong fiscal management by the State of Ohio. In September 2022, Ohio obtained its first "AAA" long-term Issuer Default Rating with Fitch, reflecting "material strengthening of the state's financial resilience and budget management, particularly over the past two biennia." Finally, Ohio has exercised fiscal restraint and foresight through its Budget Stabilization Fund, which currently sits at \$2.7 billion and safeguards against cyclical changes in revenues and expense in poor economic times.

We know that it takes strong leadership and a cooperative effort to make Ohio a safe and vibrant destination to live, work, study, raise a family and operate a business. The Ohio Chamber of Commerce remains ever vigilant and ready to tackle the next frontier of challenges for Ohio's business community. Our *Blueprint for Ohio's Economic Future* is a constructive look at policy areas where Ohio can better capitalize on opportunities and position itself as a leader in the coming decade.



Steve Stivers
President & CEO
Ohio Chamber of Commerce

BLUEPRINT FOR OHIO'S ECONOMIC FUTURE



INTRODUCTION



EDUCATION & WORKFORCE



SENSE OF PLACE



TAXES AND COSTS



INNOVATION & COLLABORATION



BUSINESS FRIENDLINESS



INFRASTRUCTURE



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A close-up photograph of two hands shaking, symbolizing agreement or partnership. The hands are positioned in the center of the frame, with the fingers interlocked. The background is a light gray gradient with a subtle pattern of overlapping hexagons. The word "INTRODUCTION" is overlaid in white, bold, uppercase letters across the center of the hands.

INTRODUCTION

Introduction

Ohio has long been a state that sees—and seizes—opportunity and innovation. From the Wright Brothers exploring flight to the evolution of the automobile and the invention of the traffic light, Ohio has been a place for new ideas that shape our society. Today, Ohio is home to 200 corporate headquarters and 55 Fortune 1000 companies, and Intel’s recent decision to invest in Ohio points to a future as the Silicon Heartland.¹

While there is much to be proud of in Ohio, the state and its policymakers must also focus on laying the foundation for continued investment and creating economic and business growth. The State of Ohio, like the nation, is navigating complex challenges that include a decline in its population, persistent urbanization, a lack of childcare resources and a shortage of talent in its workforce. Recent national rankings—which placed Ohio near the bottom of the pack in terms of business friendliness (47th)² and tax burden (37th)³—underscore the importance of addressing these challenges.

The state is at a critical juncture, with an urgent need to move forward. Ohio must take steps now to remain one of the most competitive states for businesses while laying the foundation for future growth.

The Ohio Chamber of Commerce is leading through both its legislative agenda and its role as the convener of business. In collaboration with Accenture, the Ohio Chamber set out to explore current strengths, gaps and opportunities of the state’s business climate. Using in-depth secondary research and in-person workshops, the team examined the factors that are key to Ohio’s ability to continue to attract residents and businesses, nurture a larger, more effective workforce and make Ohio the best state in the country to do business – competitive with any place in the world. More specifically, six levers were identified, along with examples of opportunities for improvement for each.

Based on the analysis of the data, the Ohio Chamber will lead in shaping the state’s future and offers this report as a starting point to bring together leaders in business, economic development, workforce, education, housing, healthcare, transportation and other community representatives. The research provides examples of opportunities for improvement in the near term and as a foundation for sustained growth in the future.

The uncertainty of global events, previously hard to fathom, like those that we have experienced in the last two years with COVID-19 further underscore the importance of a “living” strategy that proves adaptable and resilient over time, allowing for continuous innovation and improvement in line with the evolving priorities and values of Ohioans. Now is the time for concerted efforts to further host regional stakeholder engagements across the state to develop additional dynamic initiatives that provide business leadership, direction and bold solutions that leapfrog the competition and drive growth for decades to come.

Levers	Indicators	Levers	Indicators
Education & Workforce 	<ul style="list-style-type: none"> • Workforce Participation/ Labor Supply/ Barriers • K-12 Education • Higher Education 	Sense of Place 	<ul style="list-style-type: none"> • Public Health • Affordability & Housing • Economic Opportunity • Recreational Amenities
Taxes and Costs 	<ul style="list-style-type: none"> • Tax Burden • Cost Of Doing Business • Fiscal Stability 	Innovation & Collaboration 	<ul style="list-style-type: none"> • Venture Capital • Start-ups And Entrepreneurship • Modernization & Data Privacy • Research And Development • Patents
Business Friendliness 	<ul style="list-style-type: none"> • Regulatory Landscape • Occupational Licensing • Legal Climate • Economy • GDP Growth 	Infrastructure 	<ul style="list-style-type: none"> • Energy/Utilities • Internet Accessibility • Roads and Bridges • Transportation

Executive Summary

The Ohio Chamber of Commerce operates with a simple and compelling vision: Making Ohio the best place in which to do business anywhere in the world. As the leading Ohio business advocate and resource, the Ohio Chamber supports free enterprise, economic competitiveness, and growth for the benefit of all Ohioans. Maintaining and improving Ohio’s business environment is a constant effort. To remain competitive nationally, we must examine our current environment with an eye to best practices. To that end, the Ohio Chamber is developing a proactive advocacy effort to improve Ohio’s business climate and economic opportunity.

To guide these efforts, the Ohio Chamber partnered with Accenture on a study of Ohio’s economic competitiveness. Macroeconomic forces the competition for talent, the growth of the middle class, the rapid and changing job market, the churn of workers retooling with 21st century skills, the persistent rate of urbanization and the changing digital marketplace place stress on Ohio’s ability to maintain competitive ecosystems for growth and long-term prosperity. Any of these factors, in isolation, help Ohio but do not move the needle. When combined, these economic factors multiply and amplify one another—they can and will do so exponentially.

To analyze this multiplier effect and better understand Ohio’s positioning, the first pass of the analysis focused on secondary research of national rankings that included multiple metrics relevant to economic competitiveness. Each of these rankings included various methodologies, metrics and weights.

Various National Indices Measure Success Differently

Report	Metrics	Focus	Heaviest weighted category
CNBC Top States for Business	88 Metrics	Best State for Business	Workforce, Infrastructure, Business Cost
US News & World Report Best States Rankings	70 Metrics	Outcomes for Citizens	Health Care, Education, Economy
Forbes Best States for Business	40 Metrics	Best States for Business	Business Cost, Labor Supply, Regulatory Environment
WalletHub Best States to Start a Business	28 Metrics	Startup Success	Business Environment, Access to Resources, Business Cost

While two of the rankings show minor year-over-year advances for Ohio, there remains meaningful room for improvement pointing to areas where Ohio can make changes and continue to lay the foundation for a strong business environment.

Highlights of a few of the rankings analyzed

- **Moved down to 15th from 10th**– [CNBC Top States for Business](#)
- **Moved up to 36th from 39th** – [US News and World Report Best States Rankings](#)
- **Moved down to 29th from 20th** – [Forbes Best States for Business](#) (2018 to 2019, no data available for 2021)
- **Moved up to 33rd from 34th** – [WalletHub Best States to Start a Business](#)

US News, Forbes, WalletHub, No rankings were conducted in 2020. CNBC compares 2021 to 2022.

Near the end of the research, CNBC released 2022 rankings, and while this source has been the first to release this year’s data, we included these in addition to the initial research performed. Notable changes in CNBC’s findings included improvements in infrastructure, innovation and collaboration, sense of place and access to capital, but showed drops in workforce and economy. Additionally, new metrics for 2022 included childcare resources and emerging industries like crypto and cannabis.

Executive Summary Continued

To identify areas of opportunity to improve Ohio's business climate, each of the national indices was deconstructed. Inputs to each factor were examined and areas where Ohio was ranked low nationally were identified. From here, in-person workshops were held and stakeholder engagement with business leaders was conducted to explore policy recommendations that could help to advance Ohio and elevate the state to the most business-friendly state in the nation.

Ohio's Competitive Advantage	Ohio's Key Opportunities
Affordability	Workforce Supply, Economic Mobility of Low-Income Workers
Education	Regulatory Landscape
Research & Development & Patents Issued	Start Ups & Entrepreneurship
Cost of Doing Business & Access to Capital	Venture Capital
Bridges & Roads, Broadband	Energy Reliability

Levers	Recommendations
<p>Education & Workforce</p> 	<ul style="list-style-type: none"> • Reduce Barriers to Employment • Expand Education and Job Training • Grow Ohio's Population and Recruit Out-Of-State Workers • Modernize Ohio's Workforce for In-Demand Occupations Now and in the Future
<p>Sense of Place</p> 	<ul style="list-style-type: none"> • Improve Affordability That Allows for Generational Wealth Building • Improve Health Outcomes and Address Drug Crisis • Further Understand Opportunities for Ohio's Natural Environment and Amenities
<p>Taxes and Costs</p> 	<ul style="list-style-type: none"> • Target Comprehensive Tax Reform • Improve the Municipal Tax Complexity and Burden • Conduct Further Analysis on The Business Gateway's Impact on Businesses
<p>Innovation & Collaboration</p> 	<ul style="list-style-type: none"> • Expand Venture Capital • Increase Small Business Support • Transition Manufacturers to Modern Equipment to Realize Greater Efficiencies and Higher Output • Enact Balanced and Comprehensive Data Privacy Legislation
<p>Business Friendliness</p> 	<ul style="list-style-type: none"> • Expand Cleanup of Regulatory Policies • Create Efficiency and Transparency of License and Permit Applications
<p>Infrastructure</p> 	<ul style="list-style-type: none"> • Improve Energy Transmission and Distribution Systems • Advocate for Transportation Improvements • Improve Broadband Access



LEVER 1: EDUCATION & WORKFORCE

Level 1

Education and Workforce



A New Type Of Workforce

Education & Workforce National Rankings

Best to Worst Indicators



Key: Avg Rankings In:



The attainment rate is the percent of adults aged 25-64 that have high-value credentials (e. g., certificates and certifications) or postsecondary degrees (e. g., bachelors, associates, etc.)

A strong workforce signals a healthy economy and consistently ranks as a top factor for business location, relocation and expansion. Individuals that have gainful employment can support themselves and their families, purchase goods and support the tax base. In addition, a strong workforce is one that has ample opportunities for unemployed individuals to actively look for a job until they find a good fit.

A strength for Ohio's workforce is its system of public education. National indices assessing education ranked K-12 and higher education in Ohio around average or slightly above average. In the US News ranking, Ohio was among the top 20 states, while CNBC ranked Ohio 22nd in overall education. According to the 2021 census, 90.8% of Ohioans have a high school education or higher, compared to the national average of 88.6%, and 29.3% have a bachelor's degree or higher, compared to the national average of 33.1%. These education rankings represent an opportunity for Ohio to build on this strength and grow a skilled workforce here at home, while also attracting new pools of talent to relocate here.

According to the Lumina Foundation, Ohio's educational attainment rate as of the fall of 2021 was at 49.5% of working-age adults. This is two percentage points below the national average of 51.3% and ranks Ohio 31st among all the states, and 15.5 percentage points below the Ohio Department of Higher Education's goal of 65% by 2025.⁴

The greatest opportunity for growth is in workforce supply and economic mobility of low-income earners. In several indices, Ohio ranked in the bottom ten in both indicators. Breaking down methodologies for these categories uncovered the following as drivers of challenges: working age population decline, brain drain, lower labor force participation and smaller concentration of STEM workers. According to the analysis performed by economists at the University of North Carolina, the W.E. Upjohn Institute, the University of Michigan and the University of Chicago, **Ohio is losing college graduates 12.2% more quickly than it draws them in**, and they are most often going to Illinois, New York and California.

Drivers of Ohio's Workforce Challenges: working age population decline, brain drain, lower labor force participation and smaller concentration of STEM workers.



FAFSA Participation in Ohio

Student aid is fundamental to many Ohioans' realization of post-secondary attainment. The Free Application for Federal Student Aid (FAFSA) is a prerequisite to apply for federal student aid, including federal grants, work-study and loans. Both the completion and submittal of the FAFSA are free, providing a gateway to the largest source of financial aid towards college or career school. Furthermore, many states, colleges and some private aid providers use the FAFSA to determine additional eligibilities for state and school financial aid.⁵

By the end of September 2021, Ohio's FAFSA completion percentage was 60.1%. Ongoing tracking indicates a rise of 1.2%, suggesting a completion rate of 61.3% by the end of September 2022. These percentages exceed the national completion rate of 57.2% as of mid-September 2022.⁶

Historic national completion rates for high school graduates (as of June 30 each year) include 56.9% for the class of 2021-22, 59.5% for the class of 2020-21, 61.2% for the class of 2019-20, and 60.9% for the class of 2018-19.⁷

Despite Ohio's FAFSA participation exceeding national trends, the Association of Independent Colleges & Universities of Ohio estimates that Ohio's high school graduates forgo \$111 million in total unclaimed Pell Grant (federal, need-based grant) assistance due to Ohio students not completing the FAFSA. This unclaimed amount puts Ohio at a competitive disadvantage with neighboring states having lower levels of unclaimed federal aid, including West Virginia (\$18 million), Kentucky (\$54 million), Indiana (\$65 million) and Michigan (\$89 million).⁸

Completion of the FAFSA opens educational and employment doors to many economically disadvantaged Ohioans. As an example, Central Ohio Technical College (COTC) recently unveiled its "COTC Promise," a guarantee that tuition (instructional and general fees) will be entirely covered by institutional, federal and state aid as well as private scholarships. Eligibility involves living within the county footprint of any of their Coshocton, Knox, Newark or Pataskala campuses for at least one year, and having reported an annual household income of \$60,000 or less on a completed FAFSA application.⁹ As COTC develops curriculum specifically to train future Intel employees, this program represents a direct opportunity for educational attainment and employment success.

In March 2021, the Ohio Department of Higher Education and Ohio Department of Education announced an effort to drive higher FAFSA completions, including the investment of \$2.85 million in federal Governor's Emergency Education Relief toward FAFSA completion projects. The projects include direct grants to college-readiness organizations, data system upgrades and professional development. Another idea to drive completion includes making FAFSA completion a graduation requirement, as has been implemented in Louisiana, Tennessee, Texas and Illinois, although such a proposal was inserted into and later removed from Ohio's state operating budget for FY22-23.¹⁰

The FAFSA enables Ohioans, particularly those who stand to become first generation college students, a pathway toward post-secondary attainment. As the state devises ways to increase FAFSA participation rates, the business community may be well-served by developing partnerships with K-12 and higher education institutions to publicize and drive awareness of the FAFSA and its importance.



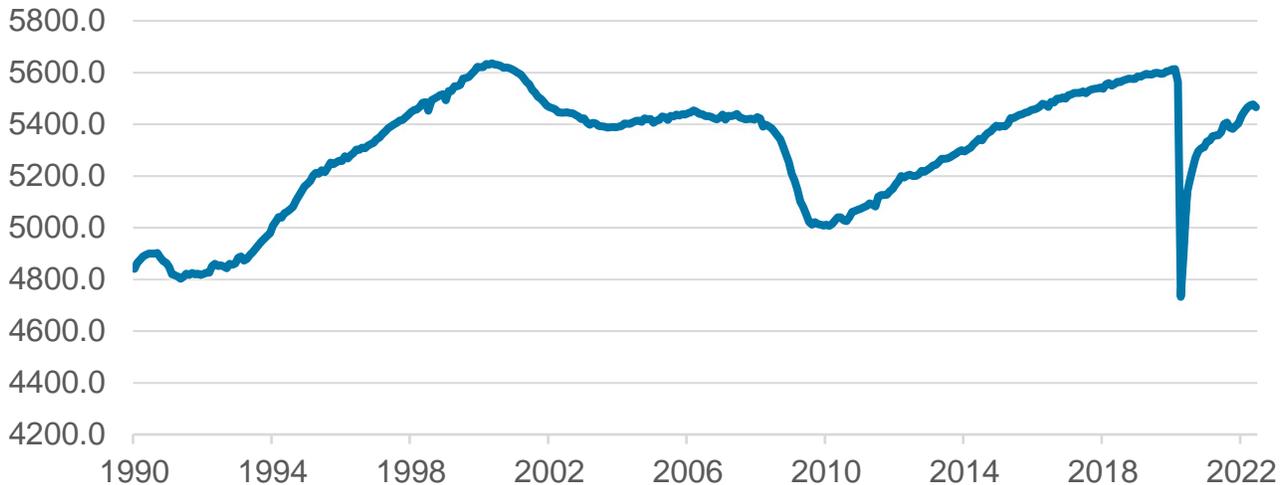
Ohio's high school graduates forgo \$111 million in total unclaimed federal assistance due to Ohio students not completing the FAFSA.



Ohio still needed over 62,000 employees to return to February 2020 employment numbers, as of July 2022

Over the past decade, Ohio hit a peak of 5.6 million total employees, both in the early 2000s and right before the pandemic. Ohio's labor force began recovering from the pandemic earlier than anticipated. While the total number of employees has increased significantly since early 2020, as of July 2022, Ohio still needs over 62,000 additional employees to reach its pre-pandemic total employment.¹¹

Ohio's Total Employment, Over Time (thousands)



Source: Accenture analysis of Bureau of Labor Statistics Total Employment

Ohio's top industries by percentage of total workforce



- Trade, Transportation and Utilities (19.3%)
- Education and Health Services (16.3%)
- Government (13.8%)
- Professional Business Services (13.4%)
- Manufacturing (12.4%)
- Leisure and Hospitality (9.8%)

Source: Accenture analysis of Bureau of Labor Statistics Current Employment Survey

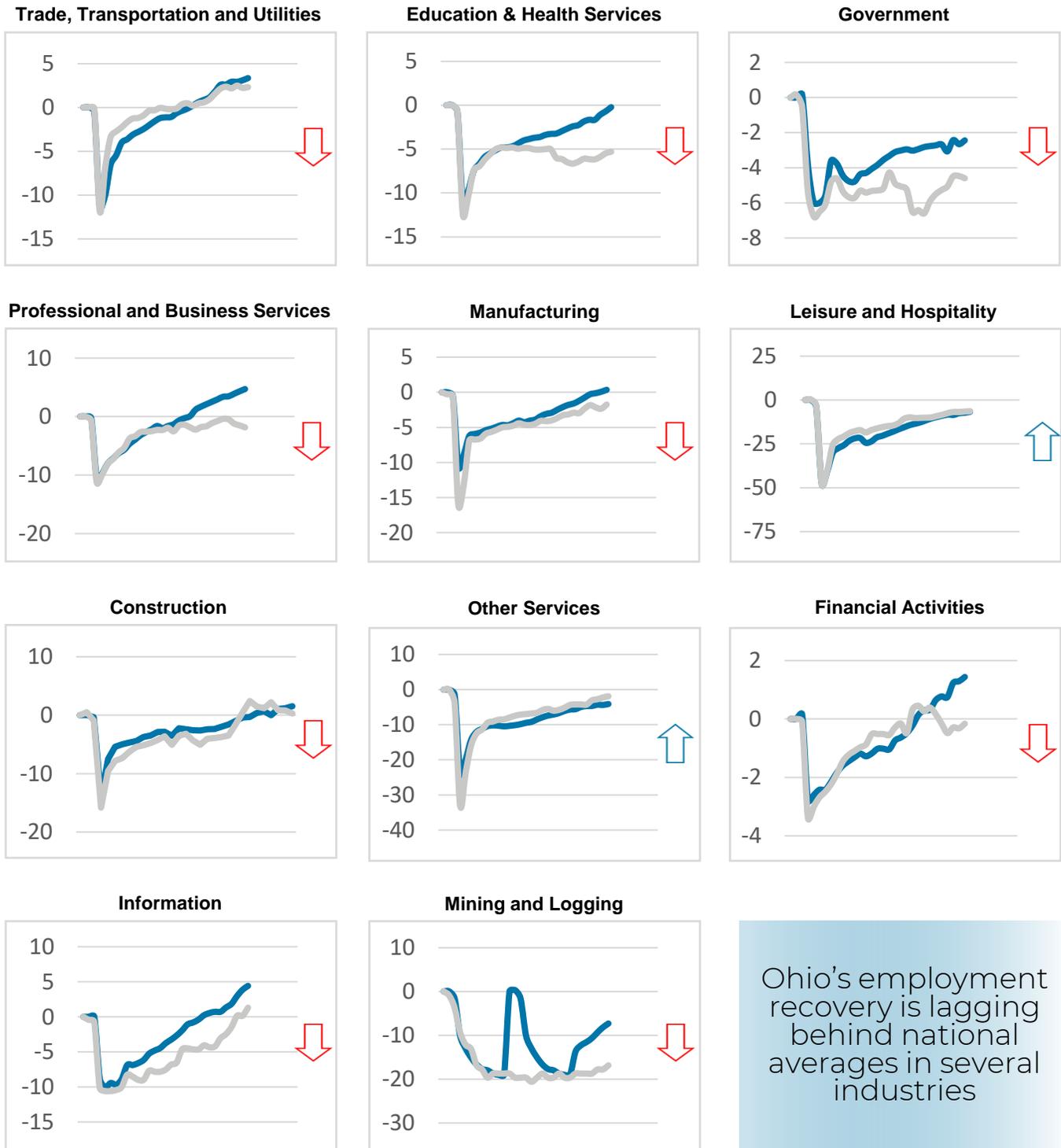


In the state's top industries, employment recovery is lagging behind the US

As of July 2022, Ohio's employment recovery has outperformed national averages in Leisure and Hospitality and Other Services. However, two of Ohio's largest industries—Education & Health Services and Government—are significantly lagging behind the US recovery.

Percent Change in Employment from January 2020 to July 2022

■ US ■ Ohio



Ohio's employment recovery is lagging behind national averages in several industries

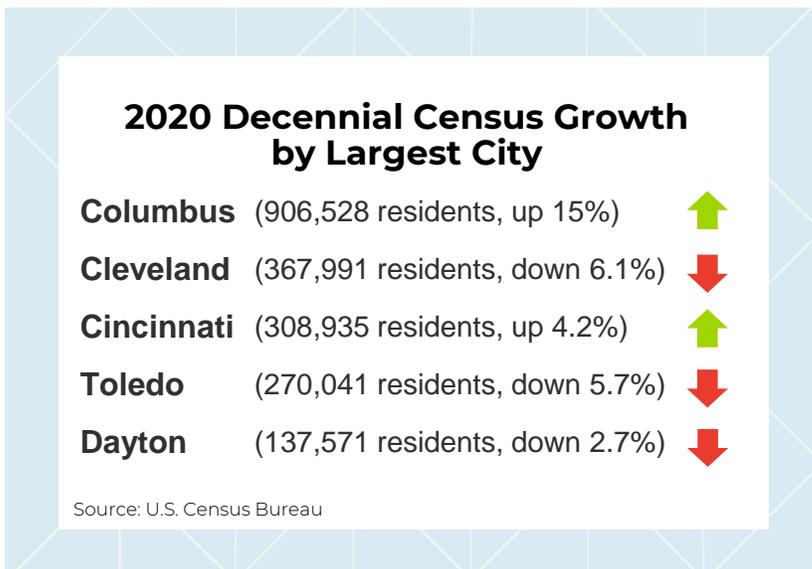
Source: Accenture analysis of Bureau of Labor Statistics Current Employment Survey



Ohio was among one-third of states that lost total population during the pandemic

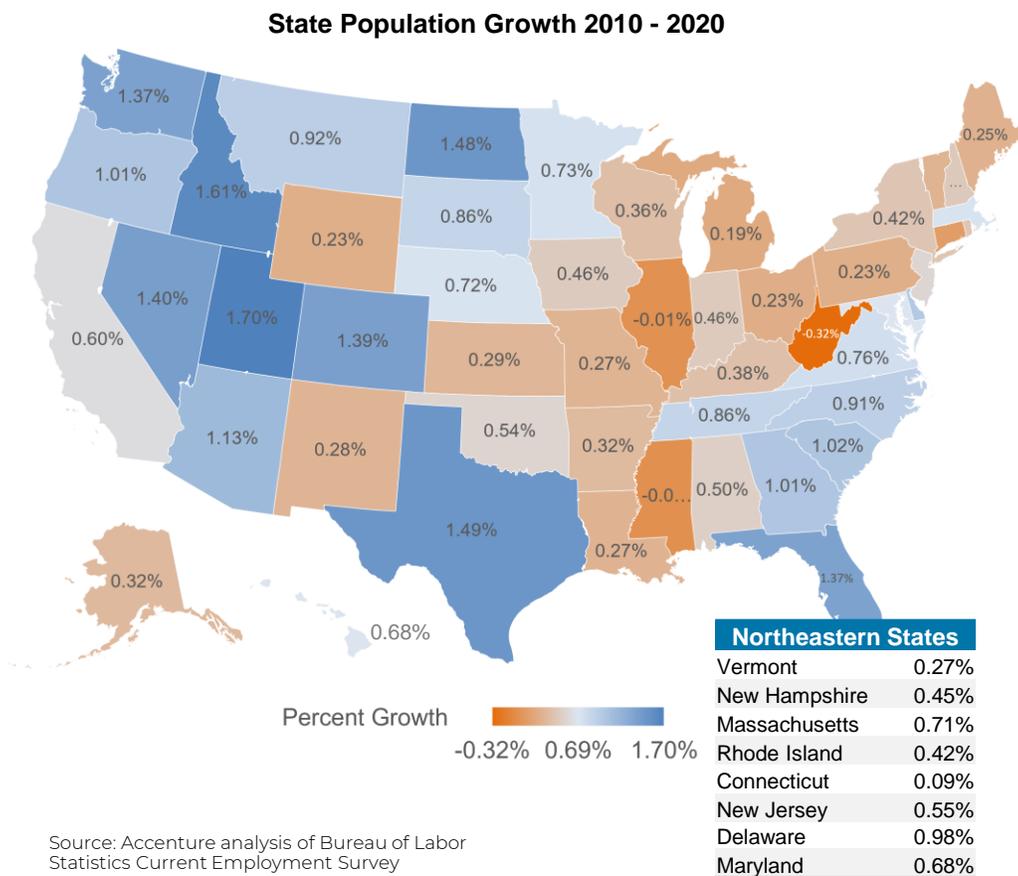
Factors affecting the slow employment and recovery include the well-known trend that the state's population growth isn't keeping up to that of its peers. The COVID-19 pandemic has only exacerbated this dynamic. From 2020 to 2021, Ohio's population declined by nearly 10,000 people. While some states' population growth slowed, only one-third of states saw population totals decrease.¹²

Ohio's sluggish growth can be attributed to an aging population, declining immigration and "brain drain." By contrast, the South and the West were home to both the fastest-growing states and cities.



15 Fastest growing states (2010-2020 Growth Rate)¹³

State	Growth Rate
Utah	1.70%
Idaho	1.61%
Texas	1.49%
North Dakota	1.48%
Nevada	1.40%
Colorado	1.39%
Washington	1.37%
Florida	1.37%
Arizona	1.13%
South Carolina	1.02%
Oregon	1.01%
Georgia	1.01%
Delaware	0.98%
Montana	0.92%
North Carolina	0.91%
US Median	0.55%
Ohio	0.23%



Additionally, Ohio's population growth was concentrated in, and surrounding, large urban areas; however, with the exception of Columbus, Ohio's large cities and economic centers are being outpaced by other large US cities. Between 2010 and 2020 Census, the population in large southern cities grew by an average of 9.4%. In comparison, cities in the West grew 7.3%, while cities in the Midwest and Northeast had much lower growth rates at 3% and 1.8% respectively.¹⁴



Ohio's labor force participation falls below average, rebounding comparably to the national average

Among people staying in Ohio, a larger portion of potential workers are not participating in the workforce. Ohio's labor force participation rate was 62.0% as of August 2022. This mirrors the national trend that labor force participation has been falling for the past decades, and has reached a 40-year low, as the workforce ages and the birthrate declines. Nationally, labor force participation mimics rates last observed during the 1970s, right as women were beginning to participate in the workforce at higher rates.

As of 2017, one study also shows that an increase in the retirement rate since 2007 accounts for virtually all the decline in labor force participation since then.¹⁵ Compounding the issue, during the pandemic, estimated yearly retirements are increasing an average of 2 million a year each year for the last decade and increased 3.2 million in 2020.¹⁶ Another age group that has faced a decline in labor force participation is younger workers. Nationally, since the late 1980s, the labor force participation rates have faced steep declines among those aged 16-19 (dropping 17.2%: 54.9% in January 1990 to 37.7% in August 2022) and 20-24-year-olds (dropping 7.6%: 77.9% in January 1990 to 70.3% in August 2022), as younger workers pursue education than in previous decades.

While 16-19-year-olds' labor force participation has fully rebounded to pre-pandemic rates (37.7% in August 2022 compared to 36.6 in February 2020)¹⁷, 20-24-year-olds still face a 3% reduction from pre-pandemic labor force participation rate (70.3% in August 2022 compared to 73.2% in February 2020). Ohio's labor force participation rate is even lower than the historically low national average.

