Massachusetts Taxpayers Foundation

SEPTEMBER 2024

MASSACHUSETTS COMPETITIVENESS INDEX REPORT

IN PARTNERSHIP WITH

UMass Amherst Donahue Institute Economic and Public Policy Research

WITH SUPPORT FROM

MACP MASSACHUSETTS COMPETITIVE PARTNERSHIP

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A NOTE FROM THE MASSACHUSETTS TAXPAYERS FOUNDATION

The success of Massachusetts' economy has historically been driven by a number of key strengths: a strong quality of life, an educated and engaged workforce, and economic sectors that adapt to changing conditions and are at the vanguard of innovation. However, these strengths are no longer as unique to Massachusetts, nor are they guaranteed to continue in perpetuity; and in recent years, national demographic shifts and increased mobility for people and employers have threatened to degrade Massachusetts' competitive edge when attracting residents, businesses, and investment.

There is broad consensus that Massachusetts needs to compete – with other regions, states, and countries – in order to succeed. But the questions remain: what factors determine our competitiveness and what states pose the largest threats to our economic success?

Some may argue that competitiveness is about the affordability and availability of housing, or the relative levels of individual and corporate tax; others argue that it is about the quality of our workforce or the costs of childcare.

The reality is that no one factor determines our ability to compete, and any assessment of competitiveness must encompass a range of factors that speak to economic health, population and labor force, business and investment decisions, and quality of life. To that end, the MTF Competitiveness Index compiles 26 different metrics, organized by category, that clearly and concisely measure how Massachusetts stacks up.

The Index, compiled with researchers at the University of Massachusetts Donahue Institute and with support from the Massachusetts Competitive Partnership, also tackles another complicated question: with whom are we competing? At a certain level, we compete with all other states, and so for each metric, our national ranking is presented. However, for many of the metrics that matter most, our competition is more targeted. We compete with the states most likely to offer alternative destinations for people, businesses, and investment.

Often, that competition is local, so the Index also ranks us among New England states. But perhaps most importantly, we are competing economically with a subset of states that offer many of the same attractions as Massachusetts. We identify Massachusetts' Key Competitor states as the non-New England states to whom Massachusetts lost the most jobs to in 2022: California, Florida, New York, North Carolina, and Texas.

By ranking Massachusetts with these Key Competitor states, the Index offers a quick and accessible guide to how we stack up on the competitiveness issues that matter most.

The purpose of the Index is not to provide a single score or ranking for Massachusetts to be used without context. The purpose of this annual Index is to provide an ongoing, consistent measure of how Massachusetts is performing compared to others and ourselves in critical aspects of competitiveness. Using publicly available, relevant data, and presenting information in a consistent and clear format, we want to provide a resource that can be used by policymakers, businesses, civic leaders, and the public to inform decisions and evaluate the impact of policy changes.

If Massachusetts is going to be serious about improving our competitiveness and enhancing what our state offers to residents and employers, we need to start with a shared understanding of where we stand and where we want to go. The first annual MTF Competitiveness Index provides a starting point for the work that will continue in years to come.

Sincerely,

Douglas Howgate
President, Massachusetts Taxpayers Foundation

MASSACHUSETTS COMPETITIVENESS INDEX 2024

The strength of the Massachusetts economy has long relied on a symbiotic relationship between its highly educated workforce and its largest economic sectors. This dynamic has led to a productive economy, which for years, enhanced the state's appeal for families, businesses, and investment. However, there are clear and growing threats to the state's competitiveness: Massachusetts' labor pool has declined compared to 2019 and the costs of locating in Massachusetts, for residents and employers, are increasing in real terms compared to other states. In short, our competitive strength is talent and our weakness is cost. **The basic question for policymakers is clear: in a post-pandemic world, can we keep and attract talent or will high costs and fewer barriers to economic mobility result in Massachusetts losing its competitive edge?**

Creating the Competitiveness Index

Over the course of this report, MTF will present an in-depth look at Massachusetts' competitiveness by examining 26 metrics organized into four categories: Economic Health (5 metrics), Population and Labor Force (8 metrics), Business, Employment, and Investment Factors (6 metrics), and Resident Life (7 metrics).