July 2022 Labor Force Participation Rate by State

Florida	59.3%
North Carolina	60.6%
Michigan	60.1%
Pennsylvania	61.7%
Ohio	61.9%
United States	62.1%
Georgia	62.2%
Virginia	63.8%
Texas	63.8%
Minnesota	68.4%

Labor Force Participation Rate:
Number Of People Working
Divided by the Population
Aged 16 and Over

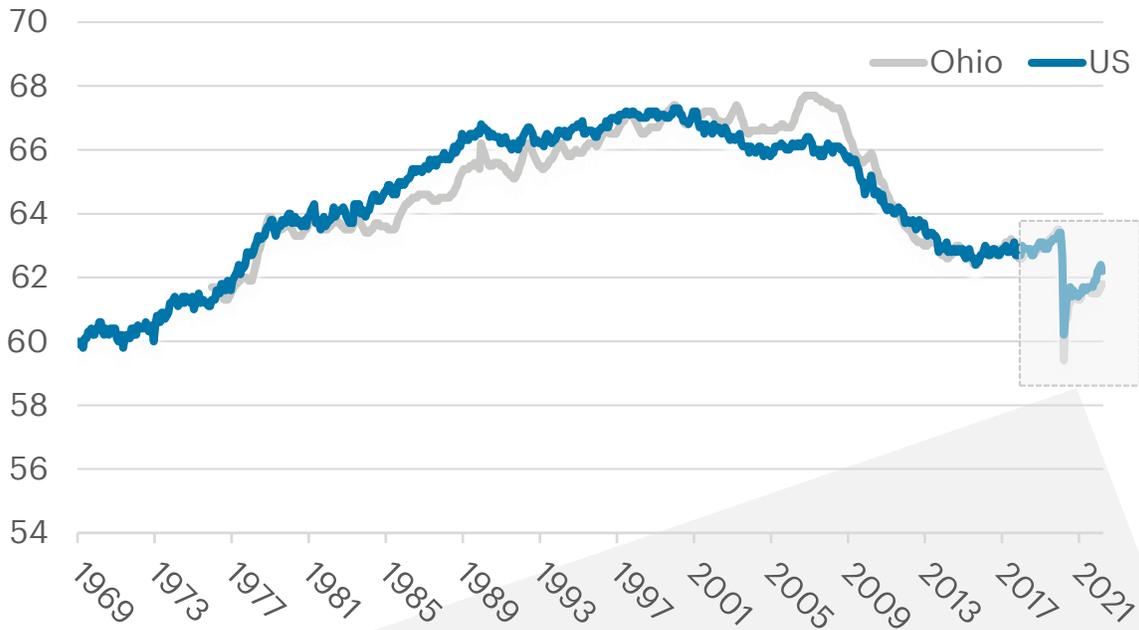


Source
FRED Labor Force Participation

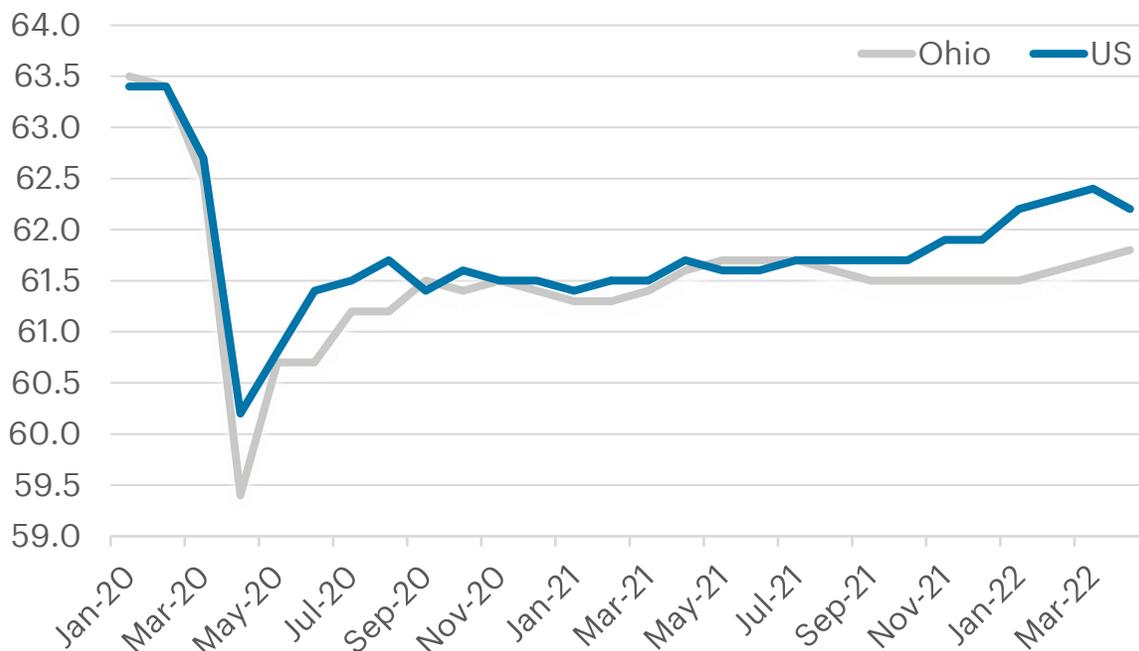


Ohio's labor force participation falls below average, rebounding comparable to national average

Ohio Labor Force Participation vs National Average, Over Time



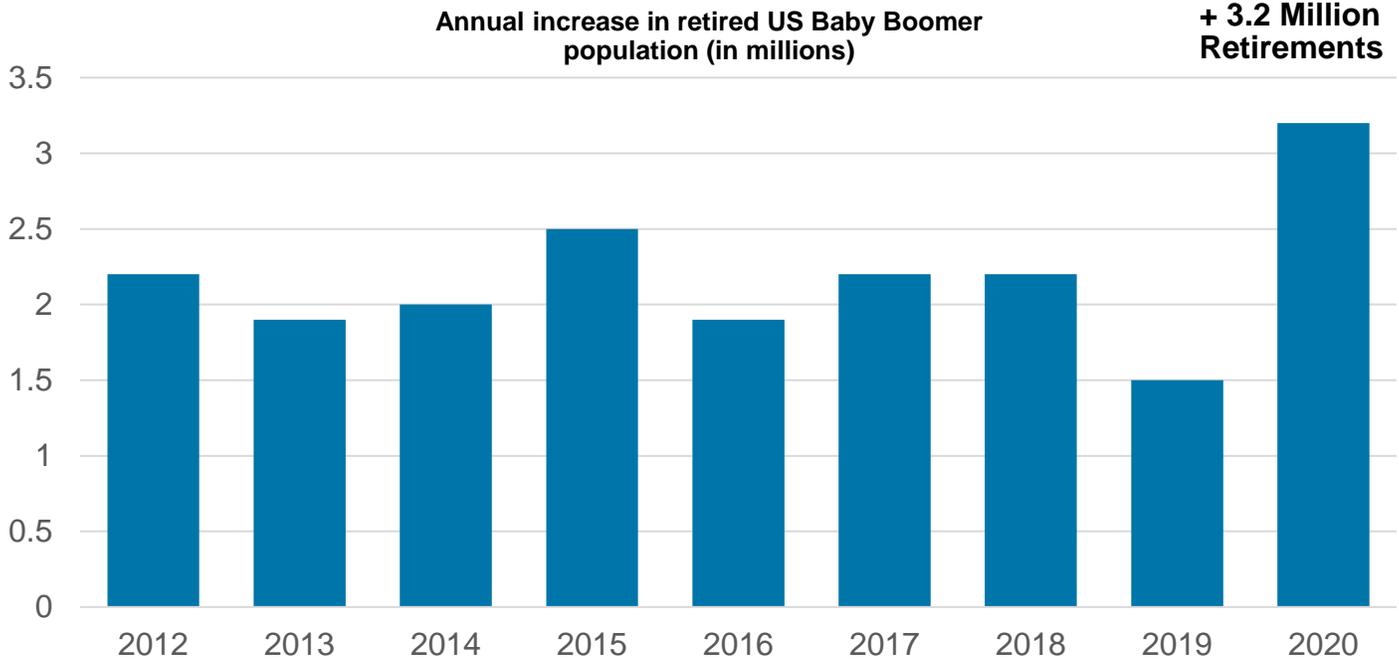
Labor Force Participation Post March 2020



Source
FRED Labor Force Participation



Baby boomer retirements rose more from 2019 to 2020 than in prior years

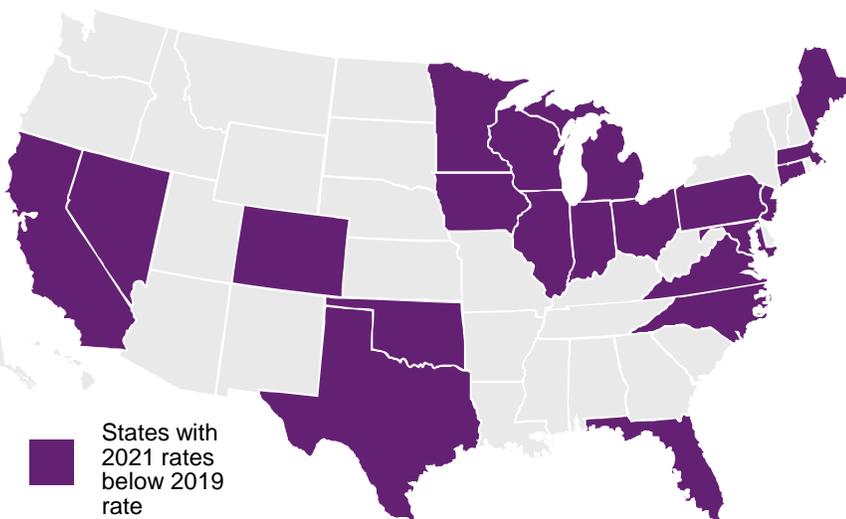


Source: Pew Research Center for analysis of July, August, and September Current Population Survey monthly files (IPUMS).
 Article: Richard Fry, (2020). The pace of Boomer retirements has accelerated in the past year. Pew Research Center.

Ohio's prime-age employment recovered more slowly than the nation's

The share of Americans in their prime working years who were neither employed nor actively looking for work was slightly higher in 2021 than before the pandemic, most significantly in midwestern states.

Prime-age employment rates are another area of concern. In Ohio and other parts of the Midwest, these rates have been recovering, and continue to recover, albeit more slowly than the national average. In 2021, the share of Americans of prime working age who were neither actively employed nor actively looking for work was slightly higher than before the pandemic.



Source: March 10, 2022, [Pew Pre Pandemic Prime-Age Employment](#)



Labor force participation rate of 20–24-year-olds still has not rebounded nationally

Labor force participation rate of 16–19-year-olds is 37.7 % as of August 2022



Barriers to labor force participation

According to the Bureau of Labor Statistics, there are around 93 million people in the United States over the age of 16 that are not in the workforce by choice, including those who are retired or in college, amongst many other reasons. Nationally, there are 7 million workers who are not in the labor force who do want a job. Of those who do want a job, around half a million are discouraged over the job prospects for a number of reasons: they think no work is available, they could not find work, they lack schooling or training, or they worry prospective employers think they are too young or old.

Nationally—and aside from discouragement—the most common barriers to workforce participation include family responsibilities, school or training and ill health or disability. For men and women alike, “other” was the most cited obstacle to work. This category includes issues related to childcare and transportation.

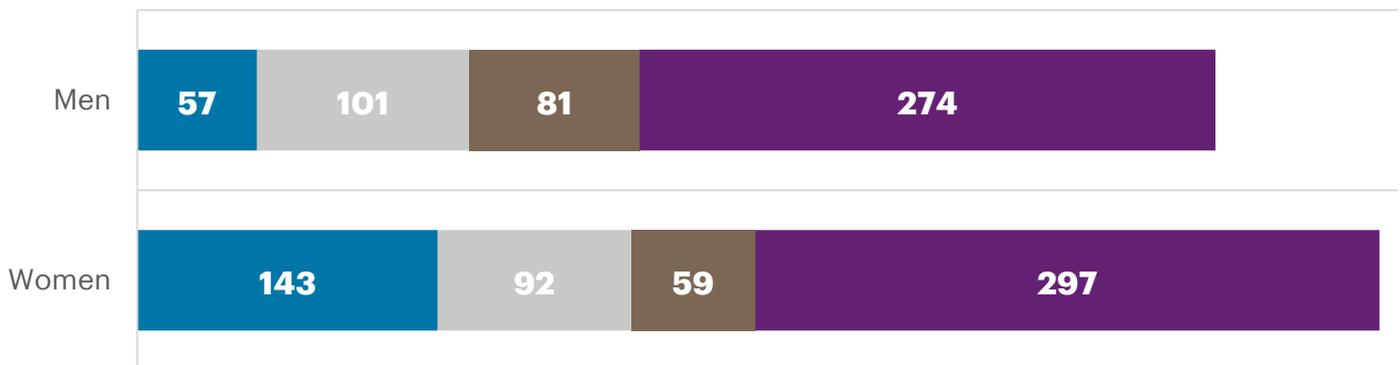


Accenture research identified several categories of hidden workers, including:

- Caregivers
- Veterans
- Immigrants and refugees
- Individuals with physical disabilities
- Individuals with mental health or developmental challenges
- Those with a criminal record
- Those without traditional qualifications

US Barriers To Finding A Job, Other Than Discouragement (May 2022, In Thousands)

■ Family Responsibilities ■ In school or Training ■ Ill Health or Disability ■ Other



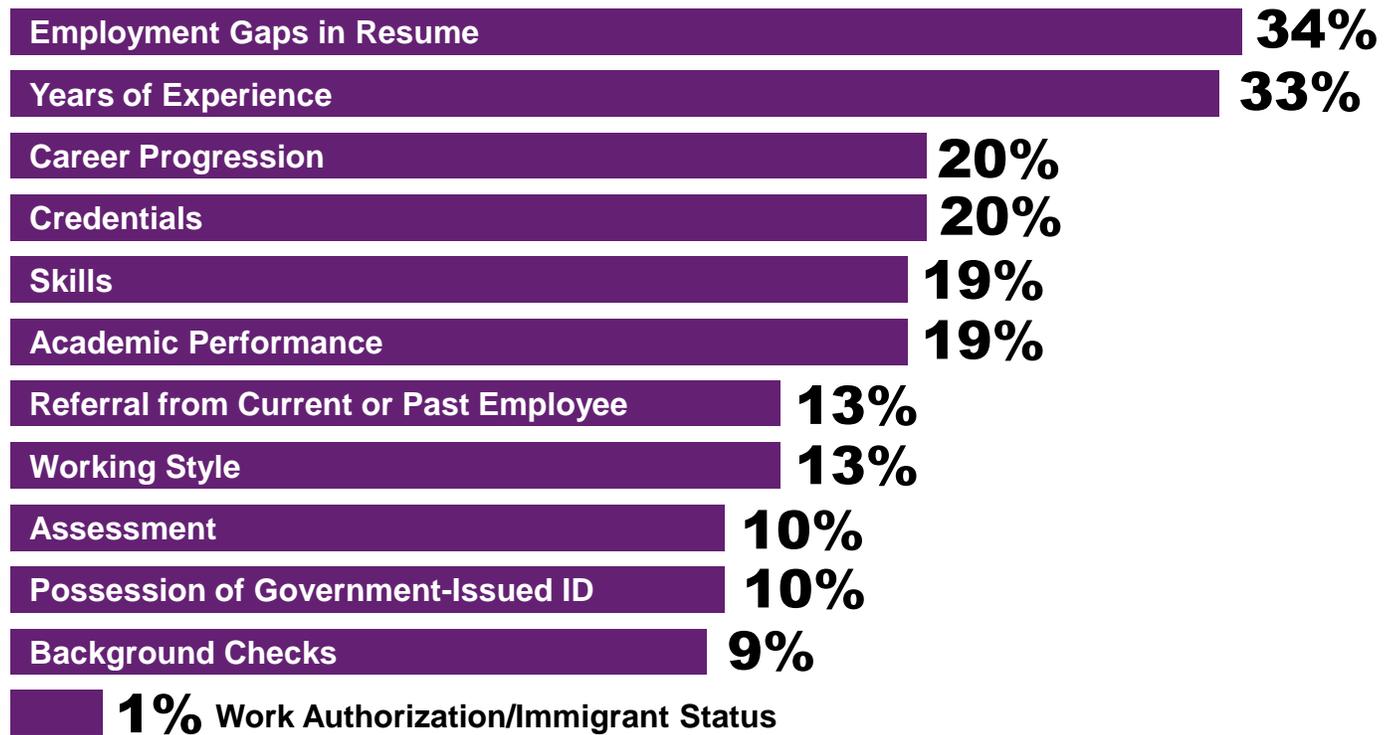
Note: “Other” includes those who did not actively look for work in the prior 4 weeks for such reasons as **childcare** and **transportation** problems, as well as a small number for which reason for nonparticipation was not ascertained.

Source: [BLS Persons Not in the Labor Force by Desire and Availability for Work, Labor Force Declines for Mothers and Fathers](#)



Job criteria that **hidden workers** feel may be working against them

Which of the following criteria do you think stops you from finding work?



Most systems also use a failure to meet certain criteria

An example is gaps in full-time employment history as a basis for excluding a candidate from consideration—no matter what qualifications they may have. When analyzing data on hidden workers in the public sector, we found that employment gaps in their resume and years of experience were the two largest issues that worked against successful job obtainment, though many other employment criteria also posed barriers.

Source: Finding - and tapping - a pool of "hidden workers," Accenture Research

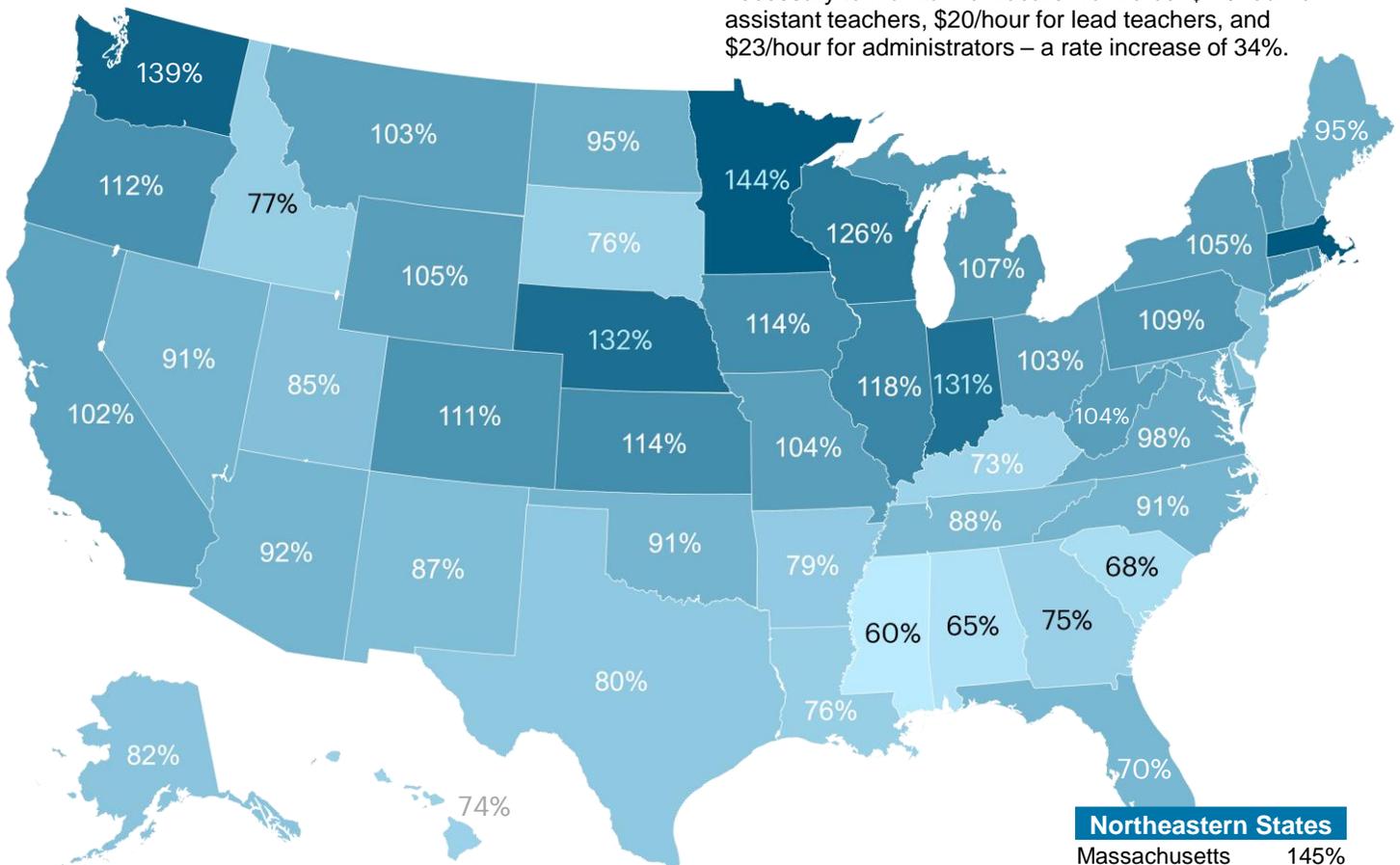


Ohio's infant care on average is more costly than rent

Diving deeper into childcare barriers, Ohio's childcare costs are on average more costly than the rent. The ratio of childcare to rent is at 103%.¹⁸ This ratio places Ohio as one of the worst in the nation. In addition to the high cost of childcare, there is limited childcare availability. Sixty percent of rural Ohioans live in "childcare deserts"—that is, any census tract that contains more than 50 children under age five where no childcare providers are available, OR any tract in which there are more than three times as many children as licensed childcare slots.

According to Groundwork Ohio's December 2021 survey, more than four in ten working parents in Ohio with children under the age of five said they have had to cut back on hours to care for their children in the past few months.¹⁹ On a positive note, nearly 60% of non-working or part-time working moms with children under the age of five in Ohio said they would go back to work or work more hours if they had access to quality childcare at a reasonable cost.

In the FY22/23 state operating budget (House Bill 110 – 134th Ohio General Assembly), the Ohio General Assembly and the DeWine/Husted Administration recently increased the eligibility threshold for publicly funded childcare to 142% of the Federal Poverty Level (FPL). While this eligibility expansion helps Ohio's employee base by allowing more families to participate in childcare, an access bottleneck exists as Ohio still lacks a corresponding increase in provider workforce to accommodate the FPL increase and follow proper caregiver ratios. Interviews and recent research by the Ohio Department of Job and Family Services (ODJFS) indicate the following average wages for childcare in 2021: \$12/hour for assistant teachers, \$15/hour for lead teachers, and \$18/hour for administrators.²⁰ One-time federal funding has afforded the short-term ability to increase wages via retention and sign-on bonuses without increasing rates, but, lacking long-term sustainability, providers will eventually have to either increase the cost of care to parents or find alternate funding sources to support gaps. In order to address childcare shortages in the long-term, ODJFS believes the following rates are necessary to maintain childcare workforce: \$17/hour for assistant teachers, \$20/hour for lead teachers, and \$23/hour for administrators – a rate increase of 34%.



Northeastern States

Massachusetts	145%
Rhode Island	116.40%
Connecticut	112.30%
Pennsylvania	108.90%
New Hampshire	98.90%
Maryland	95.20%
New Jersey	84.60%
Delaware	83.30%

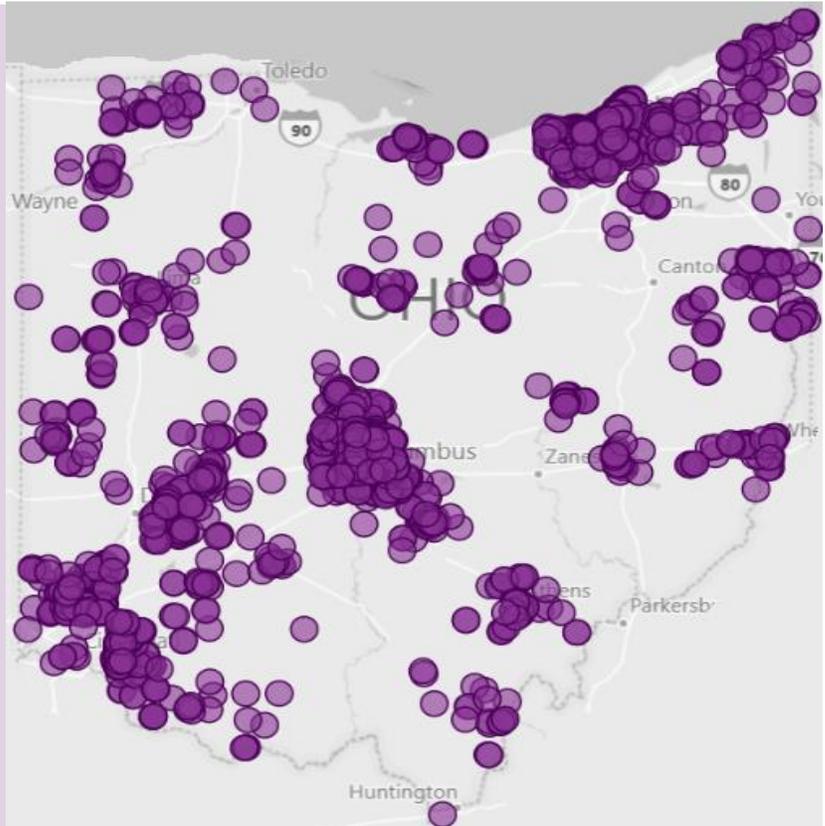
Source: EPI: Child Care Costs
Early Childhood Program Scarcity Undermines Ohio's Rural Communities



Child care locations are concentrated in urban areas

Child Care Center Locations

A 'childcare desert' is any census tract that contains more than 50 children under age five where no childcare providers are available OR any tract in which there are more than three times as many children as licensed childcare slots.



60% of rural Ohioans live in 'childcare deserts.'²¹

Source: Ohio Department of Jobs and Family Services Child Care Locations



Ohio's major cities are in the bottom quartile of cities across the nation that support upward mobility

There may also be an opportunity to focus on upskilling, as many employed Ohioans are working in industries or roles that do not support generational wealth building. Ohio's major cities are in the bottom quartile of cities across the nation that support upward mobility.

Findings ²²

- The Midwest has faced the sharpest decline of upward mobility over time.
- Only one Midwest city was in the top two quartiles. Pittsburgh was ranked second, Grand Rapids was 29th and Kansas City was 30th.
- The South was also in the bottom for economic mobility.
- The West and Northeast cities dominated the top rankings.
- Substance use disorders and lagging health quality may be responsible for some stagnation of workforce participation and upward mobility.

Upward Mobility Rankings in the 50 Largest Cities

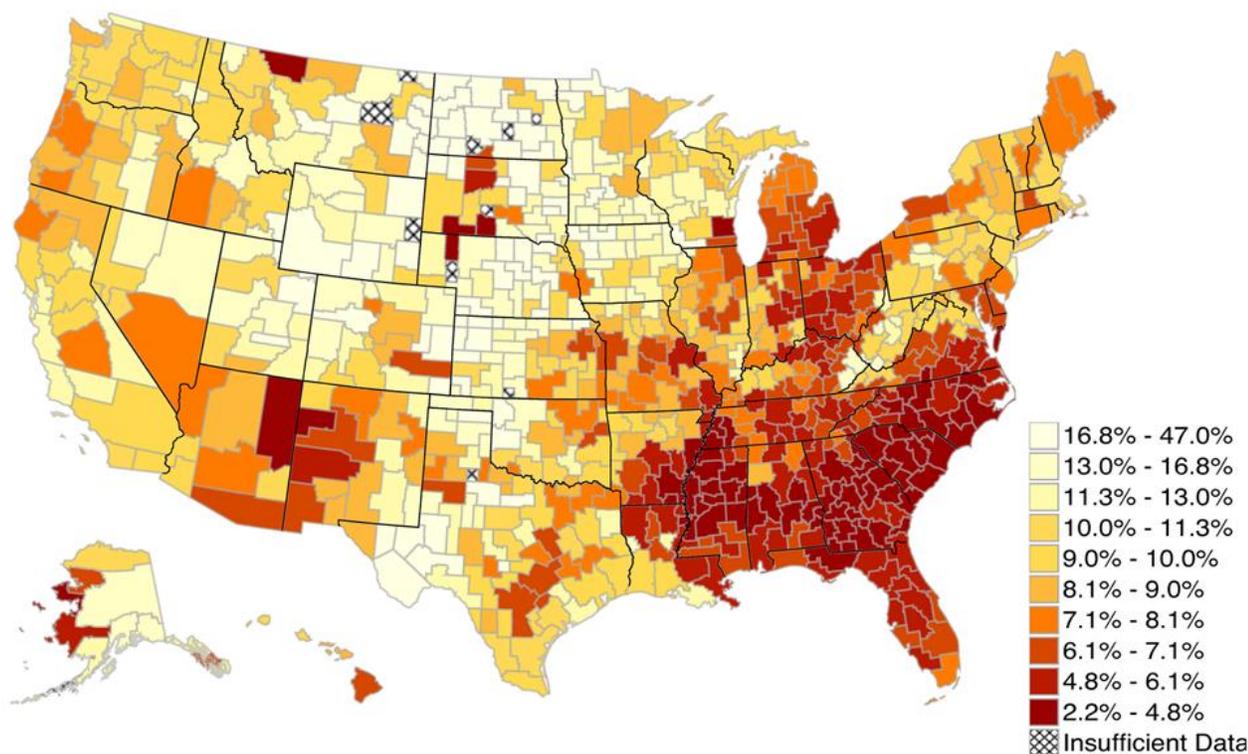
Dayton, Ohio (39th)

Cleveland, Ohio (40th)

Cincinnati, Ohio (43rd)

Columbus, Ohio (44th)

The Geography of Upward Mobility in the United States: Odds of Reaching the Top Fifth Starting from the Bottom Fifth



Source: [Equality of Opportunity](#)

NOTE: Lighter color equals more upward mobility.



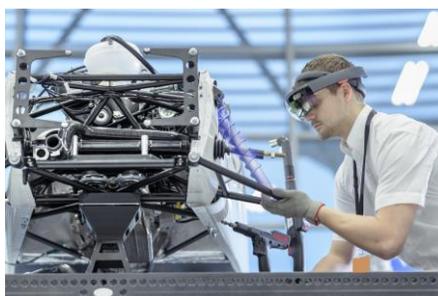
STEM Education in Ohio

An example of an industry with jobs that provide upward mobility opportunities is STEM and computer science. The average annual salary in computer science jobs is \$30,000 higher than the median Ohio household income, and while Ohio has been increasing the number of computer scientists it produces, we still rank 44th in the country for our growth in this area. According to JobsOhio data, the skill gap between computer science occupations and the supply of CS graduates in our state widens by over 11,000 openings every year.²³ Over the past decade, Ohio has made numerous strides to increase student access to non-traditional subjects such as information technologies and software coding to provide them with enhanced opportunities in the ever-changing economy. However, Ohio's economic competitiveness depends on having a technologically proficient workforce that is prepared with the skill sets for jobs that have yet to even be invented. Central to this idea is the continued integration of computer Science educational offerings at the K-12 level. Nationally, just 51% of high schools offer computer science and only 11% of STEM bachelor's degrees are in computer science, while 67% of all new jobs in STEM are in computing.

Ohio must change the narrative in its education system that computer science is foundational rather than vocational. Beyond cultivating workers for Ohio-based technology operations such as Intel or Meta, this is about cultivating a workforce for Ohio-based employers such as Scotts-Miracle Gro, Proctor and Gamble, Nationwide Insurance or Kroger. On a daily basis, Ohio employers have job openings for those with computer science skill sets, from data analytics to cloud computing, cybersecurity, the Internet of Things, artificial intelligence, programming, networking and beyond. Every industry has a need now and in the future for computer programmers and IT personnel.

According to Code.org, 50% of Ohio's public K-12 school districts had zero offerings of computer science classes at the high school level in 2020.²⁴ This disparity in course programming puts Ohio students at a severe skill set disadvantage. Additionally:

- Among Ohio higher education institutions, there were only 1,842 graduates in Computer Science in 2019
- Only 206 schools in Ohio (28% of Ohio schools with Advanced Placement programs) offered an AP Computer Science course in 2019-2020 (15% offered AP CS A and 21% offered AP CSP), which is 28 more than the previous year
- Teacher preparation programs in Ohio did not graduate a single new teacher prepared to teach computer science in 2018
- According to a representative survey from Google/Gallup, school administrators in Ohio support expanding computer science education opportunities: 65% of principals surveyed think computer science is just as or more important than required core classes





STEM Education in Ohio

In 2018, Ohio enacted House Bill 170, which created K-12 computer science standards and model curriculum. This legislation also gave flexibility to high school students by expanding the menu of coursework options applicable towards graduation requirements. These changes helped Ohio's school districts offer a diversity of challenging and robust technology course options to inspire creativity and innovation. This was permissive legislation to allow for credit flexibility at the K-12 level and the use of state standards and model curriculum to add computer science course offerings. This is different from the 27 states that require, not merely allow and assist, all high schools to offer computer science. Over and above requiring an offering, five states require all students to take a computer science course for graduation: Arkansas, Nebraska, Nevada, Tennessee and South Carolina. As of June 2022, Rhode Island is also working to add computer science to its state graduation requirement. Mississippi has a "computer science" graduation requirement that may be satisfied with a computer science, technology, or engineering course (not just computer science). Some local school districts, including Chicago and New York City, now require computer science to be offered to their students. Improving access and quality of education in computer science and STEM in K-12 and Higher Education Institutions in Ohio is just one of many opportunities Ohio can capitalize on to fill critical job openings, improve the economic mobility of its residents and improve the state's overall competitiveness in the US.

A report from the Ohio State Committee on Computer Science reported leading states, including Arkansas and South Carolina, in which 92% of high schools offer computer science. Other high-ranking states include Maryland and Rhode Island. When compared with neighboring states, Ohio's access rate (~50%) is significantly below Indiana (~74%), West Virginia (~76%) and Pennsylvania (~63%). Among Ohio's high schools offering computer science, the most significant number (185, 67%) are in suburban areas of the state, while access is lower in small towns (69, 50%), rural areas (159, 48%), and urban areas (76, 34%).

Additionally, Ohio's output of college degrees in Computer Science is falling behind in the nation. As of 2020, Ohio ranked 33rd out of 50 states in the percentage of college degrees produced that are Computer Science.

Comparatively, college degree output in Computer Science in surrounding states includes:

- Kentucky: 10.7%
- Pennsylvania: 5.9%
- Indiana: 5.2%
- Michigan: 4.8%
- Illinois: 4.72%
- W. Virginia: 4.6%





CHIPS Act

Breakdown of the \$13.2 billion in research and development and workforce development:

\$13 billion: Long-term STEM education development available on a competitive basis to states

\$200 million: Near-term labor shortage needs within the semiconductor industry (also competitive)

Intel's momentous announcement to invest \$20 billion towards constructing two semiconductor plants (FAB) in New Albany began with the groundbreaking in September 2022. The FAB is tentatively slated to become operational in 2025; however, labor is needed for site construction prior to the estimated 2025 operational date. Intel has stated the site has the potential to host up to eight plants, with a total investment approaching \$100 billion through the rest of the decade. This would make Licking County one of the largest semiconductor sites in the world and make Ohio vital towards increasing the United States current 12% production share of semiconductors globally, a decline from 37% in 1990.²⁵

President Joe Biden signed into law the Creating Helpful Incentives for the Production of Semiconductors (CHIPS) for America Act. The CHIPS Act provides \$52.7 billion for semiconductor research, development, and manufacturing in the United States. Of these funds, \$39 billion will be dedicated towards manufacturing incentives, including \$2 billion for the legacy chips used in automobiles and defense systems, \$13.2 billion in research and development and workforce development, and \$500 million to provide for international information communications technology security and semiconductor supply chain activities. Finally, the CHIPS Act provides a 25% tax credit for capital expenses associated with making semiconductors and related equipment.

Passage of the CHIPS Act frees up Ohio's leaders to now turn towards other pressing but related matters, including how best to provide for a vibrant workforce to serve not just Intel but its 140 suppliers across the state. Intel has already unveiled its Ohio Semiconductor Education and Research Program, a \$100 million endeavor to develop semiconductor education and workforce programs with more than 80 colleges and universities.

These operations are expected to:

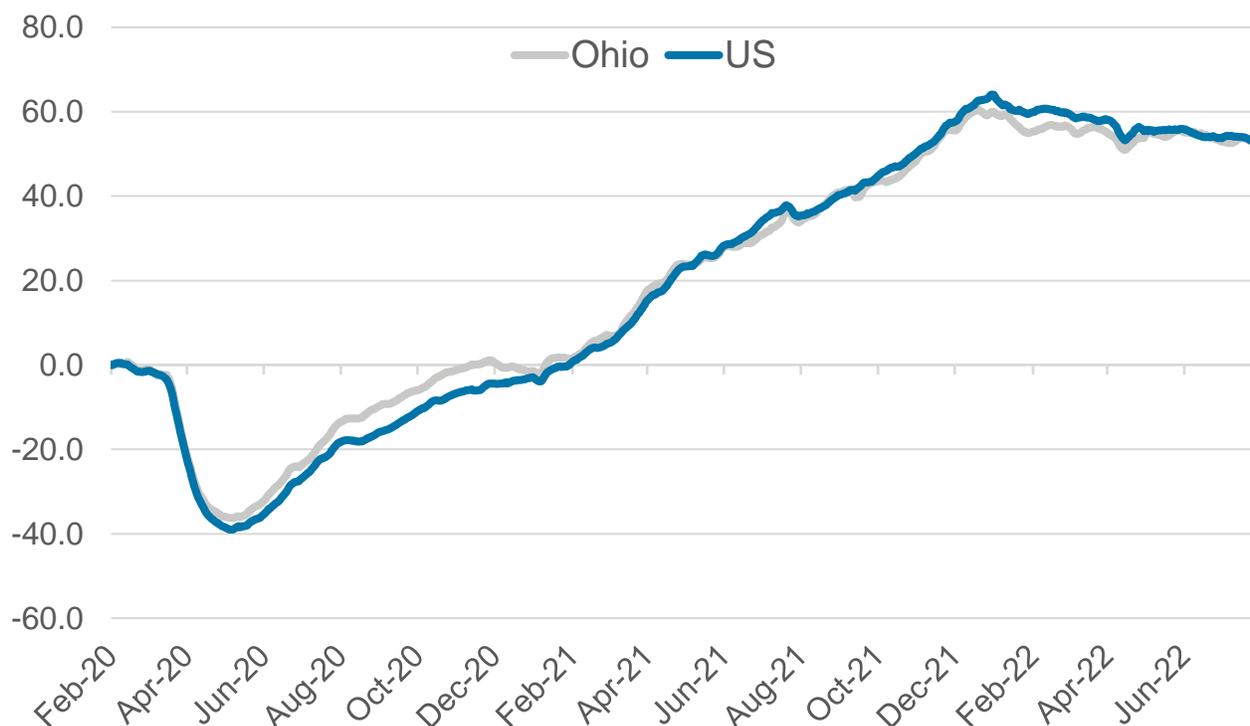
- Create 3,000 initial Intel jobs
- Create 7,000 construction jobs
 - Jobs include - Pipefitters, electricians, sheet metal workers
- Create downstream of over 10,000 local long-term jobs.
- Use 140 existing Ohio companies as Intel suppliers, with 25-30 new Ohio companies expected to emerge because of Intel's presence.





Job postings have trended up but are leveling out

Percent Change in Job Postings vs National Average



Source
[FRED Job Postings](#)

Job Opening Increases

Despite a smaller labor force, Ohio businesses continue to strive to expand their payrolls. Employers are reporting a large number of job openings and job postings in both Ohio and the nation. Nationally, according to the U.S. Bureau of Labor Statistics' June Job Openings report, job openings decreased by 10.7 million and 6.6 %, respectively, yet hires (6.4 million) and separations (5.9 million) were little changed. Available positions were increasing in transportation, warehousing, utilities, nondurable goods manufacturing and durable goods manufacturing. The largest decreases were in healthcare, social assistance, retail and food services. Job opening statistics by industry are not available for Ohio.²⁶ Although Ohio's job opening rate and posting rate have slowed over the past few months, they remain well above pre-pandemic levels.



Education & Workforce Recommendations

More work remains to sustain Ohio's positive workforce trends. Policymakers, in partnership with the business community, can make great strides to address workforce challenges. Workforce should be a top priority, as it represents one of the greatest areas of opportunity for Ohio and challenge for business leaders. Workforce solutions must be bold and multi-faceted, designed to create growth for decades.

Recommendation 1: Reduce Barriers to Employment

Undertake targeted outreach to increase labor force participation and remove barriers to work. Create targeted approaches for select types of "hidden workers" missing from the workforce or missing hours due to barriers.

1.1 Remove childcare as a barrier for caregivers and not working parents

1.1.1 Form a workgroup with interested parties such as the Ohio Department of Job and Family Services, the Ohio Treasurer's Office, etc. to explore policy options such as creating a linked deposit program for new childcare startups in childcare deserts, incentivizing wage increases for childcare workers, raising the poverty threshold, and improvements to the state's Step Up to Quality program

1.1.2 Examine tax credit initiatives or opportunities for Ohio based on best practices among peer states

1.1.3 Work with JobsOhio to determine feasibility of a program to incentivize development of on-site childcare facilities and study the interplay between OSHA and childcare facility regulations

1.1.4 Study the childcare industry and determine if assistance can be given to facilities that open for non-traditional hours and offer other changes to open additional slots for parents

1.1.5 Work with the Ohio Department of Aging to confirm Ohio is optimizing elder-care options for caregivers

Case Study: The Mom Project & Accenture

The Mom Project has launched a new, two-year partnership with Accenture. The partnership will involve three key components meant to help our community:

1. **Jobs:** Accenture Midwest will provide 150 jobs for candidates from The Mom Project. Between 10 – 15% of Accenture Midwest's new hires in the next two years will come from the partnership with The Mom Project.
2. **Support & Training:** Accenture will provide hired candidates with what the research says working parents need most once they're in a role: support. This support will include flexibility, and one-on-one mentoring from peers and training, including "new skilling" to make sure that if you're hired, you're set up for success.
3. **Community Outreach & Research:** As part of this partnership, the Mom Project is working with Accenture to reach out to under-resourced communities to help people develop skills and a roadmap toward a meaningful career pathway

1.2 Support workforce participation for individuals with a criminal record

Advocate for government to support employment opportunities, including occupational license reform, ban-the-box policies, expansion of the work opportunity tax credit, and wraparound services and trainings for private-sector organizations that hire "second chance" employees.

1.3 Support employers to increase recruitment and retention of veterans, employees with physical disabilities and individuals with mental health or developmental challenges

1.4 Pursue strategies to alleviate public assistance benefits cliffs

Benefits cliffs occur when individuals experience a sudden and often unexpected decrease in public assistance based on a small and sometimes temporary increase in earnings, resulting in a loss of economic supports and disincentive to work.

Placeholder legislation was introduced in the 134th Ohio General Assembly (House Bill 410) that would obligate the Ohio General Assembly to address the following goals:

1. Eliminating barriers individuals face when transitioning from public assistance to work
2. Transitioning public assistance recipients from consumers of state resources into contributors to Ohio's economy
3. Removing hindrances to financial independence and replacing them with incentives that lead to independence
4. Replacing the benefits cliff with a bridge to opportunity
5. Streamlining the public assistance process to promote effective communication and coordination by agencies providing assistance through a centralized process that improves information and direction to public assistance recipients



Education & Workforce Recommendations

Interested party meetings between policymakers, the statewide business community, state and county social service agencies, and assorted non-profits should convene to establish legislative action items and reasonable parameters to transition individuals off public assistance without disincentivizing work opportunities.

Recommendation 2: Expand Education and Job Training

Too many Ohioans lack the skills employers need.

2.1 Ohio Chamber to support and lead a robust Business-Education Network (BEN)

A BEN is a private-sector solution to employers' urgent need to find skilled workers. By connecting education and training providers (supply side) and industry (demand side), a BEN aims to align training to support the full spectrum of skills and needs facing the business community. This network can also advocate for additional goals related to enhancing education and talent development programs and ensuring strong alignment between Ohio's post-secondary financial aid and employers' projected needs.

U.S. Chamber of Commerce Business Education Network (BEN) ²⁷

Through the Business Education Network (BEN) —a coalition of business leaders engaged in Pre-K to 12th grade education policy, programs and research—participants will develop and promote the implementation of programs and policies that improve academic achievement in this country.

BEN is unique in three key ways:

- Its access to leading education experts. BEN—through its staff and team of advisers—is informed by decades of experience and leadership in both education and business.
- Its broad reach through the U.S. Chamber of Commerce's membership and communication capabilities. BEN's affiliation with the U.S. Chamber provides an expansive network of corporate supporters unsurpassed by other organizations.
- Its comprehensive approach to the challenges facing the business community in education. In building a coalition of cross-sector business leaders engaged in Pre-K to 12th grade education policy, programs, and research, BEN strives to ensure a solid pipeline throughout our nation's education system.

2.2 Promote employer-led work-based training

Many employers have reduced training, credentialing or education qualifications and developed their own innovative upskilling programs. Work-based learning options may encompass a variety of formal and informal arrangements, including apprenticeships, work placement and on-the-job learning. The key driver is the need to get new workers into the workforce more rapidly while ensuring that employees' training and learning meet the needs of the employer. Ohio's TechCred program has been transformative for workforce and a model for other states to emulate, growing from \$1 million in funding to \$58 million.²⁸ This program gives businesses the chance to upskill current and future employees in today's tech-infused economy. Credentials eligible under TechCred must be short-term, industry-recognized and technology-focused. The state reimburses up to \$2,000 of training upon completion of a credential. Since its launch in October 2019 and through August 2022, 1,958 Ohio employers have been approved for funding through the program, supporting the earning of 48,632 tech-focused credentials by employees. Not only should TechCred be continued and bolstered, but Ohio should examine either scaling it out or creating distinct subsidiaries calibrated to other professions.

Case Study: Accenture Professional Apprenticeship Program

Accenture recognizes the important role professional apprenticeships can play in closing the skills gap in North America and reaching untapped talent pools, providing greater access to digital economy jobs, and helping reskill workers whose jobs have been, or will be, disrupted by technology. Accenture announced a goal to fill 20 percent of Accenture's entry-level roles from the apprenticeship program in the U.S. in 2022. This is an "earn and learn" program providing salary, training, coaching and real-world experience through a year-long position and an opportunity to retain focus on candidates without a 4-year degree.

Source: [The future of work is bright because of apprenticeships, Accenture](#)



Education & Workforce Recommendations

2.3 Empower the rural workforce through the Ohio BUILDS Program

Provide broadband to rural areas, integrate rural economic and workforce development, and convene networks that connect rural communities. In June 2022, the DeWine/Husted Administration enacted House Bill 377, which created Ohio BUILDS, a \$500 million program to infuse funding into Appalachian communities in 32 Ohio counties. One of the program's three priorities involves rebuilding the local workforce. The results of Ohio BUILDS' workforce component should be carefully monitored and, if successful, used to model similar endeavors in other rural parts of Ohio.

2.4 Reskill midcareer workers and create opportunities for older workers

Expand access to continuous learning, promote seamless job transitions, and provide holistic support of midcareer workers. Policymakers should encourage initiatives and incentives, such as a tax credit, for older workers and retirees interested in re-entering the workforce. Ohio's Individual Microcredential Assistance Program (IMAP) should also be heavily promoted to Ohioans, as IMAP helps Ohioans who are low income, partially unemployed, or totally unemployed participate in a training program to receive a credential at no cost. IMAP training providers cover all tuition, fees and additional costs.

Finally, Ohio Technical Centers (OTCs) provide post-secondary career and technical education (CTE) at 52 career centers across Ohio and can easily train older workers to acquire new skill sets via short-term certificates. Many of the OTCs are positioned to respond quickly to the needs of business and industry by providing customized trainings and business consultation services to companies and organization to assist with meeting Ohio's workforce goals. In FY2018, the state level of support for OTCs was \$16.5 million, while in FY2023 that appropriation will be \$21.8 million. Ohio should continue to recognize and increase the worth of OTCs in future budgets while ensuring their training programs are nimble and meeting the needs of in-demand jobs.

2.5 Support efforts to increase labor force participation of 16–24-year-olds

Provide every young Ohioan access to an affordable talent pathway degree or credential program that includes a paid, for-credit internship or other work-based learning experience with an Ohio employer and that leads to full-time Ohio-based employment after graduation. Expand work-based learning opportunities for Ohio students, employers, and educational institutions. Support programs that encourage mentorship and career exploration opportunities for all young people, particularly for underrepresented populations in those fields such as women and minorities. Reduce the stigma amongst young people and their parents in entering the manufacturing industry or the skilled trades through career education in K-12 and other forums.

Recommendation 3: Grow Ohio's Population and Recruit Out-Of-State Workers

3.1 Consider recruitment campaigns, incentives and advocacy to recruit and retain top talent

Consider recruitment campaigns, incentives and advocacy to recruit out-of-state workers. Engage in data analysis with public and private partnerships to identify receptive audiences and those with skills matching in-demand career fields in Ohio, and what motivating factors may exist to drive migration to the state.

3.2 Foster a culture more explicitly supportive and inclusive of foreign workers and international students

Recognizing the economic necessity of our new century, an aging population and stagnant population growth, the Ohio Chamber can convene and champion a friendly, supportive community. Immigrants contribute heavily to many key sectors, such as manufacturing, agriculture, healthcare, construction and leisure and hospitality. At the state level, policymakers should support and encourage immigrants to live and work in Ohio. At the federal level, Ohio leaders should advocate for common sense immigration reform, including employment-based green card reform, changes to the non-immigrant employment-based visa program, and ways to eliminate the backlog of visa requests. Ensuring that individuals living outside of Ohio perceive it as a welcoming place will be key to the state's long-term population growth.



Education & Workforce Recommendations

Recommendation 4: Modernize Ohio's Workforce for In-Demand Occupations Now and in the Future

4.1 Focus business recruitment and retention efforts on occupations using Ohio's "Top Jobs List" to ensure adequate labor supply for in-demand jobs

Policymakers have made great strides in recent years to highlight industries that will grow jobs and promote generational wealth building. Ohio's Department for Job and Family Services and Ohio's Governor's Office of Workforce Transformation have created a "Top Jobs List" to identify jobs that are both in high demand and provide a sustainable wage and a promising future based on the projected number of openings. The result of these efforts will take time, but the long-term implications will be greatly beneficial to employers and Ohio's economy.

4.2 Promote Computer Science and STEM offerings at the primary, secondary and post-secondary education levels

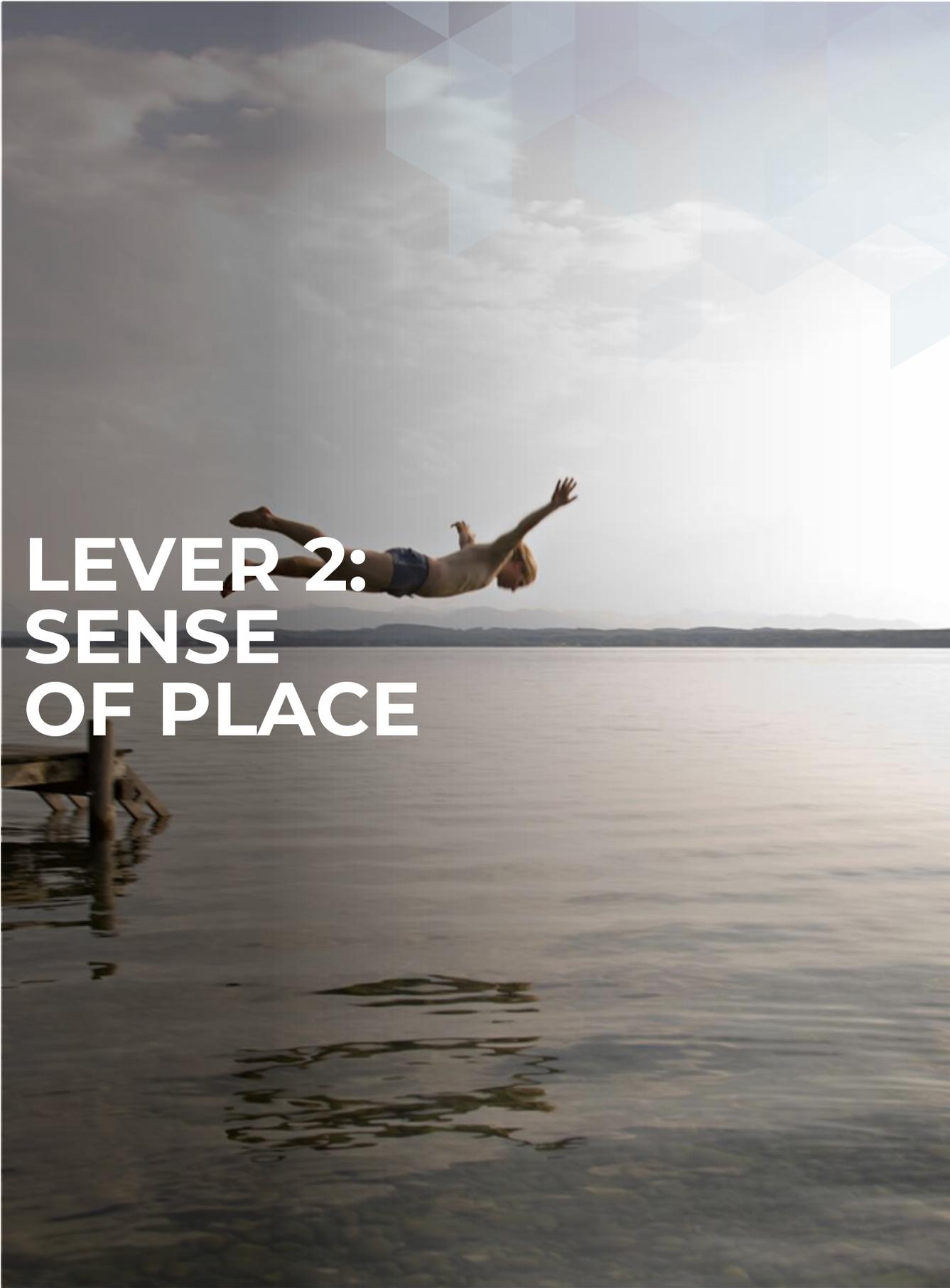
4.2.1 Heed the findings and recommendations of the State Committee on Computer Science

Keys within these recommendations are those regarding dedicated K-12 funding toward Computer Science course offerings, professional development/teacher licensure revisions to grow the faculty base to teach these classes, and efforts to ensure all Ohio high schools offer Computer Science. The committee stated its belief that enacting their recommendations would make Ohio a national leader in CS education and workforce pipeline. These recommendations – particularly those involving funding - could be incorporated into the state's operating budget or adopted piecemeal through other legislative vehicles.

4.2.2 Incentivize majors in computer science-based fields

Cultivating technology workers in Ohio's K-12 and higher education systems helps mitigate Ohio companies from having to apply for federal H-1B visas to import talent from overseas to fill tech and research positions. Congress established that 65,000 H-1B visas are available each year for workers with bachelor's degrees, and 20,000 more are earmarked for those with master's degrees or higher. Universities and research organizations are exempt from the cap. These incentive/retention tools should tie directly to STEM-related professions and in-demand technology jobs and could leverage an infusion of private dollars by providing tax benefits for companies offering matches to alleviate student debt under employee benefits packages. Recent bills in the 134th General Assembly have elements that could be good starting frameworks for development and discussion, including:

- House Bill 514 - the Graduate and Retain Ohio's Workforce (GROW) Act seeks to attract and keep students and workers in Ohio using state income tax credits, targeted scholarships and expanded student aid.
- House Bill 577 - Establishes the Ohio STEM Retention Program, which provides college students an annual tuition waiver of \$2,000 for up to three years if they meet certain conditions. It also creates the Ohio IT Promise Program, under which individuals are eligible for up to \$4,000 in student loan forgiveness if they meet certain conditions.



LEVER 2: SENSE OF PLACE

Lever 2 Sense of Place



A Desirable Place to Live, Work, and Visit

Sense of Place National Rankings

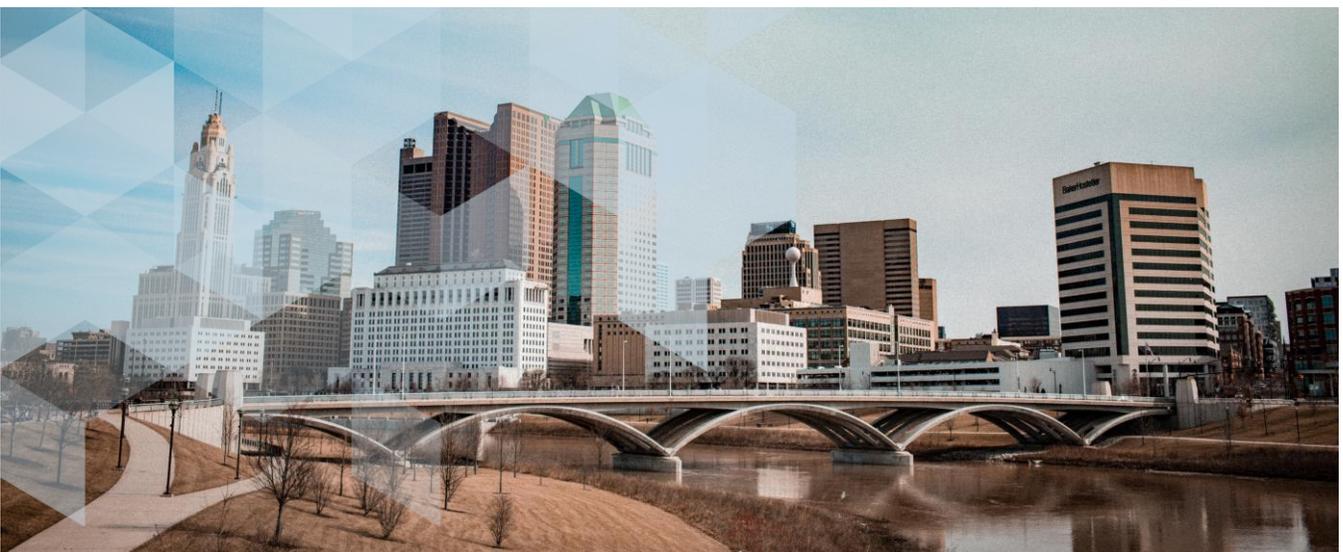
Best to Worst Indicators

- Affordability
- Equality
- Crime and Correction
- Health Access and Quality
- Public Health

Key: Avg Rankings In:

- Top Quartile
- Second Quartile
- Third Quartile
- Fourth Quartile

“Sense of Place” reflects the myriad characteristics and resources that make a community a desirable place to live, work and visit. While policymakers typically assume that people follow jobs, economics literature has shown that amenities drive much of the interregional migration in the U.S.²⁹ Thus, economic development policies aimed at increasing Ohio’s population should focus as much on investing in amenities and quality of life in Ohio as they do on business attraction. In the national rankings related to sense of place, affordability emerged as a comparative strength for Ohio, and the ‘Ohio is for Leaders’ campaign led by JobsOhio has capitalized on this asset. Ohio also ranks well for equality in terms of education gaps by race, income gaps by race and a lower labor force participation gap across genders. The state hovers around the national average for crime and corrections. However, health access and quality are notable areas for improvement. Elsewhere in this report we outline several recommendations focused on childcare, transportation, infrastructure, education and second-chance employment. The recommendations within this section are intended to provide significant opportunities to move the needle on Ohio’s affordability and promote generational wealth building.