Massachusetts ranks in the bottom 10 of all states in about 40 percent of competitiveness metrics, and among those poorly performing metrics two themes are apparent: cost and location. From business taxes, energy costs, and childcare, to housing, and the length of workers' commute times, Massachusetts is asking more from its residents than the vast majority of other states.

Massachusetts ranks in the top 10 of all states in just over 25 percent of the metrics, with high scores for educational attainment, wage and productivity, health, and our ability to attract international immigrants. These strengths speak to the state's longstanding recipe for economic competition: a positive feedback loop between an educated populace, industries that rely on highly skilled labor, and a strong quality of life.

These big-picture weaknesses and strengths are not new, **but mobility of talent and investment, combined with an aging population, pose new and emerging threats to Massachusetts' competitiveness.** In 2023, Massachusetts ranked 45th in the nation for domestic out-migration. Combine this with the fact that Massachusetts has experienced the third largest decline in its labor force since 2018, and the increasing stakes of competition for talent become clearer.

Identifying Massachusetts' Competitors

Assessing those stakes and Massachusetts' current position requires more than just a national outlook. **We need to provide policymakers and the public with a scorecard that shows Massachusetts in comparison to the states with whom we are in the most direct competition.** For this analysis, we focus on two cohorts:

Cohort	Definition	Competitors
Economic Competitors	Non-New England states with the biggest MA job outflows	California, Florida, New York, North Carolina, Texas
Geographic Competitors	New England states	Connecticut, Maine, New Hampshire, Rhode Island, Vermont

Each metric includes comparisons with these ten competitor states to provide a more relevant diagnostic for policymakers on where Massachusetts stands in the competition for talent and investment. Among its economic competitors, Massachusetts ranks last or second to last in 12 of the 26 metrics. In seven cases, these metrics relate to cost, while in three others, they relate to population and economic growth trends. **Massachusetts ranks at the bottom (last or second to last) in five of the six Business, Employment, and Investment factors reviewed in this Index.**

Business, Employment, and Investment Competitiveness Rankings

Metric	National Rank	Competitor Rank
R&D Funding as a Share of Gross State Product	2	1
Average UI Tax Amount per Covered Employee	43	6
Energy Cost	48	5
Corporate Income Tax Collections per Capita	40	5
Health Insurance Paid by Employer	36	5
Business Formations per Employer Business	35	6

As businesses consider where to expand or grow employment in a post-pandemic economy, Massachusetts' struggle to measure up to similar economies in terms of core cost drivers will continue to impact the state's economic outlook.

Massachusetts' Relative Progress

This Index not only provides a benchmark for the Commonwealth against other states but also benchmarks Massachusetts against itself. As the state implements policies that, either intentionally or unintentionally, affect our competitiveness, a critical measure is whether Massachusetts is improving or taking a step back compared to itself. For each metric, this Index tells the reader how the Massachusetts measure has changed over the past year (or another relevant time-period). This self-assessment is particularly important when looking at our historic strengths and the longer-term changes in our labor force.

Massachusetts continues to build on its strength as a well-educated state. Between 2018 and 2022, Massachusetts' share of the population 25 or older with a Bachelor's Degree increased by more than two percentage points, an impressive achievement given that Massachusetts is already ranked first among all states in this metric. Continued growth in this area is essential if Massachusetts is to attract high-wage jobs in emerging sectors.