Housing Supply and Affordability

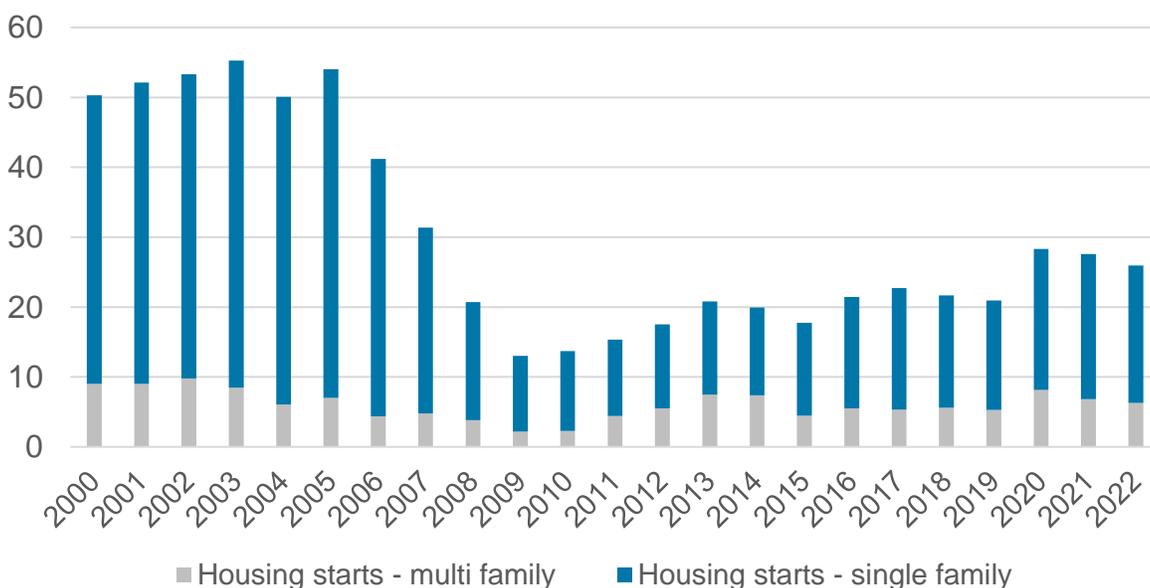
According to US News, Ohio ranks as a top state for affordability in food, energy, and housing in relation to median family incomes. However, secondary research indicates limited available housing units due to a ten-year low in new builds following the 2008 housing crash. Additionally, Ohio has a shortage in starter home builds and rental units that are affordable and available to extremely low-income households (ELI).³⁰ Compared to other renters, severely cost-burdened households are more likely to sacrifice other necessities like food and healthcare. While homeownership can provide a pathway to upward mobility, there are no simple solutions to the nationwide housing shortage and increased demand.

The Ohio REALTORS organization defines workforce housing as “housing that is affordable to households earning 60 to 120% of the area median income and typically includes a home priced between \$150,000 to \$300,000.” Housing is generally considered “affordable” when a person or family spends no more than 1/3 of their income on rent or a mortgage plus utilities.³¹ However, U.S. Census Bureau statistics show that Ohio’s median household income (in 2019 dollars) is \$56,602. Furthermore, the Columbus Dispatch recently noted that, “36% of households in the Columbus metro area alone make less than \$50,000 annually. The under-\$50,000 population is the largest income segment, followed by 32% who make between \$50,000-\$100,000... Depending on household size and financial obligations, some of them would struggle to buy a home costing more than \$150,000.”³²

Despite this, the homeownership rate in Ohio was 68.2% in 2019, slightly higher than the U.S. average of 64.6%. Throughout the state, rates of homeownership are higher in rural areas (74%) and lowest in urban areas (46%), likely due to the high mix of multifamily rental properties in urban areas. Homeownership rates are consistently high across the state, though they are highest in Southeast Ohio (71.0%) and lowest in Central Ohio (61.8%). Rates of homeownership are highest in rural areas (74%) and lowest in urban areas (46%).³³

From a housing supply standpoint, production remains challenging despite the wide scale market demands and will continue to impact future homeownership. In 2019, the National Association of Home Builders found the median price to build a single-family home in the U.S. was just over \$296,000.³⁴ Even prior to the pandemic, developers’ hands have long been tied by land availability, zoning, density restrictions, regulations, construction costs and a lack of skilled workers. Current disruptions in the supply chain have led to material prices rising at an exponential rate. Lumber, appliances that rely on multiple components from different countries, windows, chemical-based materials and a shortage of tradespeople are inflating production costs. These key drivers collectively throttle residential development, particularly in housing at lower price points. In order to build housing for Ohio’s workforce at an affordable price point, homebuilders must realize a return on investment to justify construction, putting home ownership out of reach for many Ohioans.

**Housing Starts in Ohio
(thousands)**



Lack of housing starts, especially starter home builds, is fueling the housing shortage

Source: Accenture analysis of Oxford Economics Housing Starts

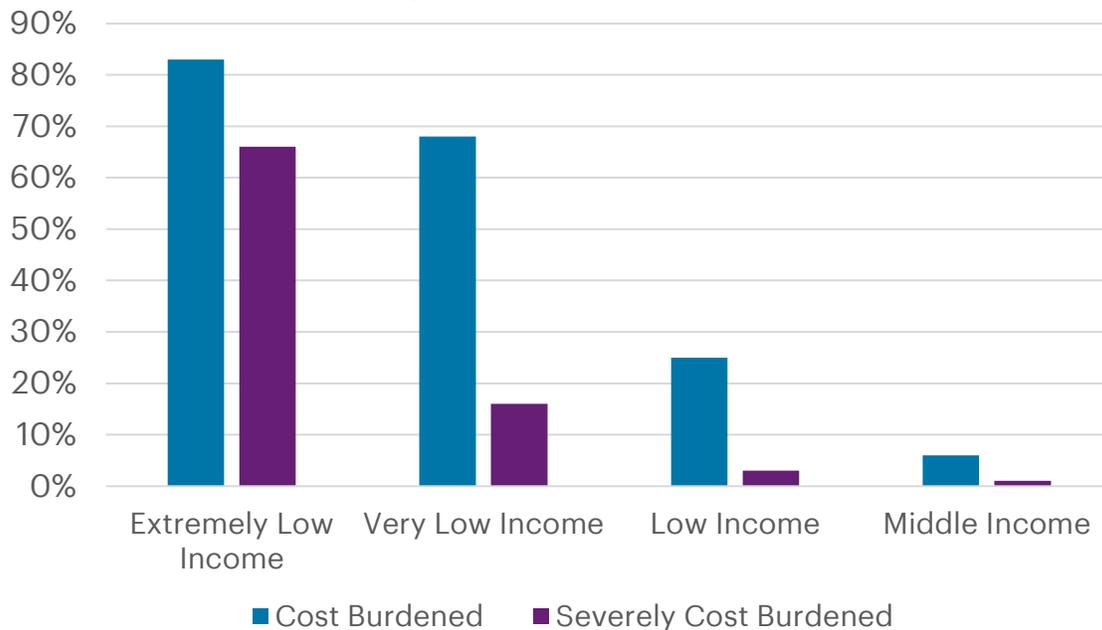


Many Ohio households are severely cost burdened by housing costs

Affordability remains a concern for renters as well. In 2020, only 3 out of the 10 most common jobs in Ohio paid an hourly rate necessary for a worker to afford a modest, two-bedroom apartment, creating a significant rent budget for not only Ohio's lowest income renters, but for moderate-income renters across the state. This shortage of affordable rental housing leaves nearly 400,000 Ohio household rent burdened, spending over half their income on rent. Over 90% of renters making under \$22,750 are rent burdened, as are 73% of renters who make between \$22,750 and \$37,900, and 30% of renters who make between \$37,900 and \$60,650 annually.³⁵

Severely cost burdened poor households are more likely than other renters to sacrifice other necessities like healthy food and healthcare to pay the rent, and to experience unstable housing situations like evictions.

Housing Cost Burden by Income Group



Source: [National Low Income Housing Coalition](#)

Cost Burdened: Renter households spending more than **30% of their income on housing** costs and utilities

Severely Cost Burdened: Renters spending **more than half of their income** are severely cost burdened

Case Study: Iowa's Housing Initiatives to Attract New Workers

Governor Reynolds announced \$100 million invested through ARPA to invest in housing in order to "eliminate barriers for those trying to enter the workforce." This additional assistance brought Iowa's total investment in housing to over \$300 million. This included:

- Federal Housing Tax Credit Program
- Workforce Housing Tax Credit Program
- Downtown Housing Grant Program
- Home Repair Block Grant
- Minority Homebuyer Down Payment Assistance

Source: [Governor Reynolds Announces Historic Investment for Housing \(iowaeda.com\)](#)

Shortage of rental homes affordable and available
for extremely low-income renters

254,545 units



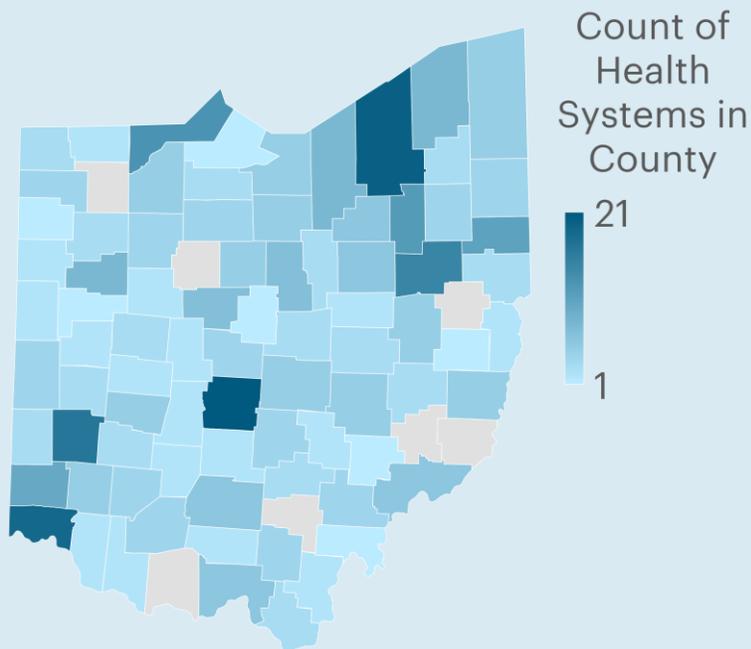
Healthcare Access

Compared to people in other states, Ohioans are living less healthy lives and spending more on healthcare. Although health access is rated more favorably than health quality in Ohio, both categories see Ohio ranked in the bottom ten across multiple national indices. There are well-documented health access and cost concerns persisting across the state, beginning with poor childhood health, and leading to poor lifetime health outcomes. From 2013 to 2018, fewer than 60% of Ohio children enrolled in Medicaid managed care plans received the recommended number of well-child visits.³⁶ This low access results in decreased knowledge about health and healthcare, and can allow for the development of early, chronic health conditions. Ohio's per-capita public health spending is fourth lowest in the nation,³⁷ and approximately 7% of Ohioans are uninsured.³⁸ Sparse public health spending leads to less preventive care and greater downstream consequences, including increased number of emergency visits and higher readmission rates.

Additionally, poor health literacy is a driver of high costs. Improving health literacy in a population involves more than the transmission of health information, although that remains a fundamental task. Helping people to develop confidence to act on that knowledge and the ability to work with and support others will best be achieved through more personal forms of communication, and through community-based educational outreach. If we are to achieve the ultimate goal that is reflected in that definition of health literacy— trying to promote greater independence and empowerment among the individuals and communities we work with—we will need to acknowledge and understand the political aspects to education, focused on overcoming structural barriers to health.³⁹

The 3 C's Account for the Majority of the State's Health Systems

Number of Health Care Systems by County



Powered by Bing
© GeoNames, TomTom

**Ohio ranks
47th on
health value
out of 50
states and
DC**

Public health spending per person is the fourth lowest in the nation.

Source:
Accenture analysis of Torch Insights 2019
[America's Health Rankings](#)
[Health Policy Institute of Ohio](#)

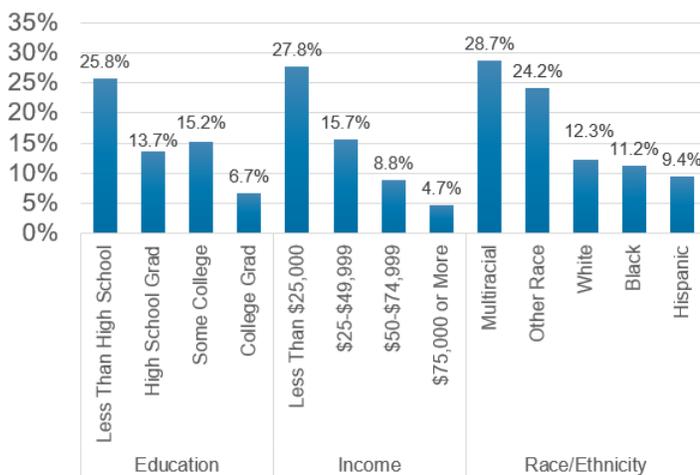


Health Disparity

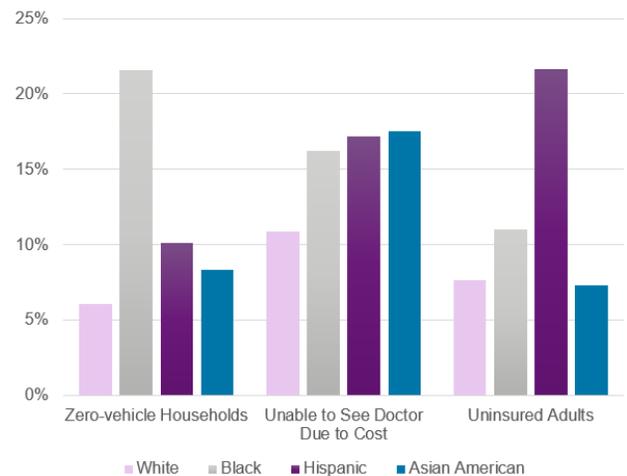
Further, Ohio exhibits notable health disparities by both demographic and geography. For example, statewide there is an average of .77 primary care physicians (PCPs) per 1,000 Ohioans. In some rural counties, the ratio is as low as .07. Disparities in health outcomes for these rural communities include higher risk of premature death (before age 75); fewer dental care providers and higher risk for teeth extractions in elderly populations; and higher risk for maternal mortality. Statewide, the hospital readmission rate is 18%, but many rural counties have rates greater than 40%.⁴⁰ Ohio populations with lower levels of education and income and/or who identify as multiracial are likely to have multiple chronic conditions and less access to health care. One approach to addressing health disparities by geography that policymakers may consider is pursuing policies that make it easier for residents in a county near a state border to access out-of-state health options using Medicaid reimbursements.

Public policy makers should support efforts to transform Ohio's healthcare system by enhancing delivery of services to reduce costs and improve health outcomes. A key component is a concerted effort to increase access to quality healthcare for all individuals. This may include expanding telehealth access, decreasing unnecessary/outdated telehealth regulations, and increasing the number of practitioners in medical establishments. Policymakers may consider introducing incentives and partnerships with educational institutions to encourage additional access to care and/or offering student aid incentives toward those pursuing medical degrees.

Percent Of Demographic With Multiple Chronic Conditions (2021)



Metrics Impacting Racial Disparities in Health Access (2021)



Ohioans who hold less than a high school degree, make less than \$25,000 a year, and/or are multiracial experienced increased probability of having multiple chronic conditions

Source: 2018 Health Care Cost Institute America's Health Rankings Health Policy Institute of Ohio



Health Outcomes

The mental and physical health of Ohioans ranked consistently low across indices. Poor mental and physical health impede people's ability to work, especially when combined with a substance use disorder. Researchers have noted a clear connection between low health rankings and low rates of workforce participation and higher rates of government programs. One national estimate suggests that up to 40% of prime working-age men not in the workforce have a health condition that may prevent them from working.⁴¹

When compared to other states, several Ohio health outcomes are troubling. These include drug deaths, cardiovascular disease and multiple chronic conditions ranking in the bottom ten nationally. The pandemic compounded these challenges with disrupted treatment and increased social isolation. Indeed, Ohio's drug deaths rose to 44 per capita, with the heaviest burdens in metropolitan and Appalachian counties. Additionally, Ohio has 6.9 infant deaths per 1,000 live births (2019). Smoking and tobacco use continue to be issues throughout the state and are what the Health Policy Institute of Ohio (HPIO) identifies as a "missed opportunity" when it comes to prevention.⁴² Ohio invests around 10.6% of what the Centers for Disease Control and Prevention recommends for state tobacco prevention and control, according to the report. A positive step in the state's approach to tobacco usage was the 2019 enactment of the "Tobacco 21" law, making it illegal to "give, sell, or otherwise distribute cigarettes, other tobacco products, or alternative nicotine products like e-cigarettes/vaping products to any person under the age of 21."⁴³

Ohio ranks low for health outcomes

(1st is best, 50th is worst)

- Drug Deaths 47th
- Cardiovascular disease 41st
- Multiple chronic conditions 40th
- Premature death 39th
- Depression 37th
- High Blood Pressure 35th
- Obesity 37th
- Diabetes 37th
- Cancer 34th



Source:

[America's Health Rankings, Untied Health Foundation, 2021](#)

[Where Have All the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate, NIH, 2017](#)

[Ohio nearly last in US for health, report shows, The Columbus Dispatch, 2021](#)



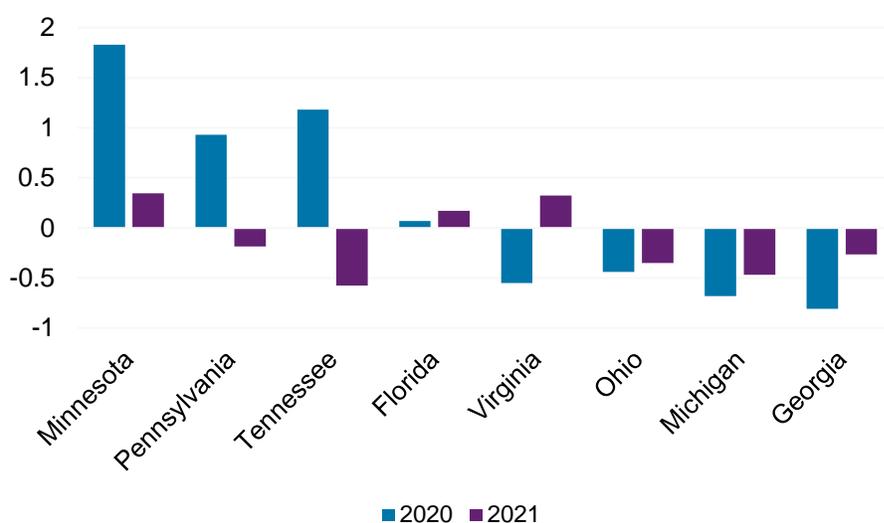
Health Outcomes

Ohio's business community would benefit from strengthening the Office of Health Opportunity in the Ohio Department of Health and supporting state and local health agencies to eliminate health disparities. Additionally, the Ohio Chamber, in coordination with business leaders, can prepare, position, promote and provide a robust pipeline of talented minority executives to serve on health boards and in leadership roles. These leaders can advocate for increased public spending on evidence-based practices, including increasing access to preventative care, physicals, vaccines and health education.

It is clear more is needed to address the rapidly increasing number of unintentional overdose deaths. Several of the economic opportunity recommendations throughout this report can provide pathways to reduce future addiction-related harms. A statewide campaign through trusted messengers should continue to address the stigma of the disease of addiction and provide evidence-based treatment and recovery services. Policymakers and business leaders should also ensure all areas of the state have access to quality and effective services, as well as wrap-around services and support groups for family members.

Topics in the Public Health Outcomes Score are **behavioral health, mortality and physical health**. This category is one of the five categories of measures used in the America's Health Rankings model. The other four categories are social and economic factors, physical environment, clinical care and behaviors. This model is built upon the World Health Organization's definition of health: **"Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."**

Public Health Outcomes in Ohio and Peer State



Source:

America's Health Rankings, Untied Health Foundation, 2021

Where Have All the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate, NIH, 2017

Ohio nearly last in US for health, report shows, The Columbus Dispatch, 2021

Case Study: Arkansas Health Innovation and Investment Highlights ⁴⁴

Investment Amount: Up to \$42 million

Description: The Arkansas State Innovation Model is based on two complementary strategies: population-based care delivery and episodes-based payment. These strategies support a patient-centered health care system and were launched statewide with the support of both public and private insurers. Arkansas' model includes:

- Patient-centered medical homes that provide comprehensive, team-based care with a focus on chronic care management and preventive services.
- Additional health homes to coordinate medical, community and social support services for individuals with complex or special needs (including behavioral health conditions, developmental disabilities or long-term care).
- Episodes of care with a retrospective payment approach that rewards providers who deliver high-quality, cost-effective and team-based care for specific conditions.



Rising Costs of Memory Care

The Ohio Council of the Alzheimer's Association reports that Alzheimer's disease is a growing public health crisis in the nation and in Ohio. The impact of Alzheimer's is projected to rise, with recent data showing 220,000 people aged 65 and older are living with Alzheimer's in Ohio. These numbers show that a public health approach is necessary to lessen the burden and enhance the quality of life for those living with cognitive impairment and their families and to reduce the financial burden to individuals and the health care system.

Individuals living with Alzheimer's disease or other dementias in the United States make up 41.9% of the residents in Residential Care Facilities (RCFs), with some estimates putting the number of people living in RCFs who have some form of cognitive impairment as high as 70%. Although the total number of dedicated dementia/memory care units is still low, RCFs will have to navigate caring for a growing number of individuals diagnosed with dementia or a related memory issue. Ohio has a higher proportion of RCFs with Memory Care Units (MCUs) than the national average.

According to the 2017 Biennial Survey data, four in ten (38.6%) of RCFs have a dedicated MCU. One in five MCUs in Ohio were in a Continuing Care Retirement Community (CCRC), providing a continuum of care from independent living to skilled nursing care. Most MCUs in Ohio are small, with an average unit size just under 30 beds (28 beds), and an overall occupancy rate of 85.3%. RCFs in Ohio with MCUs are more likely to be in urban areas. The majority of residents in MCUs are private pay, with an average private pay rate of \$5,700 per month. The remaining 8.3% of residents use the Medicaid Assisted Living Waiver Program.⁴⁵

The Ohio Council of the Alzheimer's Association states that a one-month delay in nursing home placement could save Ohio nearly \$1 billion annually. The Ohio Department of Insurance reports that in Ohio, the average cost of long-term care is \$93,805/year for a private room in a nursing home, \$52,065/year for care in an assisted living facility, and \$52,624/year for home health aide services (44 hours per week). Long-term care insurance pays for medical care given in a nursing home, assisted living facility, adult day care center or your own home. It can pay the expenses related to skilled care and treating chronic health problems. Ohio's Partnership for Long-Term Care Insurance is one type of policy and is a collaboration between the State of Ohio and private insurance companies. Encouraging younger Ohioans to purchase a long-term care insurance plan could significantly drive down or delay Medicaid growth from the rising costs of treating memory care.

Individuals currently can take out money tax-free from health savings accounts (HSAs) to pay long-term care insurance premiums, with the maximum annual tax-free amount based upon age. As of 2019, individuals 40 or younger can withdraw up to \$420 tax-free from an HSA to pay premiums; ages 41 to 50 can take out \$790; ages 51 to 60, \$1,580; ages 61 to 70, \$4,220; and ages 71 or older, \$5,270.⁴⁶ If an individual and his/her spouse both have long-term-care policies, each can use money tax-free from an HSA to pay premiums, up to the aged-based maximum. These limits increase slightly each year for inflation.

Ohio policymakers should consider augmenting these limited federal incentives with state tax deductions or credits for a remaining portion of long-term care insurance premium costs. Any forward-thinking personal investments in long-term care will have dramatic cost-savings years from now.

Memory Care Challenges in Ohio ⁴⁷

- 11.6% of people aged 45 and older have subjective cognitive decline
- 421,000 family caregivers bear the burden of the disease in Ohio
- 614 million hours of unpaid care provided by Alzheimer's caregivers
- \$10 billion is the value of the unpaid care
- \$2.534 billion is the cost of Alzheimer's to the state Medicaid program in 2020, with these costs projected to rise 16% from 2020 to 2025



Natural Environment and Amenities

Ohio is rich in parks, museums, libraries and other amenities that contribute to a vibrant culture and sense of community. The natural environment—particularly access to green space with a range of available recreational activities—is a key driver of economic development and population growth. Additionally, fostering a distinct, attractive community rich in the arts and culture nurtures a strong sense of place. Economic development policies aimed at increasing Ohio's population should focus as much on investing in amenities and quality of life as they do on attracting new businesses. Progress is underway, including an increase in Lake Erie's public waterfront access from 22% to 50%⁴⁸ and continued investments in Ohio's parks from \$766 million combined in Fiscal Years 2018-2019 to more than \$925 million in FYs 2020-2021.⁴⁹

Parks in major Ohio cities rank high across the 100 largest U.S. cities and can be used to promote the state's sense of place

Cincinnati: 4
Cleveland: 23
Toledo: 49
Columbus: 55

Source: Trust for Public Land 2022 Park Score

The Cleveland Museum of Art, Photo by [Ally Griffin](#)



Sense of Place

Recommendation 1: Improve Affordability That Allows for Generational Wealth Building

1.1 Make dedicated efforts to increase home ownership

Together with the business community, policymakers should focus on innovative housing solutions that promote homeownership and housing affordability in order to expand the workforce and promote long-term change.

Two proposals from the 134th Ohio General Assembly merit further consideration in this regard:

1.1.1 First-Time Home Buyer Savings Act (House Bill 186) - authorizes a tax-favored savings program for home buyers. Under the program, an individual may designate a savings account as a first-time home buyer savings account and receive an income tax deduction for amounts deposited into the account. The individual may then withdraw money from the account to make a down payment or pay the closing costs on a single-family home, a unit in a multiple-unit building, or a manufactured or mobile home provided the residence is located in Ohio.

1.1.2 Ohio Affordable Housing Tax Credit Program (House Bill 560) - would provide a \$50 million annual tax credit for 10 years for the development of new affordable housing units. Ohio is annually allocated about \$120 million of federal bond volume cap for multifamily development that it is, essentially, forfeiting as it lacks a state-level low-income housing tax credit in place like 20 other states do to help draw down those federal resources. The program would be managed by the OHFA just as they manage the federal LIHTC now, changes no local zoning ordinances and would sunset after six years. Federal LIHTC comes in two forms: a 9% and 4% credit. The 9% credit is allocated through a competitive process. Projects utilizing the 4% credit are financed in part with federal tax-exempt bonds.

According to an economic impact analysis, HB 560 would help stimulate 2,300 more affordable housing units each year. The economic activity will generate \$1.7 billion of new tax revenue for state, county and local governments over the life of the housing units. Moreover, the tax credit would create 34,000 new construction jobs in its six years of existence and generate \$11.4 billion of economic impact in Ohio.⁵⁰

1.2 Make efforts to provide affordable rent

Ohio should reaffirm existing commitments to federally subsidized housing, while also exploring and recommending additional strategies to promote new construction and availability of housing stock. Subsidized housing at below market-rate rents allows income-restricted individuals, families, and older adults to meet other household needs such as food, transportation, utilities and personal services. The opportunity cost of these savings translates into new money spent locally that supports jobs and generates tax revenue.

Recommendation 2: Improve Health Outcomes and Address Drug Crisis

Tackling public health in Ohio is complicated and daunting but also extremely pressing. Ohio business leaders have a significant stake in the health of Ohio's general population and the equity of health services. The Ohio Chamber should act as a convener of health institutions and stakeholders to advocate for the improvements listed below.

2.1 Increase residents' ability to access care by improving and enhancing delivery systems

By advocating for a transformation of Ohio's healthcare delivery system, we can work to prevent the development of early, chronic health conditions, improving health outcomes and leading to a healthier population. Increasing engagement between Ohioans and primary care physicians, including through the advancement of telehealth, will drive down costs by emphasizing early identification and treatment, and promotion of healthy behaviors.

2.2 Make efforts to eliminate health disparities via targeted outreach to at-risk communities

Improving health literacy in a population involves more than the transmission of health information, although that remains a fundamental task. Helping people to develop confidence to act on that knowledge, and the ability to work with and support others, will best be achieved through both more personal forms of communication and community-based educational outreach. Ohio's business community would benefit from strengthening the Office of Health Opportunity in the Ohio Department of Health and supporting state and local health agencies to eliminate health disparities.



Sense of Place

2.3 Increase awareness and access to addiction treatment, harm reduction and mental health services

The Ohio Chamber, and the business community, should continue to support statewide campaigns through trusted messengers to address the stigma of the disease of addiction, and evidence-based treatment and recovery services. Policymakers and business leaders should also ensure all areas of the state have access to quality and effective services, as well as wrap-around services and support groups for family members. Finally, steps should be taken to address the shortage of personnel in behavioral health and recovery support services professions.