The size of the Commonwealth's labor force provides a more sobering look at how Massachusetts is changing over time. Between 2018 and 2023, the state's labor force shrunk 2.4 percent. This statistic has the most profound public policy implications among all the metrics presented in this Index. If the state's labor force shrinks, it will not be able to support a growing economy. **Arresting the long-term labor force decline has to be job one for policymakers looking to ensure the future success of the Commonwealth.**

Creating a Starting Point

This Index provides a wealth of policy-relevant information on where Massachusetts stands in the current competitiveness landscape. Just as importantly, it establishes a starting point to measure our progress in the years to come. So many policies implemented over the past legislative session have been adopted because they are purported to improve our competitiveness. Given that, we must have a way to assess if we are moving in the right or wrong direction, and if we are moving fast enough. By capturing a holistic set of indicators that relate to our talent, quality of life, or costs, we can better understand what we are doing well and where we are falling short.

This first Index suggests at least five key areas for policy focus:

1) Create a competitiveness roadmap

By comparing Massachusetts to its biggest competitors for jobs, we can see consistent strengths and weaknesses, as well as orders of magnitude. While it may not be surprising that Massachusetts lags competitor states in terms of energy costs, it is notable that our costs are 17 percent higher than in New York, let alone more than double the cost of North Carolina or Texas. As we consider policies in Massachusetts, maintaining a sense of how our changes will affect us relative to competitor states is essential.

2) Stem outmigration

The rate of domestic outmigration in Massachusetts, compared to competitor states, is incompatible with long-term economic growth. Just as concerning, the outflow is more highly concentrated among wealthier residents. Massachusetts has always been reliant on taxes from high-wealth residents to support state government and that reliance has never been higher than after the passage of the income surtax. Losing high-wealth residents poses a clear and present economic and public finance threat to the Commonwealth.

3) Grow the labor force

Massachusetts has a productive economy, but economic growth cannot continue with a stagnant or shrinking labor force. A smaller labor force does not just put pressure on our existing economy but makes it less likely that businesses will look to Massachusetts to start or expand their operations. Rather, they will choose locations where they can be more confident they will find the workforce they need.

4) Incorporate cost considerations into policy conversations

Cost pressures are acting like a vice on the Massachusetts population. For lower-wage families, the cost differential in Massachusetts for housing and childcare, to name two, can spur relocation, while at the same time, higher-wealth families are more likely to leave Massachusetts than any other income group. Either of these trends would be a threat to Massachusetts, and combined they are a crisis and speak to the need to reduce cost differentials between Massachusetts and other states.

5) Foster and support the relationship between our education system and the economy

Massachusetts competes with other states with two major advantages: the most skilled workforce in the nation and a concentration of high-wage, high-knowledge industries. But in a more mobile world, we need to be more proactive than ever to ensure we keep and enhance these advantages.

Biggest Competitive Strengths

Metric	National Rank	Economic Competitor Rank
Population 25 Years and Over with a BA or More	1	1
8th Grade Math Test Scores	1	1
Average Weekly Wage	1	1
Gross State Product Per Capita	2	2
R&D Funding as Share of Gross State Product	2	1
International Migration	2	2
Life Expectancy at Birth	4	1

Biggest Competitive Weaknesses

Metric	National Rank	Economic Competitor Rank
Five-Year Labor Force Change	48	6
Income Inequality	48	5
Energy Cost	48	5
Cost of Living	47	5
Commute Time	47	5
Childcare Costs	47	6
State and Local Tax Collections Per Capita	46	4
Housing Cost Burden	45	3
Domestic Migration	45	4
Average UI Tax Amount Per Covered Employee	43	6

ECONOMIC HEALTH

Economic Health examines economy-wide, high-level measures that impact a broad range of people and businesses. These macroeconomic concepts offer insights into the general prosperity and cost of living in a state. For instance, measures in this category provide estimates of relative economic activity (gross state product per capita) and compare states' number of businesses per capita. Additionally, this category compares states' levels of income inequality (the GINI index), as well as average wages, and price levels, which allow measurement and comparison of the overall cost of living. Theoretically, this category speaks to some of the more evergreen fundamentals of state economies.