2.4 Incentivize long-term care insurance among younger Ohioans to drive down future costs to taxpayers

Ohio policymakers should consider augmenting limited federal incentives with state tax deductions or credits for the remaining portion of long-term care insurance premium costs. Forward-thinking individual investments in long term care will have dramatic cost savings in the years to come.

Recommendation 3: Further Understand Opportunities for Ohio's Natural Environment and Amenities

3.1 Capitalize on Ohio's unique features including parks, libraries, museums, etc. for compelling first impressions

Consider an analysis of the most impactful ROI for amenities and natural environment. Such an analysis may identify key attractions, opportunities and gaps. With these insights, re-evaluate resources based on those that make the greatest impact on tourism, migration and sense of place.

3.2 Utilize public-private partnerships to maximize economic opportunity in conjunction with recreational assets

Public officials and economic development groups should strategize to ensure that the development of new recreational attractions, or revitalization efforts of existing assets, include an economic component to maximize the benefits provided by natural amenities. By providing dining, shopping, and other commercial opportunities through careful planning and design, Ohio can strengthen communities across the state by providing innovative approaches to recreational activities.



LEVER 3: TAXES AND COSTS

Lever 3 Taxes & Costs



Funding our Future

Best to Worst Indicators

Cost of Doing Business
Fiscal Stability
Tax Burden

Key: Avg Rankings In:



Ohio's low cost of doing business (low wage/utility costs, space costs, etc.) and consistent long-term and short-term stability scores led to positive rankings in cost of doing business and fiscal stability. Ohio businesses paid \$23.4 billion in state and local taxes in FY20. This equated to \$4,800 per employee in the state.⁵¹ In tax burden, however, Ohio ranked in the third quartile. Of states that tax personal income, Ohio has one of the lowest rates nationally. However, since the review of the state income tax, many states reduced or are considering reducing income tax rates and/or moved to a flat tax. Ohio's low income-tax rank from the Tax Foundation was also due to the significant number of local jurisdictions that are statutorily allowed to impose a local income tax compared to the nation. Ohio's low corporate tax rank from the Tax Foundation is due to the commercial activity tax.

We reviewed Ohio's main tax categories and narrowed down the recommendations based on consultation with the Ohio Chamber on the largest impact to businesses.





State Fiscal Stability

Ohio's business climate benefits from traditionally strong fiscal management by the State of Ohio. A high credit rating benefits Ohio by allowing the state to achieve a lower cost of borrowing. In September 2022, Fitch Ratings upgraded Ohio's long-term Issuer Default Rating (IDR) to AAA status from AA+ reflecting "material strengthening of the state's financial resilience and budget management, particularly over the past two biennia." The rating action is Ohio's first "AAA" rating with Fitch, which began rating Ohio's credit in the 1990s and represents the highest rating for Ohio's IDR by one of the three main rating agencies since 1979.⁵² Ohio has other mechanisms in place that maintain budgetary stability, including balanced budget controls, State Appropriation Limitation (SAL) and budget stabilization fund.

In terms of balanced budget controls, Ohio has a combination of statutory and constitutional provisions that ensure these requirements.⁵³ Ohio Revised Code sections 126.05 and 126.07, along with Article II, Section 22, Article VIII, Sections 1-3, and Article XII, Section 4 of the Ohio Constitution provide for:

- **Limiting the state's ability to incur debt**
- **Requiring the general assembly to provide for raising revenue sufficient to defray state expenses each year**
- **Permitting money in the state treasury to be spent only pursuant to an appropriation made by law**
- **Limiting the duration of appropriations to two years**
- **Requiring the governor to curtail spending in the event of insufficient revenue**

The SAL was originally created under a 2006 law, and it limits annual general revenue fund spending growth to 3.5% or the sum of inflation plus population growth, whichever is greater. The General Assembly may exceed the SAL for a fiscal year under the following circumstances:

- **Declaration of an emergency by the Governor, when excess amounts can only be used for that emergency**
- **Under an affirmative vote by two thirds of the members of each chamber of the Ohio General Assembly, and when the bill specifically identifies the purpose of the appropriations and states whether they are to be included as aggregate GRF appropriations with respect to future determinations of the SAL**

There is required recasting of the SAL every four years, which is a step to prevent the buildup of unused appropriation capacity or the potential for large spending increases in some years. Lastly, Ohio's Budget Stabilization Fund is a reserve balance that is set aside during good economic times to protect the state budget from cyclical changes in revenues and expenses that may occur during poor economic times. By law, the maximum balance of this fund is 8.5% of the General Revenue Fund revenues.⁵⁴ As of June 2022, the balance of Ohio's Budget Stabilization Fund was \$2.7 billion.⁵⁵

**As of June 2022,
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Ohio's Budget
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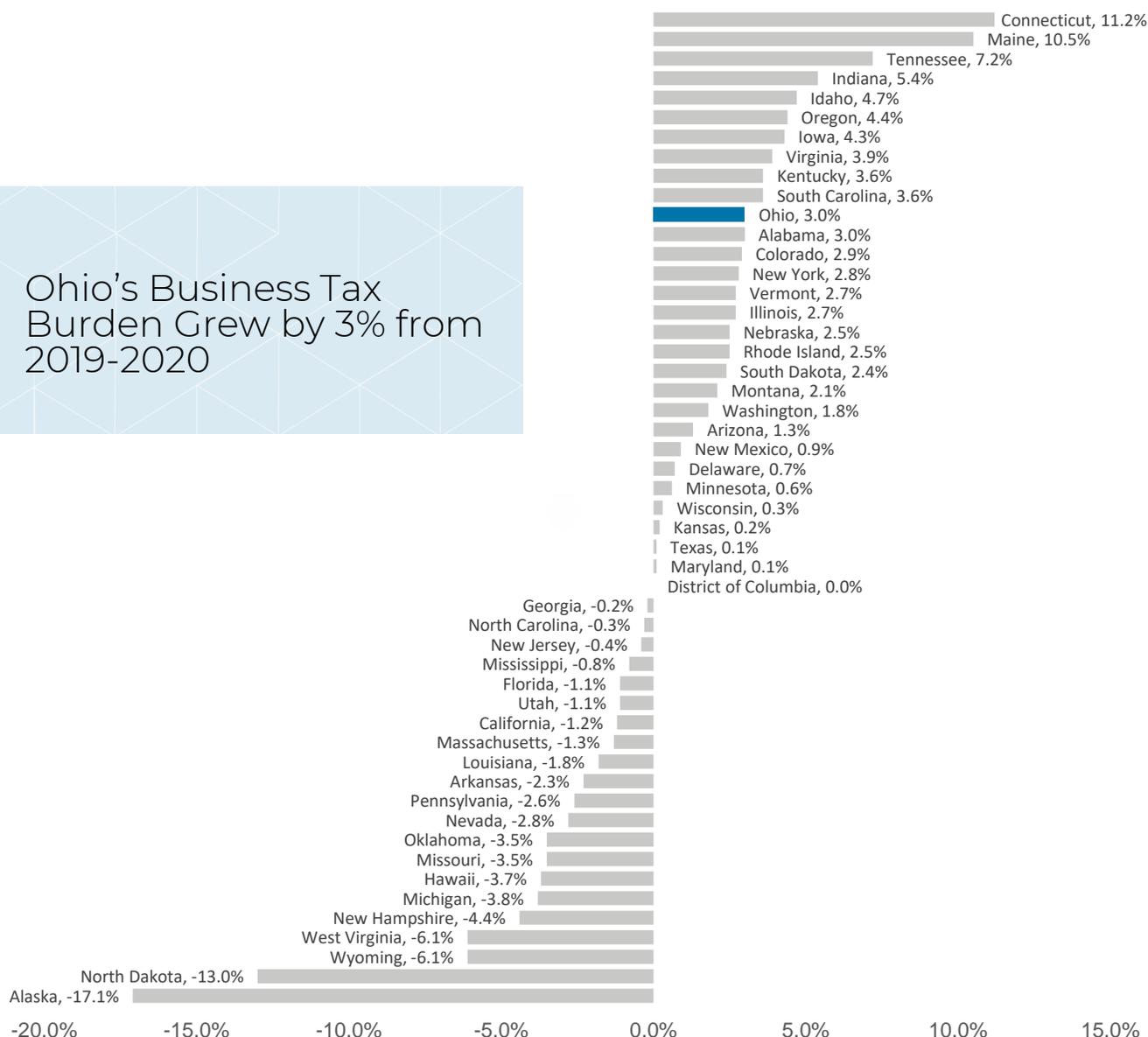
Taxes

According to the Council on State Taxation (COST) its Total State and Local Business Taxes Report published in October 2021, Ohio falls below the national average for the total tax burden.⁵⁶ The business tax burden can be evaluated by comparing business taxes paid with benefits received by businesses due to government spending, such as education, public safety and high infrastructure. This is measured through a calculation provided by the Federal Reserve Bank of Chicago to allocate a percentage of expenditures in major categories that influence businesses. Calculating the business tax-to-benefit ratio estimates the extent to which businesses are “getting what they paid for” from their tax dollars.

While Ohio trails national average, business tax burden is increasing. As the COST study shows, Ohio’s business tax burden grew by 3% from 2019-2020. Not only is the overall tax burden increasing, there is also a significant administrative burden due to the complexity of municipal definitions of income and how varying taxes are applied to businesses and their employees. This burden, and the associated compliance costs, reduces Ohio’s competitiveness relative to other states.

Change In State And Local Business Taxes By State, FY19–FY20

Ohio’s Business Tax Burden Grew by 3% from 2019-2020



Source: COST Report



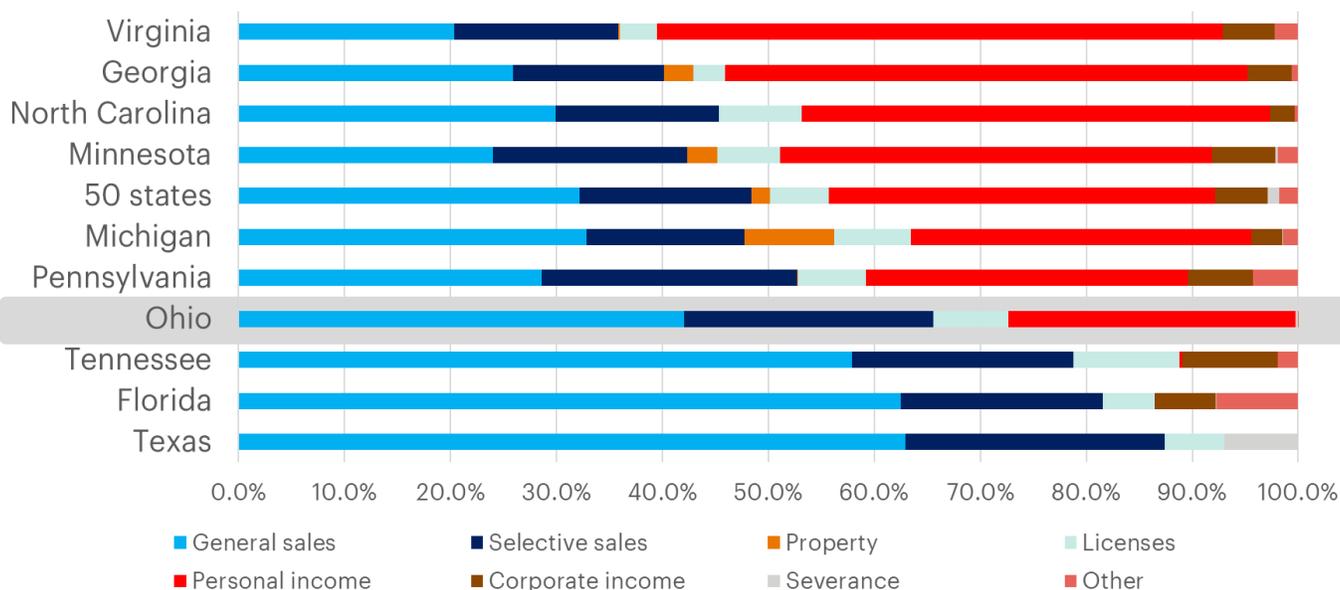
Taxes

Nationally, state and local property tax accounts for the largest share of total revenue generated from business taxes, followed by sales and excise taxes paid by businesses on their input purchases and capital expenditures. Corporate income and franchise taxes, business and corporate license taxes, and unemployment insurance taxes a relatively small percentage of total state and local tax collections. State and local personal income tax that is passed on to the employer is not considered a business tax, but the impact on employee does impact business's ability to recruit and retain talent and the state's ability to attract top wage earners and should be considered in future tax reforms.

We reviewed Ohio's main tax categories and focused the analysis to those that have the largest impact to businesses, on average. In order to understand and start to make recommendations on Ohio's tax structure, it is also important to recognize the percentage of state revenue that is derived from businesses vs. households and consumption vs. income. According to Pew, Ohio state government is most reliant on consumption-based taxes (sales and excise tax both on households and businesses), followed by personal income (mostly impacting employees), while municipal governments in Ohio are more reliant on a percentage of their overall budget on personal income tax. Special tax jurisdictions (schools, libraries, etc.) are more reliant on property taxes.

How does the state government raise its tax dollars? Consumption vs. Income Tax Reliance

Mix of Tax Source, by Dependence



Source: [Pew: How States Raise Their Tax Dollars](#)

Ohio is most reliant on general sales, selective sales and personal income tax. Tennessee, Florida and Texas do not tax personal income.



Property Taxes

Ohio's property taxes significantly vary county to county. The total tax rate includes levies enacted by the county and all taxing jurisdiction in which the property is a part. According to SmartAsset, the average Ohioan's property tax ranks 13th highest in the U.S. Yet, outside of the Midwest, most local governments are funded by a steeper property tax as most states do not allow a municipal income tax.

- The highest effective average rates are in Cuyahoga County (**2.44%**); the lowest effective average rates are in Lawrence County (**0.87%**).⁵⁷
- Ohio does not have a tangible property or inventory tax, which positions it well in these areas.

State	Real Estate Effective Tax Rate*	Property Tax Collection Per Capita	Business Tangible Property Tax	Inventory Tax
TN	0.71%	\$799		
VA	0.82%	\$1,699	Yes	Yes
NC	0.84%	\$993		Yes
FL	0.89%	\$1,377		
US Median	0.9%			
GA	0.92%	\$1,205	Partially	Partially
MN	1.12%	\$1,649		
MI	1.54%	\$1,465	Partially	Partially
OH	1.56%	\$1,356		
PA	1.58%	\$1,584		
TX	1.80%	\$1,973	Yes	Yes

*Median Real Estate Tax Rate/ Median home price

Although Ohio's property tax rates are slightly higher than peers', a lack of tangible property and inventory taxes is a competitive advantage

Sales Taxes

Ohio ranks lower than the national average for the total share of state and local sales tax that came from businesses on purchases of goods and services used in production.⁵⁸ Ohio allows local governments to collect a local option sales tax of up to 2.25%. There are 48 major areas of sales tax exemption, but as the Department of Taxation notes, "This list of exemptions is merely an abbreviation of the law." The variety of exemptions contribute to an administrative burden for small businesses trying to navigate the tax code. Excise taxes attributed to businesses include a portion of motor fuel taxes and other excise taxes, such as taxes on hotel and rental car expenditures by businesses, as well as health care and services taxes.

- Ohio allows local governments to collect a local option sales tax of **up to 2.25%**.
- There are **48** major areas of sales tax exemption, but as the Department of Taxation notes, "this list of exemptions is merely an abbreviation of the law."

State	States Sales Tax Rate	Average Local Sales Tax Rate	# of Local Sales Tax Jurisdictions
GA	4.00%	3.32%	162
NC	4.75%	2.23%	106
TX	5.25%	1.94%	1,659
VA	5.30%	0.43%	175
OH	5.75%	1.48%	96
MI	6.00%	0.00%	1
PA	6.00%	0.34%	3
FL	6.00%	1.08%	67
MN	6.88%	0.59%	98
TN	7.00%	2.55%	129

Sales tax rates as of Jan 1, 2021; Sales Tax Breadth for FY2020

Source:

[Wallethub States with the Highest and Lowest Property Taxes](#)

[City of Columbus Exemption Guidelines Ohio.Gov Sales and Use - Applying the Tax](#)



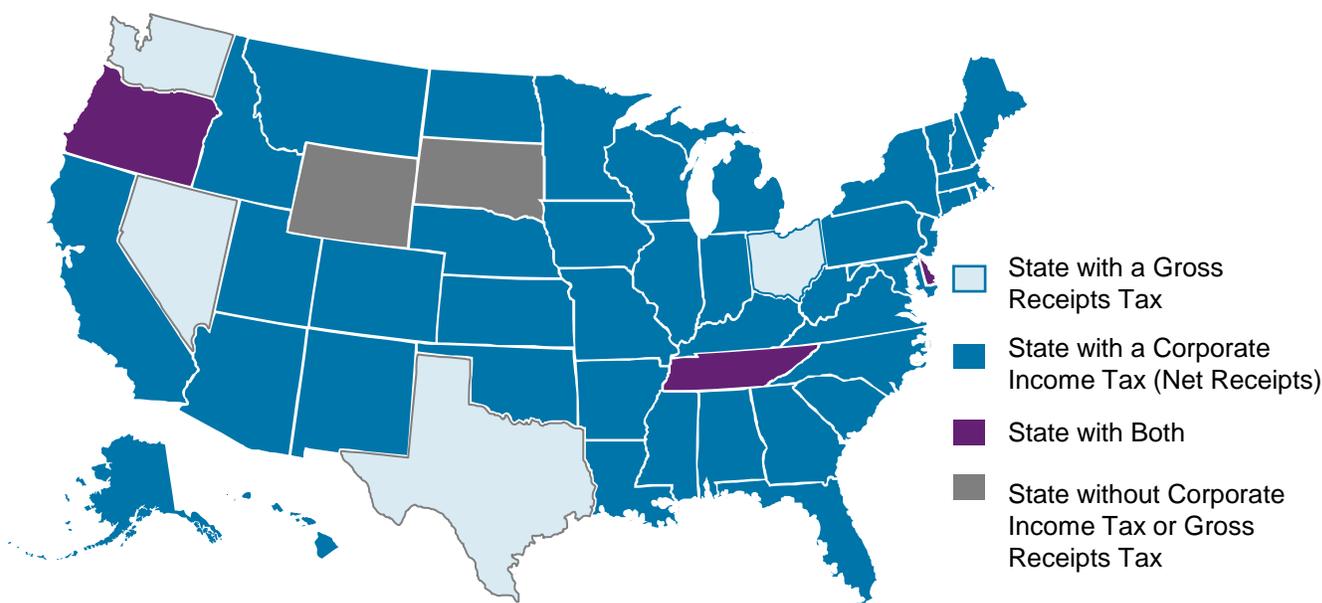
Commercial Activity Tax (CAT)

Nationally, corporate income taxes represent a relatively small percentage of total state and local tax collections from businesses. Ohio does not have a corporate income tax, but Ohio imposes a rate of 0.26% on business gross receipts in excess of \$1 million. Delaware, Nevada, Oregon, Tennessee, Texas, and Washington are the only other states with gross receipts taxes.⁵⁹ In some of these states, rates vary by industry. Certain Ohio localities impose a net profits tax.

Ohio established the Research & Development Tax Credits for qualified research expense (QRE) to encourage companies to boost R&D activities.⁶⁰ The tax credit can be taken to offset a portion of the gross receipts tax, as the tax impacts firms with low profit margins and high production volumes. This tax credit aims to lessen the overall tax burden for startups and entrepreneurs, who typically post losses in their infancy while still owing gross receipts payments.

Gross Receipts Tax vs Corporate Income Tax

Ohio's CAT tax is one of the few gross receipts taxes still levied in the country.



- Of the 7 states that levy a gross receipts tax, Ohio and Oregon are the only states to **not** levy a multitude of **different rates** depending on the **business type**.
- By requiring LLCs and S Corps to file through the state's gross receipts tax, as in Ohio, this causes an **extra burden**, in compliance with forms, reporting, etc., and minimizes the benefits of incorporation.
- Alaska, Illinois, Iowa, Minnesota, New Jersey and Pennsylvania levy top marginal corporate income tax rates.
- Ohio's CAT was implemented in 2005 as a replacement for the state's corporate income tax, a capital stock tax, and the tax on business tangible property. Apprehension to change the CAT tax may be the recognition that other business taxes will need to be imposed.

Source:
[Tax Foundation: Does Your State Have a Gross Receipts Tax?](#)
[Tax Foundation: Gross Receipts Taxes](#)
[2021 State Business Tax Climate Index](#)
[Tax Foundation: Corporate Income Tax](#)



Commercial Activity Tax: CAT impacts firms with low-profit margins and high production volumes

- Ohio imposes at a rate of 0.26% on business gross receipts in excess of \$1 million, some states rates vary by industry
- Gross receipt tax impacts firms with low profit margins and high production volumes
- Gross receipt tax can be particularly severe for start-ups and entrepreneurs, who typically post losses in the early years while still owing gross receipts payments.

CAT Effective Rates by Firm Type

Industry Sector	Profit/Receipts Ratio	Effective Tax Rate
Construction	3%	8.60%
Wholesale	3%	8.40%
Retail	3%	7.90%
Transportation and Warehousing	4%	7.00%
Arts, Entertainment, and Recreation	4%	6.20%
Professional, Scientific, and Technical Services	5%	5.00%
Agriculture, Forestry, Hunting, and Fishing	5%	4.70%
Educational Services	6%	4.50%
Health Care and Social Assistance	6%	4.40%
Manufacturing	6%	4.00%
Information	8%	3.40%
Real Estate and Rental & Leasing	18%	1.40%

The numbers above represent the average effective rates on profitable businesses

Source:
[Tax Foundation: Commercial Activity Tax](#)
[2022 State Business Tax Climate Index](#)



Income Taxes

Local Income Tax

Of states that tax personal income, Ohio has one of the lowest statutorily allowed rates, and has several tax brackets. However, the state also has a significant number of local jurisdictions to impose an additional local income tax. Only 17 states statutorily allow local jurisdictions to impose a local income tax. Local income tax has been a longstanding and significant source of revenue for many cities in the Midwest. At 848 local income tax jurisdictions, Ohio is second only to Pennsylvania.

More than 3.2M Ohioans pay an additional 2% or more for local income tax on top of state income tax

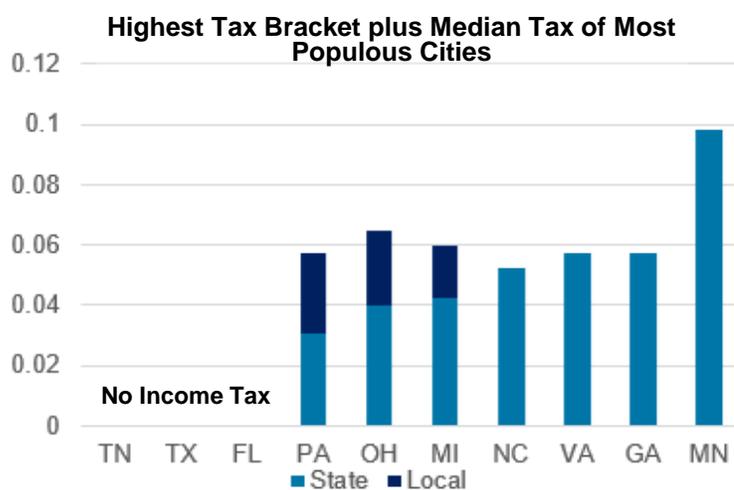
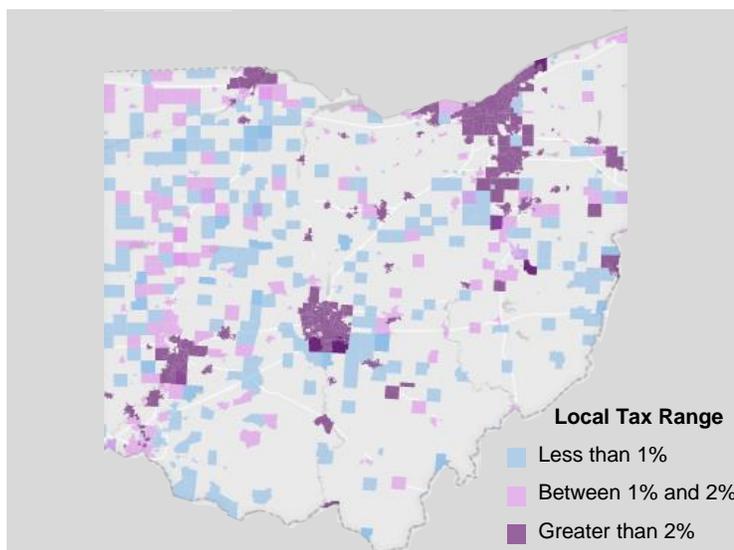
Only 17 states statutorily allow local jurisdictions to impose a local income tax.

State	Total Number of Local Tax Jurisdictions
Pennsylvania	2,978
Ohio	848
Indiana	98
Michigan	23
GA, FL, MN, NC, TN, TX, VA	0

Source: [Local Income Tax, Tax Foundation](#)

Residence Tax and Workplace Tax

Individuals always owe municipal income tax to the municipality where they work (this is called “workplace tax”), but they may or may not owe income tax to the municipality where they live (this is called “residence tax”). Most individuals have the tax owed where they work automatically withheld by their employer. Many individuals in Ohio work in a municipality that has an income tax and live in a different municipality that also has its own income tax.



Source: [The Finder - Muni Rate Database Table Instructions \(ohio.gov\)](#), [U.S. Census Bureau QuickFacts: United States \(2020\)](#), [State Individual Income Tax, Tax Foundation \(2022\)](#)

Residence Tax: Individuals that live in municipalities

Workplace Tax: Individuals that earn taxable income in municipalities

Many individuals in Ohio work in a municipality that has an income tax and live in a different municipality that also has its own income tax.

State Income Tax

According to analysis of the FY2023 governors’ budgets, 30 states are proposing net decreases in taxes and fees while just three are proposing net increases. Twenty-two states are proposing reducing personal income taxes and ten states are proposing reducing the corporate income tax.⁶¹ To remain competitive, Ohio must conduct a comprehensive tax review to identify ways to reduce and simplify the overall tax burden on businesses and their employees.

22 governors proposed reducing personal income taxes in their FY23 budget address

Source: [Summary: Spring 2022 Fiscal Survey of States, NASBO, 2022](#)



Taxes & Costs Recommendations

Recommendation 1: Target Comprehensive Tax Reform

1.1 Conduct a comprehensive review of state and local tax liabilities for businesses, including: property, sales and excise, gross receipts, local net profit, corporate license, unemployment insurance and individual income taxes paid by owners of pass-through entities

While recent analyses by the legislature have focused on state tax rates and state tax expenditures, Ohio's last comprehensive review of tax policy at both the state and local level was conducted by the Committee to Study State and Local Taxes in 2003. Nearly 20 years later, Ohio policymakers should conduct a renewed examination of these policies to ensure a quality tax system for Ohioans.

1.2 Perform a review of incentives to ensure they attract and retain business operations in Ohio

Policymakers should compare Ohio's incentives to peer and aspirational peer cities and states across the country, to ensure Ohio's economic development incentive landscape remains competitive with those locations.

1.3 Analyze any proposed tax changes to consider the impact on services that benefit businesses and communities, such as education, public safety and infrastructure

Recommendation 2: Improve the Municipal Tax Complexity and Burden

2.1 Pursue uniformity of tax rates and tax filing requirements to reduce the complexity and compliance burden of municipal income tax

With over 800 local taxing jurisdictions, Ohio's businesses struggle to navigate a complex and burdensome municipal tax code. Differing definitions of income, variable rates, and onerous filing systems reduce productivity and increase costs. Policymakers should support efforts to standardize filing requirements and rates, while improving processes to reduce compliance burdens.

2.2 Address municipal workplace vs. residence tax withholding as this creates an administrative burden for the employer

Given the rise of remote and hybrid work, businesses need clarity and certainty on meeting their tax obligations at the municipal level. With more than 1 in 7 Ohioans reporting they worked from home in 2021, this issue is more pressing than ever. Bringing clarity to this problem will make Ohio a more attractive place for businesses and employees by reducing administrative burden and tax uncertainty.

2.3. Ensure any reforms provide municipalities with adequate funding for key local services

Recommendation 3: Conduct Further Analysis on The Business Gateway's Impact on Businesses

3.1 Create robust one-stop shops, including conducting further analysis on the Ohio Business Gateway, to better relieve the administrative burden of taxes, licenses, and fees on businesses.

The Ohio Business Gateway is a service for business provided by the state to help streamline the relationship between businesses and the local and state governments, specifically making the processing of payments to the government simpler and via electronic methods. Efforts to improve the impact of the Gateway should focus on affording business owners a more comprehensive platform with which to interface with varying governmental entities.



LEVER 4: INNOVATION & COLLABORATION

Education & Workforce



Sense of Place



Taxes and Costs



Innovation & Collaboration



Business Friendliness



Infrastructure



Our Business-forward Future

Best to Worst Indicators

- Patents Issued
- Research & Development
- Startups & Entrepreneurship

Key: Avg Rankings In:

- Top Quartile
- Second Quartile
- Third Quartile
- Fourth Quartile

Small business, entrepreneurship and venture capital are important to employment, economic development and community growth. Small businesses contribute to local economies by bringing growth and innovation to the community in which the business is established, by providing additional employment opportunities and attracting creative talent.⁶² Ensuring these businesses have the resources, funding and support they need to be successful will, in turn, create vibrant communities where residents enjoy expanded opportunities to thrive.

When compared to peer states, Ohio has a strong number of patents issued per capita in Health, Science and Agriculture research grants. Ohio's strong Higher Education institutions offer a good partner in research and development as well as a talent pipeline. However, when it comes to small businesses, Ohio ranked at the very bottom in the nation for startups and entrepreneurship across multiple indices. Despite a strong standing in patents issued and research and development, Ohio ranks low in terms of both new business formation and business survival. This performance illustrates clear opportunities for growth. In this section, the analysis reviews access to capital as a catalyst to spur start-ups and entrepreneurship.

As Ohio businesses continue to grow, innovate and digitalize, data security and privacy will increasingly be an important consideration for legislators. Ohioans' individual data is more exposed now than ever, with their digital exposure only growing. Their personal information may be collected by a variety of entities and used or sold without the consumer's knowledge in certain circumstances. As data is exchanged and exposed, it is increasingly vulnerable to identity theft, financial fraud and other costly consumer problems if inadequately protected. Not only is there no national standard for regulating the collection and use of personal information, but as of June 2022, just five states – California, Colorado, Connecticut, Utah and Virginia – have enacted comprehensive data privacy statutes, with many more in the early stages of development.⁶³



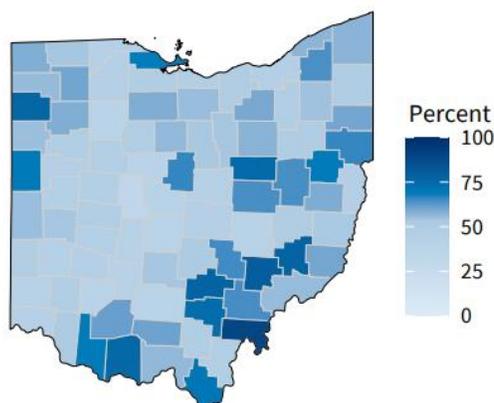


Small Business

According to the U.S. Small Business Administration (SBA), small businesses represent 99.6% of Ohio businesses.⁶⁴ Small businesses that thrive continue to support their local economy by reinvesting in their communities and improving property values and overall quality of life. Additionally, with innovative work and growing employment opportunities, cities have a better chance of retaining post-graduation talent.

Ohio had essentially no net gain of small businesses over the past two decades, and the majority of small business employees are concentrated in Appalachian counties.⁶⁵ Further, new loans to Ohio small businesses making less than \$1 million a year have steadily declined since the early 2000s, according to the SBA. This demonstrates an opportunity to improve Ohio's overall performance by putting a focus on small and rural businesses.

982,035 small businesses **2.2 million** small business employees
99.6 percent of Ohio businesses **44.6 percent** of Ohio employees



Ohio ranks 47th for Small Business growth
Wallet Hub Best States to Start a Business

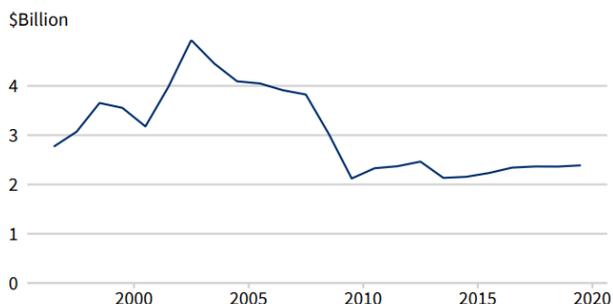
Share of employees working at small businesses by county

Source of data: [Statistics of US Businesses](#) (Census)

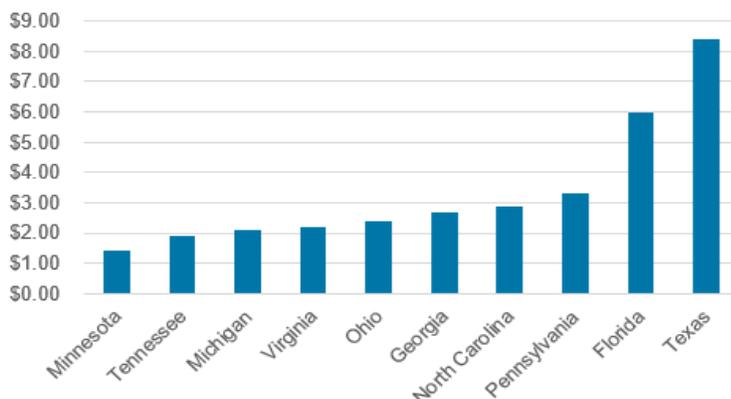
Ohio has lower amounts of small business lending than other comparison states

- Ohio **small business lending** (to businesses with under \$1 million revenue) has decreased since the early 2000s but has stayed flat in the last 10 years.
- Texas and Florida are **outliers with significantly higher levels of lending**.
- Ohio performs similar to other **Midwestern** states (MI, MN).

New Lending to Businesses with Revenues Under \$1 Million in Ohio



2021 Total Lending to Small Businesses (billions)





Entrepreneurship and Small Business Support

A growing body of research suggests that entrepreneurial skills and experience are passed on from generation to generation. Research from The Ohio State University in 2016 found that entrepreneurs who grow up working in a family-owned business are more likely to be successful.⁶⁶ Further research points to opportunities to expand programs that provide young people with entrepreneurial experiences.

One avenue for building this experience in young adults and early entrepreneurs is through business incubators, accelerators, coworking spaces and other entrepreneurship support organizations. These resources provide connections to mentors, education, partners, community influencers and investors essential to the growth of small businesses and entrepreneurs.

Ohio should further expand the model of Innovation Districts recently announced in Cleveland, Cincinnati and Columbus, serving as a public-private partnership between medical and research facilities, academic institutions and private corporations. These districts incentivize new research and development, are estimated to create 60,000 new jobs, inspire more than 47,000 new STEM graduates and generate \$9 billion in annual economic impact to the state.⁶⁷ The Innovation District model should expand to include new industries and new private sector partners to attract increased investment in Ohio.

Small Business Development Centers (SBDCs) are another resource to provide support to small businesses. These statewide, nationally accredited programs provide high-quality, one-on-one consulting, training, and information resources to empower new and existing businesses. The model consists of a public-private partnership with the U.S. Small Business Administration, the Ohio Department of Development, and Ohio universities and colleges. These programs provide a wide array of services, including:

- Business assessment valuation
- Cash flow analysis
- Financial projections development
- Free one-on-one business counseling
- Identifying sources of capital
- Inventory control assessment
- Market feasibility and research
- Marketing strategy development
- Strategic business planning
- Workshops and training programs

The Springfield, Ohio, SBDC received the Great Lakes Region award in 2020 recognizing its local impact: providing in-depth advising for 238 clients, helping to create 19 new businesses and 134 new jobs in the area, retaining 29 at-risk jobs, and supporting small businesses in obtaining \$3 million in capital and increasing sales by almost \$400,000.⁶⁸ This recognition represents an opportunity to share best practices and expand offerings to the rest of the state's SBDCs. While an SBDC network in Ohio exists, steps can be taken to improve coordination and access to services. One successful model is the Tennessee SBDC, featuring a single website that coordinates all local SBDCs and offers an intuitive user experience.⁶⁹ The site's official intake form automatically routes each request to the appropriate local office. The site also highlights detailed statistics and performance measures. Another option states often consider is appointing a small business ombudsman to coordinate efforts at the state level and support businesses in navigating the various resources offered by state and local agencies.

Case Study: Rhode Island small business/regulation hotline

At the Rhode Island Department of Business Regulation portal, users can submit questions and complaints to the Small Business Ombudsman.

Case Study: Pennsylvania supporting small businesses through environmental regulations

Small business owners with a question or issue can request assistance from the ombudsman to voice concerns and interests with the Department of Environmental Protection (DEP). Any Pennsylvania-based small businesses with 100 or fewer full-time employees can receive free, confidential service from the ombudsman for issues pertaining to DEP. The ombudsman's role also includes reviewing proposed regulations to ensure small businesses' interests are heard and considered in the regulatory process.

Source:
[State of Rhode Island Department of Business Regulation](#)
[Pennsylvania Small Business Assistance](#)



Manufacturing in Ohio

Manufacturing is an essential driver of Ohio's economy, and priority may be placed on new policies and programs that will make Ohio an attractive place for manufacturers small and large to do business in the years to come. Just as critical, however, are Ohio's legacy manufacturers, as they have made considerable investments – sometimes over decades or familial generations – and have fixed assets and bases of Ohio employees already in place.

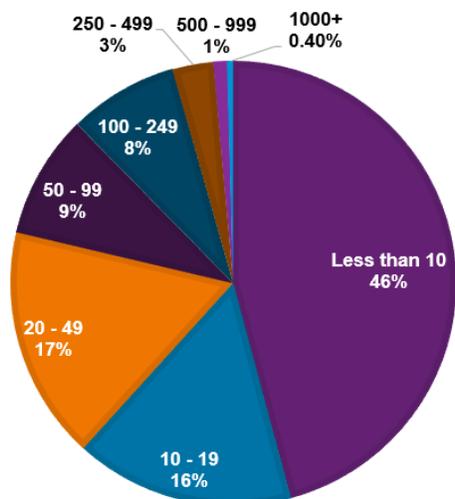
Team NEO in Cleveland is the regional economic development partner for NE Ohio. Their biggest challenge as it relates to manufacturing is how to boost modernization of legacy machinery. Many small and medium-sized manufacturers still use 20- to 50-year-old equipment – finding ways to squeeze life out of a device, procuring a spare part or rigging up a temporary fix. Sooner or later, there must be an embrace of digital technology and the efficiencies and cost-savings offered. In Team NEO's whitepaper titled "Smart Manufacturing Industrial Internet of Things (IIoT) Roadmap for Northeast Ohio," it states: "To gain the benefits of IIoT, [Northeast Ohio's] current manufacturing base will need to change their processes and how they work. According to Moody's Economy.com projections, Northeast Ohio's manufacturing GRP is projected to grow approximately \$4 billion from \$45 billion in 2018 to \$49 billion by 2025. [...] The higher end of the potential impact IIoT will have on [Northeast Ohio's] manufacturing sector by 2025 is \$62 billion."⁷⁰

Ohio is in a strong position to make sizeable investments in legacy manufacturers through manufacturing readiness grant programs similar to that of Indiana's Manufacturing Readiness Grant, which was launched in 2020 to stimulate private sector investments to modernize Indiana's manufacturing sector.⁷¹ Supporting these existing companies is not just a quality retention and growth tool but also rewards their ongoing state presence. Programs could target small and medium-sized manufacturers who otherwise lack the capital and capability to modernize their machinery and facilities.

Case Study: Indiana Manufacturing Readiness Grant

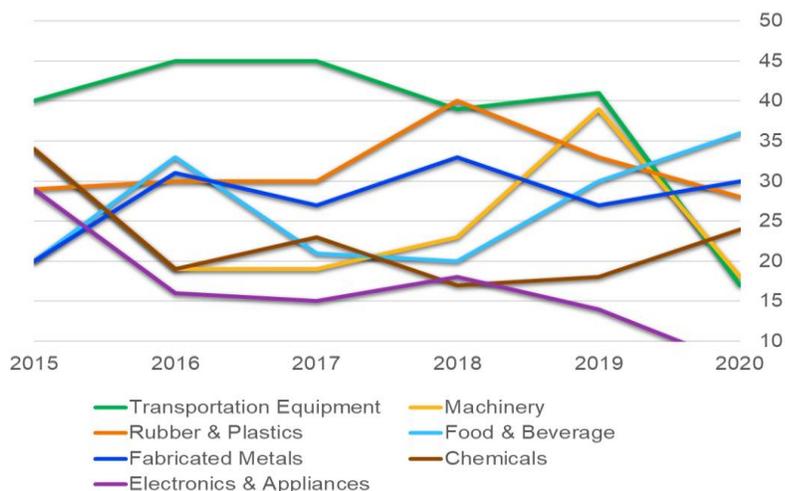
Indiana's Manufacturing Readiness Grant which was launched in 2020 to stimulate private sector investments to modernize Indiana's manufacturing sector. To date, there have been 355 applications since inception, with 267 awards totaling \$22.8 million to support \$190.4 million in project budgets in 66 counties. Based on the strong response to the program, the Indiana General Assembly appropriated \$20 million in the two-year budget that runs through June 30, 2023.

Percent of Firms by Number of Employees



Almost 50% of Ohio manufacturing firms employ fewer than 10 people, while 0.4% of firms employ 1,000 or more people

New Manufacturing Project Investments by Industry



In 2020, Food and Beverage and Fabricated Metals projects led Ohio's new manufacturing investment projects

Source: Ohio Manufacturer's Association 2020 Report
State Awards Manufacturing Readiness Grants, Inside Indiana Business
Manufacturing Readiness Grants Extended Through 2023, WBIW

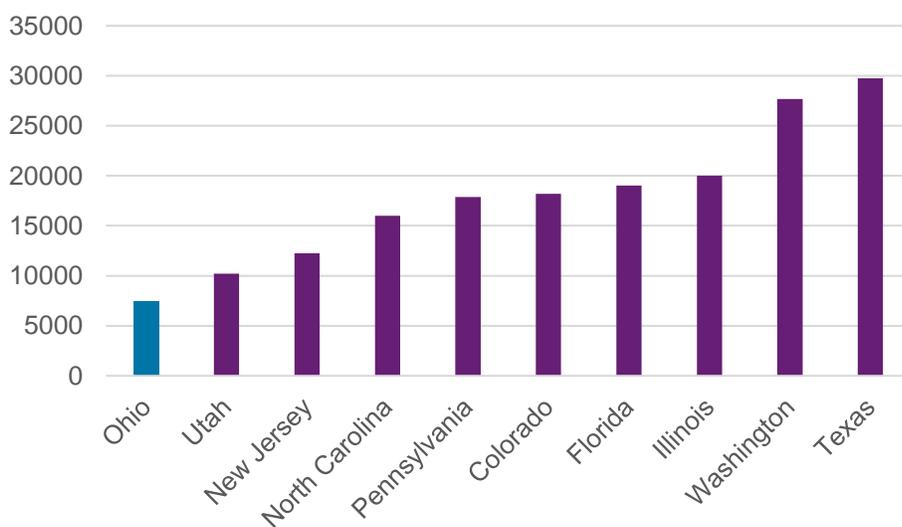


Venture Capital

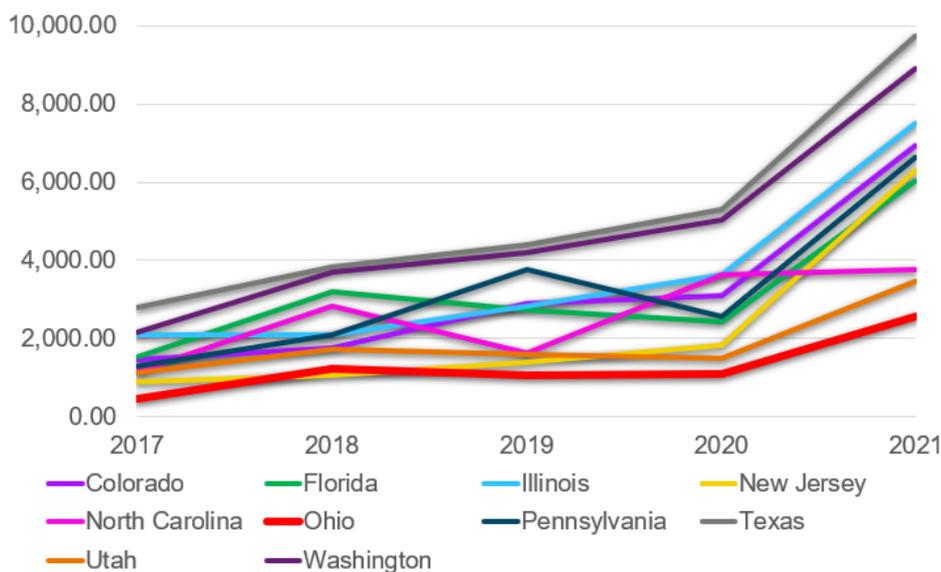
Venture capital (VC) funding is another indicator of a strong business economy. These are funds that go directly to efforts that promote innovation and development of new products and technologies. Nationally, 2020 was a record-breaking year for venture capital investment. In that context, Ohio underperformed versus national data. In 2020, the state accounted for \$1.5 billion of \$156 billion in U.S. VC investments—or 1%, up from 0.6% five years ago.⁷² While in 2021 Ohio companies did secure a record \$2.37 billion in venture capital funding (103% increase from 2020),⁷³ Ohio still dropped to less than 1% of overall US Investments (which nearly doubled to \$329.9 billion in 2021).⁷⁴ Ohio VC-funded companies are primarily located in or around one of the “three Cs” (Cincinnati, Cleveland and Columbus). Columbus and Central Ohio accounted for \$594 million, or 40% of the state total, ranking the metro area 21st among cities nationwide, and demonstrating an opportunity to expand on the success seen in the Central Ohio area to broader communities.

Although venture capital investments in Ohio have increased, they are not growing at the same rate as in other competing states

VC Funding by State Past 5 Years (M)



VC Funding by State (M)



In 2021, Ohio had a **record-breaking** year in venture capital (2.37B, 180+ deals, 103% increase from 2020).

Nationally, 2021 was a record-breaking year for venture capital investment.

Ohio accounted for just \$1.5 billion of \$156 billion in U.S. VC investments in 2020 – or **1%**, up from 0.6% five years ago.

Source: Accenture analysis of Pitchbook data

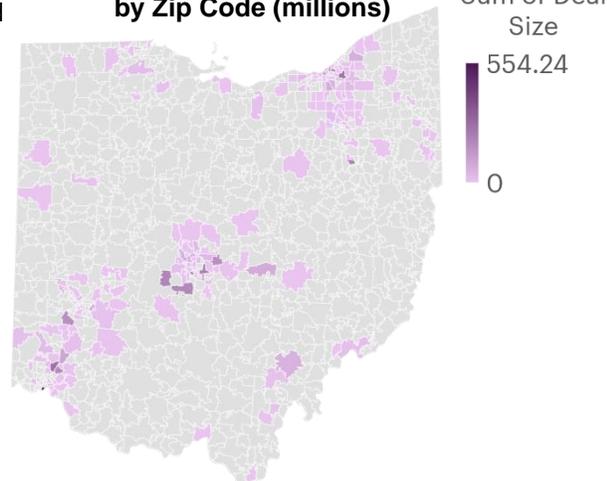


Venture Capital Funding by Region

Ohio has made efforts to increase venture capital funds through the Third Frontier and Technology Initiative.⁷⁵ These programs provide access to business expertise, mentorship, capital, and talent to build and scale cutting-edge technology companies. However, to catch up to states leading the nation in VC funding, Ohio must increase the volume of capital allocated to these investments.

There are options that may be approached through policy, as well as through various public-private partnerships. Policymakers can advocate for increasing capital allocated to state-based investment funds similar to Third Frontier and other incentives for investment firms to increase lending. On a larger scale, policymakers may consider a “fund of funds” to support venture capital and private equity firms that invest in multiple industries important to the state, such as technology, logistics and automotive manufacturing. The preference would be for Ohio-based firms, or at least those with a significant in-state presence. A portion could be set aside for funds that specialize in backing minority-owned businesses. Through a partnership of the region’s leading venture organizations and investors, as well as investors from Silicon Valley and others outside the region, small initial investments would be solicited from the region’s philanthropies, state pension funds and university endowments as a vehicle for institutional investors to make solid but relatively small bets.

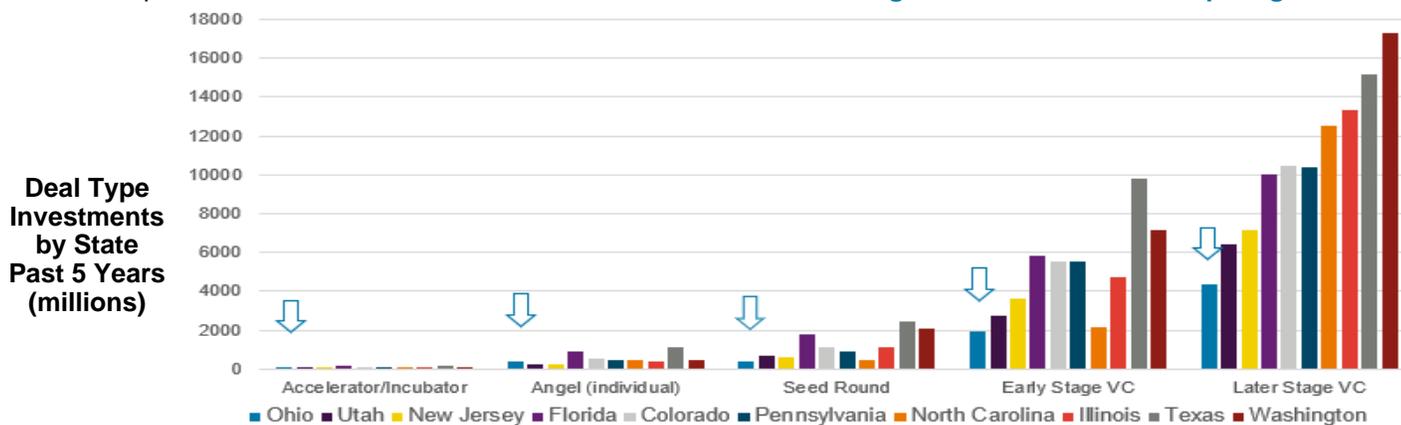
Venture Capital Investments by Zip Code (millions)



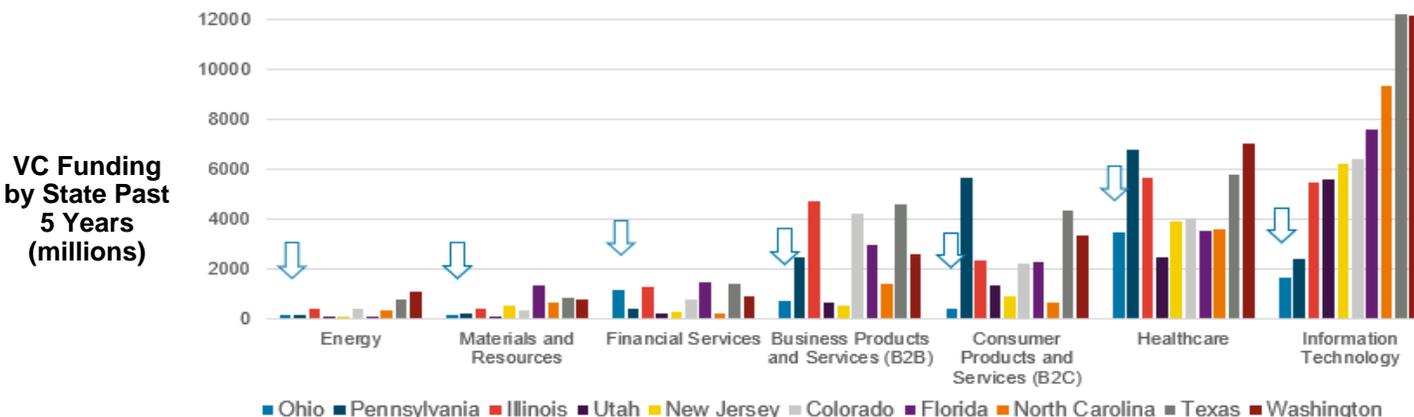
**Columbus Zip 43215 receives ~4x larger than the second highest zip code at 2551.35 (M)

Most funded companies are located in or around one of the “three C’s.” Columbus and Central Ohio accounted for \$594 million, or 40% of the state total, ranking the metro area 21st among cities nationwide.

Venture Capital Investments have increased in Ohio, but **are not increasing at the rate of other competing states**



Ohio’s venture capital investments are **most competitive** in the Financial Services Industry, **least competitive** in Information Technology and **average** in Healthcare





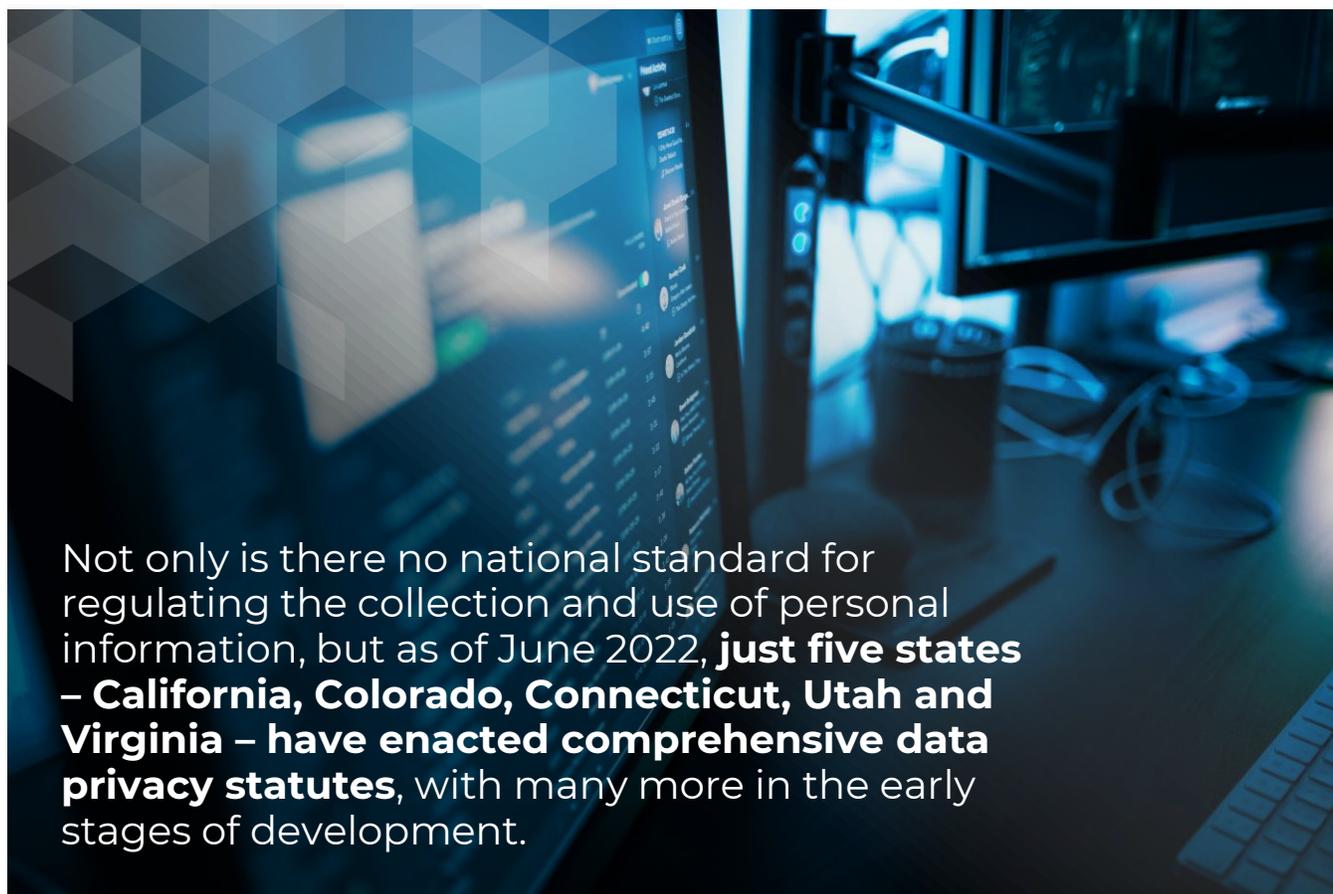
Data Privacy

As the cybersecurity landscape continues to evolve, businesses of all sizes and across all sectors of Ohio's economy continue to amass voluminous amounts of data on their customers, employees and operations. As cyber threats posed by data breaches, ransomware attacks and other nefarious actions continue to rise, so do claims against cyber insurance policies and the demand for coverage. This translates to rising costs of business and the continued vulnerability of personal data.

In the 134th Ohio General Assembly, legislation was introduced (House Bill 376) to protect citizens and give them more control over their digital presence, while at the same time proactively working with the business community on their data privacy plans to better protect consumer data and improve their overall interactions with businesses. Ohio should re-examine comprehensive data privacy legislation such as House Bill 376 that 1) equips Ohioans with consumer rights and recourse related to the collection, processing and selling of their personal data, and 2) promotes a business environment in Ohio that incentivizes the implementation of stringent cybersecurity protections over sensitive customer information. Such legislation should follow the lead shown by Virginia, Connecticut and Utah by designating the State Attorney General with sole enforcement authority without any private right of action.⁷⁶

The legislation should also provide an affirmative defense to affected businesses complying with these consumer rights and all other bill provisions, and who have established and are maintaining a privacy program meeting national cybersecurity standards, such as NIST's (the National Institute of Standards and Technology) privacy framework.

Both the affirmative defense and Attorney General enforcement are positive reinforcements to businesses for doing the right thing and investing in strong cybersecurity measures. These liability protections also would serve as not just an attraction tool for large, out-of-state companies to relocate to or invest in Ohio, but also a strong retention tool for medium-sized Ohio-based businesses to expand operations.



Not only is there no national standard for regulating the collection and use of personal information, but as of June 2022, **just five states – California, Colorado, Connecticut, Utah and Virginia – have enacted comprehensive data privacy statutes**, with many more in the early stages of development.



Innovation & Collaboration Recommendations

Recommendation 1: Expand Venture Capital

1.1 Continue to expand venture capital and private equity investments throughout Ohio and to a wider array of industries and types of startups by:

1.1.1 Incentivizing firms to provide additional investment in early and later stage deals in Ohio's high-priority industries (i.e., Financial Services, Information Technology and Healthcare)

1.1.2 Help prepare/support rural areas to receive those investments and advance businesses to the next stage

1.2 Consider the creation of an Ohio-focused "fund of funds"

In pursuit of increased investment in Ohio, policymakers may consider a "fund of funds" to support venture capital and private equity firms that invest in multiple industries important to the state, such as technology, logistics and automotive manufacturing. The preference would be for Ohio-based firms, or at least those with a significant in-state presence. A portion could be set aside for funds that specialize in backing minority-owned businesses.

Recommendation 2: Increase Small Business Support

2.1 Advocate for and advertise small business and minority business development centers, Innovation Districts and the creation of a small business ombudsman

Streamline disparate incubation network programs to provide members with greater access to an entire system of support resources. Create rural incubation networks for sharing with similar demographics.

2.2 Enhance small business activity tracking

Improve utilization of data to understand small business activity and provide support to active businesses versus those that are dormant but not dissolved. It is critical to have accurate real-time data of all active/non-active small businesses in order to provide the support they need, understand where they're located and understand why they may be struggling to stay open.

2.3 Create support programs that provide low-interest or no-interest loans and grants to promising small businesses

Policymakers can consider several options to expand support to small businesses across Ohio. For example, in partnership with the Ohio Treasurer, the state can promote and expand linked deposit programs and create additional programs to achieve social impact, especially in rural communities. Further, Ohio can identify opportunities through ARPA funds to either create or bolster revolving loan funds or create grant programs providing assistance to small businesses.

North Carolina has had success with its Department of Commerce's Economic Development Grant, including the Job Development Investment Grant Program (JDIG) and other grant programs.⁷⁷

- Since JDIG's first award in 2003, Commerce has disbursed \$420,663,892 to companies for creation of 53,656 new jobs, which equates to approximately \$7,840 per job created. These companies also retained 115,396 jobs that existed at the time of their awards. Since 2003, private investment made by grantees was over \$10.9 billion.
- Of the total 350 announced awards, 245 (70%) went to companies with existing North Carolina operations and 105 (30%) went to those new to the state. Of the total 350 awards, 167 (48%) were expansions of existing facilities and 183 (52%) went to the construction of new facilities.



Innovation & Collaboration Recommendations

Recommendation 3: Transition Manufacturers to Modern Equipment to Realize Greater Efficiencies and Higher Output

3.1 Support manufacturers to realize greater efficiencies and higher output through innovative advancements

Many small and medium-sized manufacturers still use 20-to 50-year-old equipment –finding ways to squeeze life out of a device, procuring a spare part or rigging up a temporary fix. To remain competitive in the manufacturing landscape of the 21st century, Ohio should consider supports to those manufacturers seeking to retool for the demands of the modern economy.

3.2 Adopt a manufacturing readiness grant program similar to that of Indiana’s Manufacturing Readiness Grant

Ohio should pursue adoption of a Manufacturing Readiness Grant, with criteria for applicants to include, among other measures: prioritizing eligibility for small and medium-sized legacy manufacturers, assessing the applicant’s manufacturing presence in Ohio, a funding match, a detailed description of the purpose and scope of the awarded funds, and a review of applications by the appropriate agency staff and a group of industry peer volunteers.

Recommendation 4: Enact Balanced and Comprehensive Data Privacy Legislation

4.1 Examine comprehensive data privacy legislation to:

4.1.1 Equip Ohioans with consumer rights and recourse related to their personal data

4.1.2 Promote a business environment that incentivizes implementation of cybersecurity protections of sensitive information



LEVER 5: BUSINESS FRIENDLINESS

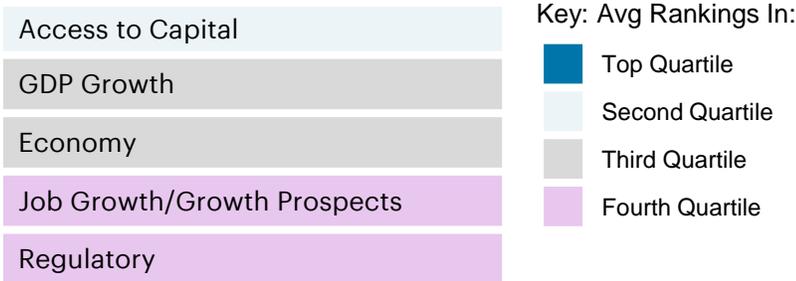
Lever 5

Business Friendliness



Building a Better Regulatory Landscape

Best to Worst Indicators



A state’s business friendliness can be difficult to define and measure. The indices used different categories and weightings related to the concept of “business friendliness.” Ohio’s economy had average rankings across all indices based on its good access to capital, high number of corporations headquartered in the state and its good credit rating. These stable economic ratings are important for attracting new businesses to relocate to Ohio, as companies are seeking states with stable finances and solid economies as they rebound from the pandemic. CNBC ranked Ohio 3rd for access to capital, which included federal and state funds for COVID-19 recovery. Some indices included GDP growth in the economy category, while others ranked it separately. Regardless, Ohio has experienced 6% GDP growth since 2016, putting it below the U.S. Average of 8.5%.⁷⁸ Job growth and growth prospects are tied to business friendliness, as well as workforce and education.

Most indices heavily weighed data on the regulatory landscape and lawsuit/liability climate in the business friendliness category, and Ohio scored low across multiple indices in both. In regulatory landscape, Ohio is ranked 47th by CNBC—a finding that stems largely from the sheer volume of requirements or restrictions. Given the length and complexity of regulations, most indices rely on sources that count total number of pages and/or total number of restrictive words (“must,” “shall,” “prohibited,” etc.) rather than rating on the quality and conciseness of each individual regulation. This approach is not a very reliable metric for measuring regulatory landscapes. However, recognizing current efforts underway to improve Ohio’s regulatory landscape, we’ve made some recommendations to yield more favorable performance in future rankings.

Given the length and complexity of regulations, most indices rely on sources that count total number of pages and/or total number of restrictive words (“must,” “shall,” “prohibited,” etc.) rather than rating on the quality and conciseness of each individual regulation.



Regulatory Landscape

Complex regulations and legal climates can impose heavy administrative burdens on small businesses. Regulations most commonly cover Tax Code, Employment and Labor, Antitrust, Advertising, Environment, Privacy and State Licensing. These requirements may make it difficult, or sometimes impossible, for small businesses to navigate and ensure their business is in good legal standing. For example, small businesses may get tied up in legal battles at the municipal and state level for the same alleged infraction. In addition, they may be challenged to obtain licenses quickly; in some cases, they may inadvertently fail to acquire all required licenses. For many small businesses, poor compliance is rooted in their lack of awareness and/or understanding of the relevant requirements.

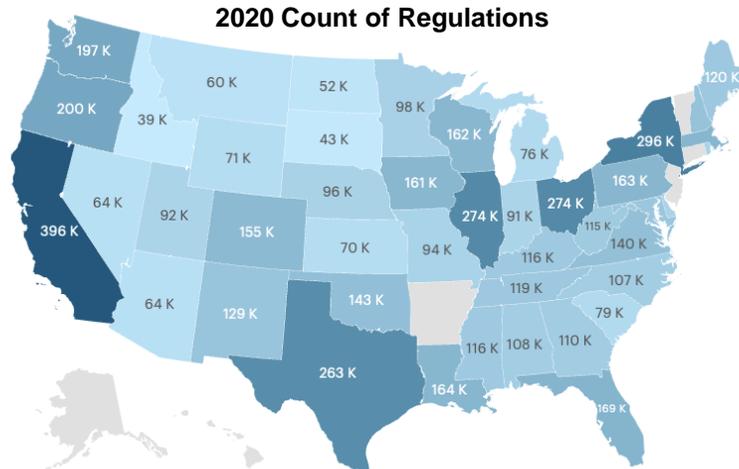
Ohio already has multiple efforts in progress to improve in this area. These include:

- Requirement extended through June 2025 that requires state administrative agencies to **cut two regulations** for each new regulation issued
- Common Sense Initiative (CSI): Reviews business-impacting rules, helps businesses navigate regulatory obstacles and leads initiatives to **improve Ohio's regulatory climate** using an augmented intelligence tool
- Cut Red Tape Ohio: **Allows Ohioans to report regulations** that restrict their businesses, families or daily life

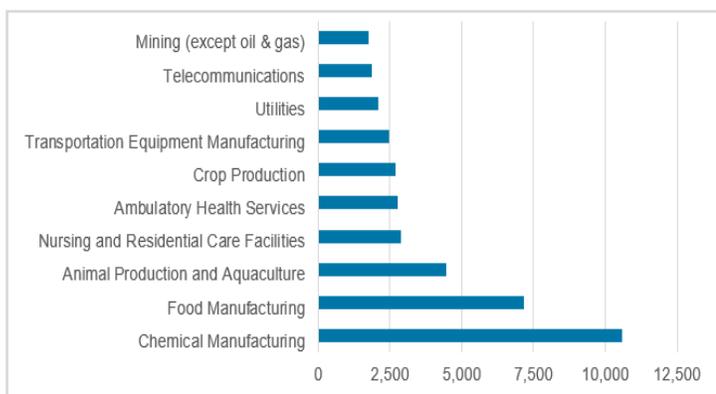
Many sources used the Mercatus Center findings as part of their regulatory definitions, in this ranking Ohio is 47th.

- Ohio ranks the highest for restrictions and number of words among our comparison states, followed closely by Texas, Florida and Pennsylvania.
- Restrictions are instances of the words and phrases “shall,” “must,” “may not,” “required,” and “prohibited” within a regulation.

2020 Count of Regulations



Top Ohio Industries Targeted by State Regulations



Top 10 Regulators in Ohio in 2018



Source: [A Policymaker's Guide to State RegData 2.0](#), Mercatus



Occupational Licensing Landscape

Occupational licensing affects more than 20% of the workforce. Ohio's occupational licensing is more complex and restrictive than many comparison states. The Mercatus Center uses machine learning and text analysis to identify restrictions (that is, instances of words and phrases, such as "shall," "must," "may not," "required," etc.) contained in a jurisdiction's regulations. In this study of Midwest and Mid-Atlantic states, only Indiana had more occupational licensing restrictions than Ohio.

The Mercatus Center study uses **machine learning and text analysis** to identify restrictions contained in a jurisdiction's regulations

- **Restrictions** are instances of the words and phrases "shall," "must," "may not," "required," and "prohibited" within a regulation
- Ohio was a **close second** to Indiana
- Occupational licensing restrictions are most prevalent in **healthcare**
- There may be some opportunities to **simplify** occupational licensing in industries that tend to be small businesses

State	Total Restrictions	Total Words	IFJ* Licensing Burden Ranking
Indiana	26,152	2,391,508	26
Ohio	25,630	1,638,103	16
Maryland	9,477	776,745	10
Pennsylvania	5,851	538,085	51

*Institute for Justice; Higher rank (e.g., 50) corresponds with a lower burden

Occupation	Total Restrictions	Total Words
Health diagnosing and treating practitioners	12,258	810,348
Private detectives and investigators	5,548	340,600
Counselors, social workers and other community and social service specialists	1,980	114,075
Barbers, hairdressers, hairstylists and cosmetologists	1,412	69,519
Psychologists	1,128	74,375
Dental hygienists	1,052	85,187
Architects, surveyors and cartographers	875	51,465
Construction and building inspectors	643	37,186
Accountants and auditors	458	38,671
Landscaping and groundskeeping workers	241	14,659
Real estate brokers and sales agents	35	2,018

A 2015 report by the Obama Administration concluded that:⁷⁹

- Most research does not find that licensing improves quality or public health and safety.
- Unlicensed workers earn 28% less than licensed workers.
- Lower-income workers are less likely to be able to afford the tuition and lost wages associated with licensing's educational requirements, closing the door to many licensed jobs for them.
- Because licensing laws are passed at the state level, licensing also reduces interstate mobility

Source: A Snapshot of Occupational Licensing Regulation in the Midwest and Mid-Atlantic States, Mercatus License to Work: Ranking the States, IFJ



One Stop Shop

Increase Coordination Among Agencies

Examples of Areas of Opportunity for Agencies to Coordinate to Ease Administrative Regulatory Burden for Business Owners

Example 1



- › A beauty salon owner has to register their business with:
 - The Ohio Secretary of State for a vendor's license
 - The Ohio Department of Taxation,
 - The Ohio State Board of Cosmetology
 - Local governments for health and safety approvals

Example 2



- › A restaurant owner has to register their business with:
 - The Ohio Secretary of State for a business license
 - The Ohio Department of Taxation
 - The Ohio Department of Liquor Control for an alcohol permit
 - Local governments for health and safety approvals

Example 3



- › A bait shop/fishing supply owner needs to register with:
 - The Ohio Secretary of State
 - The Ohio Department of Natural Resources' Division of Wildlife for a permit, and a hunting and fishing license
 - The Ohio Department of Taxation for a vendor's license
 - Local governments for health and safety approvals

Standardize Registration, Validation, Receipt, and Renewal

Example of how Ohio could create one profile a user could utilize across agencies:



Step 1

- › The user would first establish a profile within the Secretary of State, the central business licensing issuing unit



Step 2

- › The profile information would then funnel to various licensing agencies at different levels of government.



Step 3

- › The user would only have to input information once
- › This is also helpful in diminishing "shadow duplicates" in business licensing



Legal Climate

In the most recent survey conducted by the U.S. Chamber of Commerce's Institute for Legal Reform (ILR), Ohio ranked as the 15th worst state legal climate in the country. This result, derived from a Harris poll based upon interviews with more than 1,300 in-house general counsels, senior litigators and executives at public and private companies with at least \$100 million in annual revenue, shows Ohio must pursue policy reforms that create a more stable and predictable legal climate that eases regulatory and compliance burdens for businesses.

Ohio businesses can often become inundated by lawsuits from a variety of entities including private individuals, state regulators and local governments that seek to achieve a public policy goal rather than assure compliance with a particular regulation. While regulations are a necessary part of the modern economy, using litigation and private rights of action to drive enforcement efforts creates added costs and harms Ohio's business climate. Additionally, duplicative efforts by state regulators and local governments exacerbate administrative burdens.

Studies performed by the Institute for Legal Reform further explain why the use of private rights of actions to enforce certain types of harms are problematic⁸⁰ and how municipal litigation has expanded over the years in a manner that now seeks to achieve public policy goals rather than address a concrete injury.⁸¹

Category	Institute for Legal Reform Ranking
Enforcing meaningful venue requirements	37
Overall treatment of tort and contract litigation	35
Treatment of class action suits and mass consolidation suits	37
Damages	35
Proportional Discover	35
Scientific and technical evidence	37
Trial judges' impartiality	32
Trial judges' competence	36
Juries' fairness	33
Quality of appellate review	39

The ILR ranked Ohio 35th in Overall Lawsuit Climate

The 2019 Lawsuit Climate Survey: Ranking the States was conducted for the U.S. Chamber Institute for Legal Reform by The Harris Poll. The final results are based on interviews with a national sample of 1,307 in-house general counsel, senior litigators or attorneys, and other senior executives who are knowledgeable about litigation matters at public and private companies with annual revenue of at least \$100 million



Source: State Legal Climate Ranking, Institute of Legal Reform



Business Friendliness Recommendations

Recommendation 1: Expand Cleanup of Regulatory Policies

1.1 Revisit current cleanup efforts through Cut Red Tape Ohio and the Common Sense Initiative in order to maximize impact.

This may include increasing efforts to encourage cross-agency collaboration and business engagement in the rulemaking and rule review process.

While working through the recommendations below, we also recommend the state continue advocating for occupation licenses reform, promoting the utilization of Cut Red Tape Ohio⁸² and continuing the Common Sense Initiative efforts to reduce regulatory complexity.

1.2 Review and reduce occupational licensing restrictions where applicable

1.2.1 Join more interstate compacts for occupational reciprocity

1.2.2 Perform regular cost/benefit analyses of licensing laws:

- Limit licensing requirements to those necessary to protect the public (many occupations have educational requirements not necessary to promote public safety).
- Ensure licensing requirements do not prevent qualified individuals from securing employment.
- Minimize procedural burdens of acquiring licenses in terms of fees, complexity of requirements, processing time and paperwork.

1.3 Mitigate lawsuit abuse against businesses

Possible public policy solutions to create a better civil justice climate include limiting new private rights of actions and reforming how local government entities can commence litigation. Specifically, these reforms can be addressed by:

- Limiting the use of private rights of action for intangible and speculative injuries
- Requiring a clear demonstration of a causal connection between the alleged harm and the alleged misconduct
- Curtailing the use of public nuisance lawsuits
- Disincentivizing localities from bringing a lawsuit

Recommendation 2: Create Efficiency and Transparency of License and Permit Applications

2.1 Examine the coordination of all licenses and permits across governmental layers to determine where duplicative efforts create burden and identify opportunities for standardization

Ohio should explore avenues to create a single-source permitting and licensing system, to reduce administrative burden. Such a system could be housed on the InnovateOhio Platform (IOP), which already offers integrated and scalable capabilities that enable state agencies to become more customer-centric and data-driven. Through coordination between the Ohio Secretary of State, InnovateOhio, varying state agencies, and local government entities, a single-source permitting system will diminish duplicative efforts and save businesses time and money.

2.2 Improve transparency in the application process, with links to direct contact information, timelines for completions at each stage, costs and the number of procedural steps related to each application

Increased transparency not only allows business owners to know exactly if they are compliant with relevant permitting and licensing obligations, but also helps to hold government officials accountable for administering these permitting systems. In partnership with efforts such as Cut Red Tape Ohio and the Common Sense Initiative, increased transparency can also help shine a light on opportunities to reduce complexity.

2.3 Reduce licensing or permitting barriers to entry for those opening or relocating a business to Ohio

As of 2020, Ohio was ranked 47th of 50 states in the Mercatus Center's analysis of state regulatory landscapes. To provide a more competitive business environment while still protecting public health and safety, Ohio policymakers should consider avenues to reduce barriers to entry to new businesses or provide expedited review for those businesses seeking to relocate to Ohio.



LEVER 6: INFRASTRUCTURE

Lever 6 Infrastructure



Creating More Reliable Infrastructure

Best to Worst Indicators



A strong workforce and vibrant businesses are possible only if people have access to essential infrastructure. They need the ability to travel to physical locations, and businesses need reliable internet and electricity to support their operations. Policymakers have a vital role in facilitating this infrastructure both to businesses and, with the rise in remote work, to employees' homes. Although the prevalence of remote work is increasing, the vast majority of Ohioans still need to commute to a physical location to do their jobs requiring safe and reliable options in cities as well as to and from their homes.

Of all the economic levers, Ohio was ranked highest in infrastructure consistently. Ohio jumped from 11th to 2nd between 2021 to 2022 in CNBC's Best States for Business Report. Through the Ohio Broadband Strategy and significant future investment as part of the Infrastructure Investment and Jobs Act (IIJA), Ohio has made, and continues to make, strides in improving access to reliable high-speed internet and broadband in all parts of the state.⁸³ Transportation in Ohio ranked close to the national average, with low rush-hour traffic and commute times improving the score. The rankings also measured the volume of goods shipped, access to markets within a 500-mile radius, availability of vacant land, conditions of drinking water and wastewater, risk of flooding, wildfires and extreme weather.

Ohio now has a unique opportunity and imperative to improve infrastructure as it works to connect people to jobs. Based on the latest estimates, Ohio expects to receive about \$13.5 billion in IIJA funding.⁸⁴ Additional funding is pending further guidance or competitive grants. State strategies to present for competitive IIJA grants will be useful for funding transportation and broadband investments.

Ohio expects to receive about

\$13.5 B in Infrastructure Funding as part of IIJA

The state should advocate for strategic implementation of IIJA funds to enable job growth





Digital divide continues to throttle opportunity

A 2022 analysis by The Ohio State University indicates that approximately one million Ohioans lack residential access to fast, reliable high-speed internet service. This means that approximately 10% of Ohioans are deprived of online access to the modern economic, health, cultural, educational, and social resources enabled via broadband.⁸⁵ According to US Census Bureau data, the number of Ohioans working from home more than tripled from 2019 to 2021 with 14.8%, or more than 1 in 7, reporting that they worked from home in 2021.

In December 2019, the DeWine/Husted Administration released the Ohio Broadband Strategy, a report created with input from business and community leaders that explores ways to provide service to all communities by leveraging Ohio's state assets and resources, encouraging public-private partnerships, and coordinating broadband expansion with economic development initiatives. One of the first initiatives was the creation of the office of BroadbandOhio, charged with implementing the Ohio Broadband Strategy and serving as the point of contact for all broadband projects in Ohio. The office is also charged with identifying high-priority initiatives and ensuring their completion, as well as serving as a liaison among state agencies in order to implement the goals of the state in expanding access. BroadbandOhio also serves as a resource for local governments and private industry as they undergo their own expansion efforts and will leverage federal dollars to further expand broadband in Ohio.⁸⁶

Pursuant to this strategy, in May 2021, the state enacted House Bill 2, creating the Ohio Residential Broadband Expansion Program. The program provides grants designed to offset construction cost hurdles and help facilitate the expansion of high-speed internet and all broadband services to unserved households across Ohio. While this program was originally seeded with \$20 million, shortly after its enactment, it was augmented by an additional \$250 million via the state's operating budget.

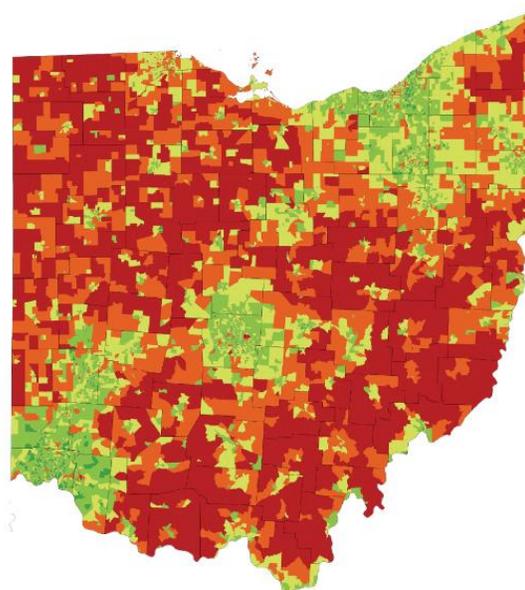
In March 2022, the Administration announced the first round of grant awards from the Ohio Residential Broadband Expansion Grant Program, amounting to \$232 million. The grants will directly and indirectly fund 104 total projects in 62 counties and are expected both to bring high-speed internet to nearly 100,000 households and improve broadband availability to an estimated 230,000 residents.⁸⁷

Over the next four years, Ohio is anticipated to receive over \$1 billion in broadband funds from federal programs - estimates include over \$260 million from the US Department of Treasury's Capital Projects Fund and over \$800 million from the National Telecommunication and Information Administration (NTIA).⁸⁸

Approximately
1 Million Ohioans

lack residential access to fast, reliable high-speed internet service

The number of Ohioans working from home **more than tripled** from 2019 to 2021 with 14.8% (more than 1 in 7) reporting that they worked from home in 2021.



Key: Internet Speeds

0-9 Mbps

10-24 Mbps

25-49 Mbps

50-100 Mbps

100+ Mbps

Source: Broadband Ohio



Digital divide continues to throttle opportunity

There remains considerable work to be completed to fulfill the Ohio Broadband Strategy and maximize federal funds effectively. In order to achieve universal broadband, Ohio faces the challenge to create a grant structure that provides large incentives or subsidies in high-cost, low-customer revenue in areas that are underserved. Lower-cost and/or high-customer revenue areas will only require small subsidies to justify the business case for deployment. These strategies should be informed by local business voices, coupled with expert guidance to help ensure long-term effectiveness. Additionally, in order to accurately create a broadband grant and incentive structure, the state must accurately map all locations that lack adequate service and the unserved and underserved locations and let residents challenge the map if any have been missed.

To prepare for record breaking allocations effectively, broadband providers will need to accelerate current operations while significant workforce shortages and supply chain issues pose threats to erode the impact of increased allocations. State and local governments should be investing in and supporting local broadband and infrastructure workforce development, as they will be essential to effectively implement universal broadband.

Given that multiple infrastructure projects will be accelerated throughout the state, the state should also consider a “Dig Once” or “Build-Once” concept that would significantly reduce the cost to build high-speed fiber-optic infrastructure throughout the entire state. This could include a joint-trench agreement that requires that all providers of broadband services—and in some cases, all utilities—install their infrastructure at the same time, in the same trench or in the same conduit, or a one-touch agreement where the conduit is installed during any relevant government-funded construction project.

Case Study: Michigan ‘Dig Once’ Tool

In March 2021, the Michigan Infrastructure Council released a ‘Dig Once’ tool which enables public and private infrastructure owners to document future construction.



**Ohio is anticipated to receive
Over \$1 Billion
in federal funds for broadband to
unserved or underserved households**

Source:

[Michigan Infrastructure Council Debuts Public and Private Infrastructure ‘Dig Once’ Coordination Tool](#)

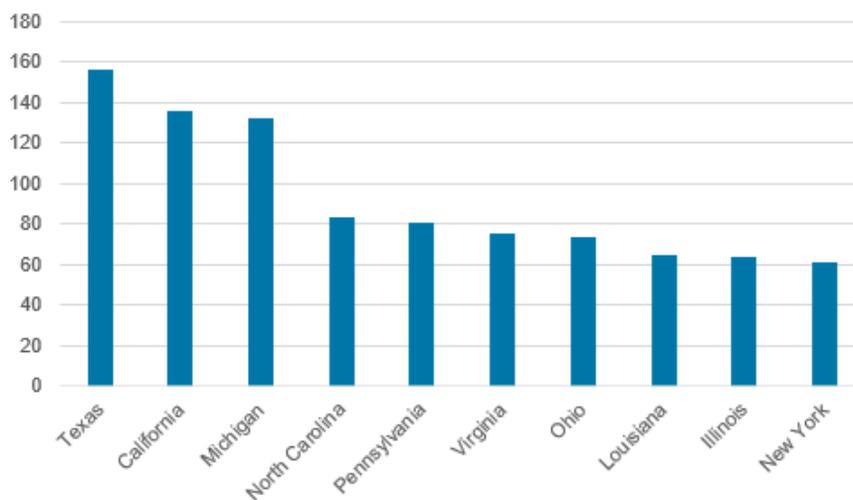


Energy Reliability

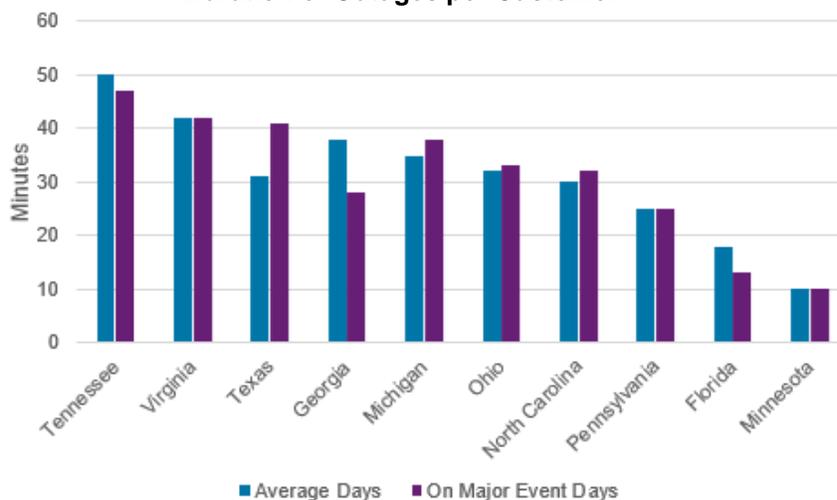
Ohio’s energy infrastructure supports a large consumer demand and performs well in affordability rankings, though its electric reliability and resiliency need improvement. Metrics rank Ohio’s reliability as 40th, due in part to frequent outages and aging infrastructure. Ohio has the seventh-highest number of outages in the nation affecting more than 50,000 people.⁸⁹ These outages are most often caused by severe weather that increases energy demand along with the likelihood of trees/vegetation falling on powerlines. Nationally, 92% of all outages occur along distribution lines (lines between the electric company’s sub-station and consumers). In Ohio, many power lines are more than 50 years old.

- Ohio ranks **7th in the number of outages** affecting over 50,000 people, largely due to weather
- Many portions of the transmission and distribution system are over **50 years of age**
- The total cost of billion-dollar-scale weather outages on businesses amounted to over **\$600 billion** from 2016-2020

Number of Power Outages Impacting at least 50,000 People (2000 - 2021)



Duration of Outages per Customer



Nationally, the total cost of billion-dollar-scale weather outages on businesses amounted to over **\$600 billion** from 2016-2020.⁹⁰

Source: [Electric Utility Performance A State-By-State Data Review, Citizens Utility Board, United States Power Outage Statistics by State.](#)



Ohio consumes more electricity than it generates

On average, Ohio generates

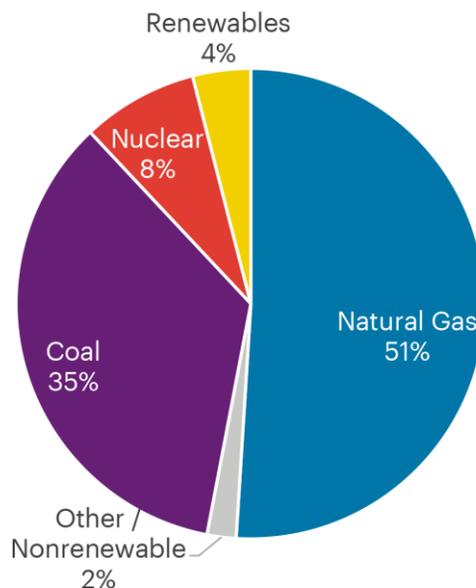
3,186.94
trillion Btu

On average, Ohio consumes

3,404.48
trillion Btu

- On average, Ohio **imports 25%** of its electricity needs.
- PUCO forecasts a **4.32% increase** in electricity needs from 2019 to 2039.
- Industrial sector accounts for **1/3 of consumption**.

Ohio Electricity Generation Capacity by Source



Ohio is one of the top 5 electricity consuming, and one of the top 10 coal consuming states in the nation

Ohio's outages can only be expected to continue as its large population, industrial economy and seasonal temperature variations create demand that exceeds in-state generation. Today, Ohio purchases and imports approximately 25% of its electricity from other states. Additional demand will result from continuous electrification of processes and tools in our daily lives. The expansion of the Silicon Heartland attracting new companies, such as Intel, will also compound the strain on existing infrastructure and in-state generation. As of 2019, the Public Utilities Commission of Ohio (PUCO) forecasted a 4.32% increase in total electricity needs by 2039.⁹¹ An increasing amount of this need is being met by in-state natural gas-fired power generation. Since 2019, new natural gas-fired power generation has provided the largest share of in-state generation.⁹²

Ohio can consider many modern options to increase the capacity of the grid and improve reliability and efficiency. A common infrastructure update that Ohio has already begun is to bury powerlines, making them less likely to sustain damage from weather and animals. Ohio can modernize the grid using cutting-edge technologies, equipment and controls, such as microgrids and battery storage. Doing so will help significantly reduce the frequency and duration of power outages, reduce storm impacts and restore service faster when outages occur.

Ohio is a **top 10 state** for net electricity generation; however, Ohio is also the **second-largest** electricity importer.

Source:
Ohio Long-Term Forecast of Energy Requirements
2021 Report Card for Ohio's Infrastructure
U.S. Energy Information Administration (EIA)



Ohio consumes more electricity than it generates

Microgrids are a distributed energy resource that provides power in tandem with and outside the electrical grid. Microgrids can provide reliable, resilient and affordable electric power to critical infrastructure in a state.⁹³

Battery storage is a technology that can be used as an uninterrupted power source for critical loads, such as servers and medical equipment. It can be a critical component of off-grid systems and help to balance variable generation sources (like solar or wind) by storing excess energy when generation exceeds demand. In times of outages or peak demand, batteries can discharge energy to fill the gap in generation. A growing number of institutions are deploying battery storage systems as a resilient energy solution. Traditional backup power solutions, like diesel generators, are not always sufficient—especially during longer-duration and larger-scale disasters.

As the number of distributed energy resources (DERs), such as solar, continues to increase, there is an emerging pattern of cooperation between utilities and customers. This cooperation is based on the shared value they can obtain from reduced peak demand and system infrastructure costs.⁹⁴ Customer-owned DER programs provide capacity payments to customers who stand by to supplement the grid with storage from their DERs—whether to reduce peak demand or to prevent blackouts and stabilize the grid during an emergency. Energy payments are then disbursed to the customer based on the actual energy they provided during a finite demand response event. Although not a panacea, this kind of modern demand response offers a flexible grid management tool. It is useful for handling variable loads with variable supply and delivers a return on investment for participating customers. Ohio can further promote smart appliances and technology to reduce costs and energy loads. Tax credits, rebates, and business/energy company-led campaigns can incentivize residents to use more energy-efficient tools, leading to lower peak loads on the grid.

Case Study: Illinois Institute of Technology

The Illinois Institute of Technology increased power reliability and saved millions in electrical system upgrades by installing a smart microgrid. To create the microgrid, existing on-site cogeneration equipment, including a 6-MW fast-start, gas-fired generator plus ten standby generators located at various buildings around the campus, were repurposed to operate in “islanding mode.” The power generated on-campus will be sold on the wholesale market to PJM Interconnection, a regional transmission organization.

States evaluating options for DER partnership management

- **Oregon:** Portland General Electric anticipates that in the next decade it expects up to 25% of power needed on peak demand days could come from DERs
- **Pennsylvania:** Pennsylvania began a three-year pilot in January of 2021 to examine the value of the ability for utilities to “actively manage” customer-sited resources like rooftop solar and battery storage
- **Florida:** Duke Energy Florida launched a 749 MW Clean Energy Connection program in April 2022 that will give customers bill credits for community solar participation. Up to 65% of capacity will go to large business customers, 10% to local governments, 25% to residential customers and small businesses, and 28% to low-income customers

Source: [Microgrid Case Study: Illinois Institute of Technology](#)

[By 2030, Portland General sees distributed resources meeting up to 25% of peak demand](#)

[Pennsylvania to be a testing ground for how utilities manage distributed energy](#)

[As conflict rises over utility DER ownership, a Duke Florida program could offer a way forward](#)

[Duke Energy offers community solar program for Florida customers interested in benefits of renewable energy](#)



Energy Infrastructure

Ohio is one of the largest natural gas-producing states in the nation and is also one of the top natural gas-consuming states for commercial and industrial end-users. Despite the large amount of natural gas being produced in the state, many urban areas continue to be underserved due to pipeline constraints, while rural areas remain unserved due to a lack of pipeline infrastructure. Ohio should encourage policies which allow more Ohio-sourced natural gas to be used locally.

The Appalachian Basin spans Ohio, Pennsylvania and West Virginia and contains two shale formations: Marcellus and Utica. The U.S. Energy Information Administration highlights the importance of the region, reporting that “on its own, the Appalachian Basin would have been the third-largest natural gas producer in the world the first half of 2021, behind Russia and the rest of the United States.”⁹⁵ The Utica Energy Alliance reports that between January 2011 and June 2020, there was \$90.6 billion in shale-related investments in Ohio, with oil and natural gas producers in Ohio paying nearly \$850 million in ad valorem taxes directly to local governments and schools. Furthermore, in the first two quarters of 2021, oil and natural gas producers paid more than \$1 billion in royalty payments to Ohio landowners.⁹⁶

Leasing State Minerals

In addition to realizing the full potential of the Utica Shale resources on private lands, leasing state minerals is another way the natural gas and oil industries can contribute to Ohio’s economy. Ohio Revised Code Section 155.31 (A) states, “It is the policy of the state to promote the exploration for, development of and production of oil and natural gas resources owned or controlled by the state in an effort to use the state’s natural resources responsibly.”

According to the Ohio Oil and Gas Association (OOGA), there are approximately 13,000 “Tier I” acres in five major shale-producing counties that are waiting to be leased. Tier I tracts of land are small acreages of state-owned minerals currently in producers’ prospective drilling units and surrounded by their contiguous blocks of acreage. When factoring in market rates for lease bonuses and royalty rates, OOGA believes that Ohio could stand to realize approximately \$200-\$220 million in new revenue from leasing minerals within just Tier I lands. These revenues do not include those that could be derived from “Tier II” acreage, or larger tracts of acreage (in the thousands of acres) that producers might want to eventually lease and would necessitate a competitive bidding process.⁹⁷

In the FY22/23 state operating budget (House Bill 110 of the 134th Ohio General Assembly), numerous revisions were made to Ohio Revised Code surrounding oil and gas leasing and the removal of red tape to improve processes between producers and state government. The Oil and Gas Land Management Commission (formerly named the Oil and Gas Leasing Commission) is now required to promulgate rules for a standard lease form and a surface use agreement (SUA). A SUA is a separate agreement for a producer to negotiate with a lessor that allows them to use the surface of the land, and a producer cannot use the surface unless they first have an executed SUA.

All revenues from leasing will now be deposited into the Commission’s administrative fund as a placeholder, with revenue distribution yet to be determined by policymakers. The leasing of state-owned minerals may also benefit private landowners by spurring development of their minerals, which in many cases has stalled due to the lack of state leasing.

Ohio could stand to realize approximately \$200 - \$220 million in new revenue from leasing minerals just within Tier I lands.



Energy Infrastructure

Policymakers should examine the timetables for leasing of state minerals - upon execution of responsibly negotiated SUAs between the state and producers - and consider earmarking all revenues accrued in the Oil and Gas Land Management Commission's administrative fund to be used as revolving loans or grant funds to be reinvested into Ohio's assorted infrastructures and/or Southeast Ohio. For example:

- Transportation Improvement Districts (TIDs) currently provide funding for transportation projects that promote economic development in terms of job creation, job retention and private sector capital investment. The FY22/23 Transportation Budget (HB 74 of the 134th Ohio General Assembly) provides \$4.5 million in funding each fiscal year of the biennium. TID program funding could be significantly augmented through even a fraction of the revenues realized from state mineral leasing.
- Incentivizing investment in natural gas transmission infrastructure with these funds would also be a logical nexus, particularly if the revenues from the harvesting of these resources provide for additional natural gas capacity in unserved and underserved areas of Ohio.
- In June 2022, the DeWine/Husted Administration enacted House Bill 377, which created Ohio BUILDS, a \$500 million program to infuse funding into Appalachian communities in 32 Ohio counties. The program's three priorities involve restoring historic downtowns, improving community health and rebuilding the local workforce. State minerals lease revenues could easily be used as a dedicated revenue source to continue these critical economic investments throughout Southeast Ohio.

Energy Production

Reductions in foreign oil imports due to global unrest, coupled with rebounding demand in the wake of the U.S. economy's recovery from the pandemic, have decreased energy supply and increased costs. Ohio residents feel this pain at the gas pump, at the grocery store and on their monthly electric bill. In response to inflation, many Ohioans and lawmakers have vocally pushed for greater energy independence by leveraging all of Ohio's abundant and diverse energy resources.

When energy projects are sited in Ohio to meet Ohio companies' energy needs, particularly renewable energy generation projects, there are multiple economic development benefits that flow to local communities often in need of new economic development activity. Increased energy supply lowers prices, reducing the cost of doing business in Ohio. Energy choice is also enhanced, and plant owners hire workers in construction, operation, and maintenance. Energy generation resources directly inject significant tax revenue into local jurisdictions and schools, without creating additional strain on local services. In this way, as Ohio companies increase their investment in local energy generation, they are also spurring new economic activity into Ohio's rural economies. The Ohio Chamber has publicly advocated for an "all of the above" approach to energy policy that does not hinder Ohio's ability to develop any of its abundant and diverse energy resources. The Ohio Chamber, policymakers and other stakeholders should continue to encourage the Ohio Power Siting Board to support a balanced approach to the siting process which listens to the interest of local communities while also not stifling economic development and the crucial need for domestic, safe, reliable and affordable energy.





Needs for renewable energy are increasing

Increased need will likely result in Ohio purchasing more renewable energy from outside the state

Nationally, states consume an average of 11.2% of their energy from renewable sources. In Ohio, that number is 3%—a metric that lowers the state's ranking in energy availability.

70%

of Ohio's 24 **regional planning commissions** have publicly noted an interest in renewable energy or environmental sustainability plans.

72%

is the average target for renewable energy sources for **13 cities** by 2027.

80%

is the average renewable energy or GHG reduction goal among **60 large companies** and non-governmental organizations. Nearly **60% are headquartered in Ohio**, with many listing 2025 or 2030 for their goals.

Intel's 2030 Energy Commitment

"Achieve 100% renewable energy use across global manufacturing operations"

Payment in Lieu of Taxes (PILOT)

Ohio's PILOT (Payment in Lieu of Taxes) was originally created in 2010 under Senate Bill 232 to spur renewable energy development and bring significant additional tax dollars to Ohio's communities. The permissive mechanism gives counties an option to determine how to tax renewable energy projects. Under the statute, renewable energy developers remit to the county a fixed annual amount per megawatt payment in lieu of real and personal property tax. This payment enables developers whose projects meet certain conditions to avoid excessive property tax liability. For solar projects in particular, the following requirements must be met:

- Employ at least 80% Ohio-domiciled employees in construction
- Repair roads, bridges, and culverts affected by the construction
- Provide training to local first responders
- Coordinate with an Ohio university of apprenticeship program to establish an educational/training program

In Ohio's FY22/23 operating budget (House Bill 110 – 134th Ohio General Assembly), the state extended the PILOT statute by two years. The law now sunsets at the end of 2024.

Source:

[Study gathering data on interest in, or expressed willingness to site, renewable energy sources in Ohio \(2021\)](#)

[Intel Announces Next US Site with Landmark Investment in Ohio](#)

[Utility Scale Solar Development](#)

[Ohio General Assembly Extends County's Option to Grant "Payment in Lieu of Taxes"](#)



Transportation

Even with remote work on the rise, the vast majority of Ohioans still need to commute to a physical location to do their jobs. While the state provides shorter commutes to work and low rush hour traffic compared to the national average, national rankings denote that low public transportation usage may indicate limited access to transportation, which causes a barrier to residents trying to connect to jobs, healthcare and other resources.⁹⁸ Public transit riders have significantly declined in major urban areas including Cincinnati, Cleveland and Dayton, highlighting the transit impact of urban sprawl and de-densifying of Ohio's largest cities.⁹⁹ Compounding the issue, public transit options, both fixed and paratransit, continue to rebound from decreased ridership, staff retention issues and fiscal concerns due to COVID-19.¹⁰⁰ Of the 70 public transit agencies in Ohio, 63 of them serve rural and suburban counties.

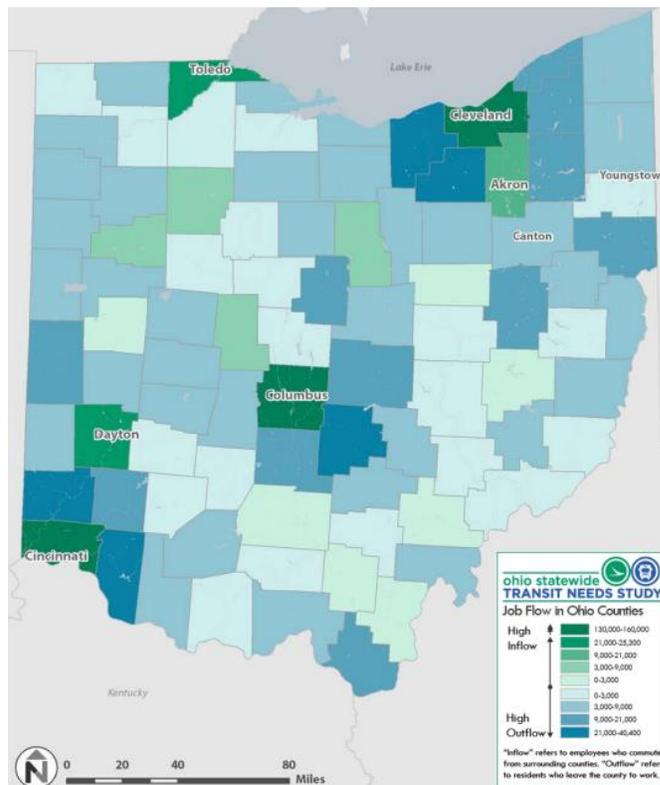
In the most recent state transportation budget (House Bill 74 – 134th Ohio General Assembly), Ohio increased public transit General Revenue Fund support by \$13.85 million each fiscal year, bringing total GRF appropriations to \$37 million per fiscal year or \$74 million for the biennium. This is in addition to Federal Highway Administration (FHWA) “flex funds” and federal transportation dollars already included in the budget. While there was significant separate infusion of federal CARES Act funds into public transportation, those funds were one-time dollars that assisted with pandemic-related expenses like capital purchases, fare suspensions, deep cleaning of vehicles multiple times a day, Personal Protective Equipment procurement, and the running of more routes and more vehicles due to reduced capacity for social distancing. The FY22/23 state transportation budget also allows the Director of the Ohio Department of Transportation to request a reduction of \$13 million in FHWA flex funding for transit if the additional federal funds received by transit entities are able to be spent for non-COVID expenses.

Overall, public transit spending in the FY22/23 transportation budget amounted to approximately \$221.4 million for the biennium (\$74 million/biennium GRF dollars, \$66 million/biennium in FHWA flex funds, and \$81.4 million/biennium in Federal Transit Administration pass-through dollars). This was a substantial increase in public transit funding over the total appropriations for the FY20-21 biennium, which were \$193.7 million following across-the-board budget reductions of 20% in 2020.¹⁰¹

Besides connecting people to jobs, limited access to transportation makes it difficult to access food, education, healthcare services and social activities further limiting economic opportunity and reducing the available workforce.

As the workforce shortage intensifies and workers continue to move to suburban communities, employer-led transportation solutions will become more viable and necessary to recruiting.¹⁰² Such options may include park-and-go strategies, offsite parking and shuttles, free or reduced fees for transit by employers and engaging public-private partnerships with government or rideshare organizations.

- **~63% of jobs** in the 3C's take **more than 90 minutes to reach** from low-income neighborhoods via transit.¹⁰³
- Ohioans who take public transportation spend an extra **75.9% of their time** commuting.¹⁰⁴
- About **47%** of Ohio's workforce works outside of the county in which they reside.¹⁰⁵
- **Counties that import the most workers** from surrounding counties include:
 - Cuyahoga (Cleveland)
 - Franklin (Columbus)
 - Hamilton (Cincinnati)
- **Counties that export the most workers** to surrounding counties include:
 - Lorain (west of Cleveland),
 - Clermont (east of Cincinnati),
 - Medina (south of Cleveland),
 - Butler (north of Cincinnati),
 - Fairfield (southeast of Columbus).



Source: ODOT Transit Needs Report



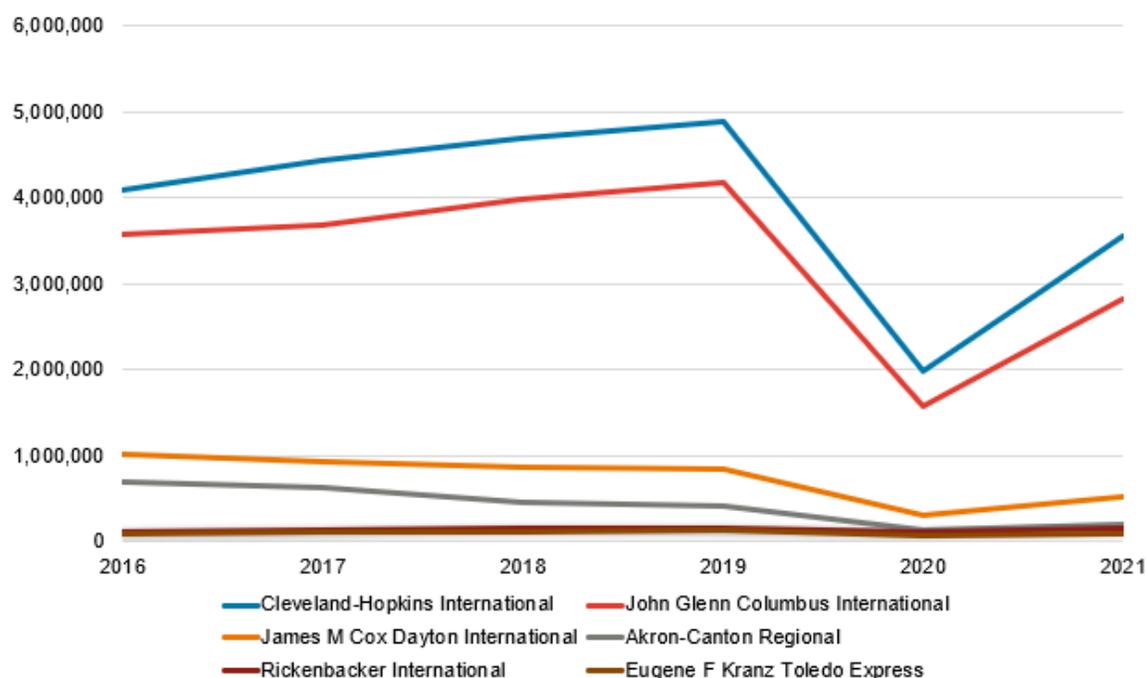
Ohio airport capacity has remained steady for the past 5 years

Transportation by air is also predicted to attract people to move to, and stay in, Ohio. Greater numbers of direct flights encourage economic activity through ease of access to state businesses and amenities. Airports provide over \$16.5 billion to Ohio in total economic output. Ohio is expected to need more than \$800 million for their airports between 2021 and 2025.¹⁰⁶ This investment is necessary to address needed infrastructure upgrades and accumulating debt. If Ohio anticipates increased workforce and resident numbers, an effort to improve airport capacity and direct flights will be vital to facilitate trade, tourism, connectivity, access to capital, and spur economic growth.

Based on number of passengers served from 2020 to 2021, among 478 Commercial Service Airports, those in Ohio decreased in rankings:

- Cleveland-Hopkins **44** → **46**
- John Glenn Columbus **50** → **51**
- James M Cox Dayton **110** → **113**
- Akron-Canton **110** → **113**
- Columbus – Rickenbacker **184** → **195**
- Eugene F Kranz Toledo **212** → **223**

Number of Passengers in Ohio Airports



If Ohio anticipates increased workforce and resident numbers, an effort to improve airport capacity and direct flights will be vital



A case study of Intel's transportation implications

From a logistics standpoint, Ohio is well-positioned, as its highway system places the state within a 10-hour drive of approximately half of the U.S. population, and a one-day drive from 60% of the population of the U.S. and Canada. The 11-county Columbus region alone is now the 11th largest distribution center in the United States, with scores of fulfillment centers and warehouses aided by the presence of Rickenbacker International Airport and 84,000 Central Ohio workers in the logistics industry.

The decision by Intel to locate its semiconductor manufacturing operations in Licking County will also pose broad transportation and logistical challenges. The company has announced its intent to source supplies and resources from 140 existing Ohio companies, with 25 to 30 new Ohio companies expected to emerge because of Intel's presence. While these Ohio-based companies have yet to be identified as of September 2022, it will be necessary to ensure their freight corridors to and from Intel are safe, timely and expansive enough to accommodate their routes without impeding other commercial or residential traffic.

One example of this looming problem involves U.S. 23, the primary route between Columbus and Toledo. According to a feasibility study by the Ohio Department of Transportation (ODOT), truck traffic in the area between the Village of Waldo in Marion County and I-270 in Franklin County is expected approximately double by 2050.¹⁰⁷ The congestion along this area is attributable to nearly 40 traffic signals that not only lead to delays for through traffic and freight but are also the only signals between I-270 and Toledo. Seven concepts for a fully free-flowing connection were developed and analyzed in the study, which concluded that none of them could be reasonably implemented in the immediate future. ODOT noted, however, that improvements to the existing U.S. 23 corridor would positively impact tens of thousands of drivers daily and plans to strategize ways to alleviate specific safety and congestion issues along U.S. 23 between Waldo and I-270.

U.S. 23 is one of several routes that connect to the I-270 outer belt, which, in turn, connects to State Route 161, the fastest route from Columbus to Licking County and the future Intel site. The 161 corridor has two lanes in both directions and presently sees roughly 40,000 cars daily. In June 2022, state officials approved \$13 million spread out over fiscal years 2022 and 2023 to widen SR 161 by one lane in either direction between I-270 and Route 62. The Mid-Ohio Regional Planning Commission expects project construction to commence by 2023, finish the following year, and cost \$65.8 million.¹⁰⁸

As transportation improvements are made in the direct vicinity of the Intel site, such as those to SR 161, policymakers should be mindful of the assorted highway bottlenecks leading from other regions of the state to Central Ohio and, ultimately, the Intel site in Licking County. Identifying and improving these arteries should be an imperative for policymakers and will help drive growth among the 140 Ohio-based Intel suppliers.

It will be necessary to ensure Ohio supplier freight corridors to and from Intel are safe, timely and expansive enough to accommodate their routes without impeding other commercial or residential traffic.





Infrastructure Recommendations

Recommendation 1: Improve Energy Transmission and Distribution Systems

1.1 Harden the grid to offer quick recovery in the face of weather and peak demand

- 1.1.1 Upgrade existing infrastructure, including the use of cutting-edge technologies, equipment and controls, such as microgrids, batteries and smart grids
- 1.1.2 Explore allowing investor-owned utilities to deploy DERs to provide maximum grid stability and flexibility to control loads during peak demand
- 1.1.3 Improve statewide energy efficiency with programs promoting smart appliances and technology to save costs and reduce energy loads
- 1.1.4 Create regulatory certainty for renewable energy generation, particularly at the siting process, which balances the interests of economic development and local input
- 1.1.5 Make permanent Ohio's PILOT (Payment in Lieu of Taxes) statute, which has been extended numerous times since its inception in 2010

1.2 Improve access to natural gas in constrained urban and rural areas to meet current needs and demands for future growth

- 1.2.1 Examine how renewable natural gas can help meet business sustainability goals
- 1.2.2 Incentivize investment in natural gas transmission infrastructure to provide additional capacity in unserved and underserved areas
- 1.2.3 Revisit Ohio's "used and useful" standard to determine its cost impact on consumers and to best enable economic development projects
- 1.2.4 Consider earmarking all revenues accrued in the Oil and Gas Land Management Commission's administrative fund to be used as revolving loans or grant funds

1.3 Increase and diversify electric generation in Ohio to support consumption needs

Recommendation 2: Advocate for Transportation Improvements

Advocate for strategic implementation of IIJA funds to enable job growth.

2.1 Hold a statewide roundtable with Ohio transportation/transit agencies to understand and prioritize areas of opportunity and infrastructure-based needs

Partner with the Ohio Department of Transportation, transit agencies, cities and major employers to explore Smart Mobility Options for reducing roadway congestion and connecting employees to jobs. Focus on opportunities to support intercounty/agency transportation between locations with concentrated citizen or employment populations. To achieve meaningful change, more open dialogue with Ohio transportation and transit agencies is necessary to understand opportunities and needs that serve both residents and businesses.

2.2 Advocate for airport capacity expansion and direct flight offerings to increase access to businesses and employees

Policymakers should pursue strategies in conjunction with airport authorities to increase direct flights to high-value destinations, maximizing capacity at Ohio's airports not only for business travel, but also for tourism and attraction to our state. JobsOhio's recent efforts to incentivize airlines to establish direct flights from Ohio's airports to international destinations will place Ohio in the spotlight for businesses that may previously have struggled to connect with opportunities to expand their footprint or relocate a company.

2.3 Explore innovative, cost-effective ways to better connect rural and suburban residents to economic centers

Transportation is often cited as a barrier to employment for those discouraged from entering or re-entering the workforce. As Ohio's economic landscape continues to shift in the years ahead, businesses and regional transit agencies should pursue innovative solutions that connect available workers with employment opportunities where they exist. Transportation limitations impede Ohioans' access not only to employment, but also to food, education, healthcare services, and social activities, further limiting economic opportunity.



Infrastructure Recommendations

2.4 Educate the business community on employer-led transportation options

Such options may include park and go strategies, offsite parking and shuttles, free or reduced fees for transit by employers and engaging public-private partnerships with government or rideshare organizations.

Recommendation 3: Improve Broadband Access

State and local governments should be investing in and supporting local broadband and infrastructure workforce development, as it will be essential to effectively implement universal broadband and prepare for record-breaking infrastructure allocations effectively.

3.1 Continue making progress in the Ohio Broadband Strategy

In implementing federal broadband programs, Ohio should create a grant structure that provides large incentives in high-cost, low-customer revenue in areas that are underserved. These strategies should be informed by local business voices, coupled with expert guidance, to help ensure long-term effectiveness. The state must accurately map all locations that lack adequate service and let residents challenge the map if any have been missed, especially those areas with significant potential for small business and economic growth due to broadband access.

3.2 Identify funding opportunities to improve/update broadband infrastructure

The state should continue to assess and address additional physical barriers impeding broadband access. Terrestrial plant construction alone can involve miles of aerial or underground plant, splicing, the installation of equipment, make-ready work on poles, potential horizontal boring and the burying of plant or running wires through underground conduit. At minimum, providing funding to assist with the replacement of outdated poles or construction of new poles will give equal footing to all broadband providers to expand their infrastructure in unserved areas – even those not participating in the Ohio Residential Broadband Expansion Program.

3.3 Provide grants to assist homeowners with individual line extensions

The state should provide grants to assist homeowners with individual line extensions. Many homes, particularly in rural areas of the state, are situated a significant distance from the pole line which necessitates thousands of dollars in construction costs to deliver service up to the actual residence. While many homeowners are able to negotiate down these costs by performing their own trenching or erecting facilities, these costs remain considerable and often prohibitive.



CONCLUSION

Conclusion

The Ohio Chamber of Commerce operates with a simple and compelling vision: Making Ohio the best place in which to do business anywhere in the world. At the core of its mission, the Ohio Chamber of Commerce is dedicated to promoting pro-business policies and to advocating for growth to benefit all Ohioans. We undertook this study to help identify ways to improve Ohio's business climate.

This study will serve as the basis for a 10-year legislative agenda. We feel that it highlights key areas of opportunity that will create positive change for businesses throughout the state. We have taken a data-driven approach and have worked to understand the driver of national business rankings.

The Chamber intends to build upon this work with additional research studies and by turning recommendations into legislative proposals. We will advocate for the solutions presented in this document with policy makers and executive administrations over the next 10 years.

Progress towards these goals will be recorded and will include periodic updates and reports to policymakers across Ohio and to the broader business community.

Levers

Education & Workforce



Sense of Place



Taxes and Costs



Innovation & Collaboration



Business Friendliness



Infrastructure



With your support, we will improve our business climate and grow our economy for the benefit of all Ohioans





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