The economic health metrics presented in this Index portray a few different stories about Massachusetts. **First, and foremost, Massachusetts has one of the most efficient economies in the nation, as measured by gross state product per capita.** Second to only New York, Massachusetts produces more than $86,000 per resident. This productivity is a strength of our economy – if Massachusetts were a country, it would rank in the top ten worldwide – and speaks to a high level of economic output.

Massachusetts also had the highest average weekly wage among all states in 2022. Combined with GSP per capita, this paints the picture of a state with a strong standard of living and a concentration of job sectors that provide attractive jobs and support high wages.

Average high wages are a good thing for the state economy, but they also imply high costs, which are borne out by the fact that the state's Regional Price Parity (a measure of cost of living) ranks 47th in the nation, with costs in the state exceeding the national average by close to ten percent. Not surprisingly, the biggest outliers for cost in the state are housing and utility costs – two of the biggest factors impacting residential and business location choices. Of greatest concern, the gap between Massachusetts and the rest of the country is growing. Since 2018, the state's Regional Price Parity has grown by more than 2 percentage points, meaning that as barriers to relocation have eased, the relative premium for living in Massachusetts has increased; a bad combination.

The impact of rising costs in Massachusetts is more significant than might be expected because Massachusetts also has significant income inequality, with a GINI index that ranks second worst in the country. Therefore, while average wages are high, the high costs in the state, especially housing, are increasingly unaffordable for many residents and can increase pressure on individuals to relocate who are at the lower end of the income spectrum. As we will see in later categories, this is happening at the same time that a record number of wealthy residents are leaving the Commonwealth for other states.

Having a productive, high-wage economy is a strength for Massachusetts and speaks to key elements of our economic success. **However, an increasing cost differential between Massachusetts, its competitors, and the rest of the nation is a major competitive disadvantage in attracting and retaining residents and employers.**

GSP PER CAPITA

Gross state product (GSP) represents the total value of goods and services produced in a state – the size of a state's economy. It is presented on a per capita basis in order to make comparisons that account for differences in state population size. A rank of 1 means that a state has the highest GSP per capita in the country. GSP per capita is fundamental to a state's competitiveness because it captures the total productivity of a state's economy and its workforce.

National Ranking - MA 2nd

MA 2nd $86,550
NY 1st $89,641

Massachusetts ranks 2nd in the country for its GSP per capita.

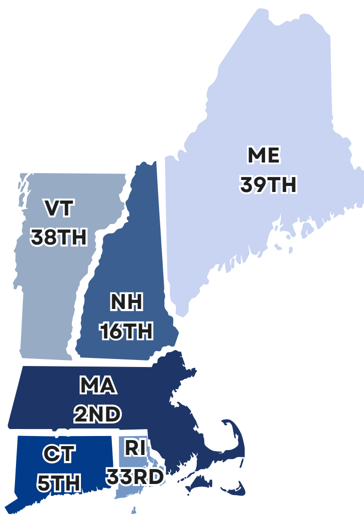
How MA is Changing

Current Data Trend

2021 Value: $84,656

The GSP per capita has gone up since 2021.

Regional Snapshot



Main Takeaways

- GSP per capita is a major competitive strength for MA nationally, regionally, and among competitor states.
- MA not only beats 4 out of 5 competitors in this metric, but exceeds TX, NC, and FL by at least 35 percent.
- Since the pandemic, MA's GSP per capita has recovered from a temporary dip and the increase has outpaced population growth, which speaks to the state's economic productivity, largely due to our concentration of high-wage, high-skill industries.
- However, GSP per capita can mask challenges in labor force size, because a growing economy with fewer workers can improve this metric.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
NY	1st	$89,641	3%	7%
MA	**2nd**	**$86,550**	**2%**	**11%**
CA	4th	$81,132	1%	14%
TX	18th	$64,070	1%	8%
NC	32nd	$56,943	1%	7%
FL	35th	$54,772	3%	12%

MA and selected competitor states ordered by rank. Most recent available is 2022. Rank is based on 2022 value.
Source: Bureau of Economic Analysis, Gross State Product; U.S. Census Bureau, Population Estimates Program.

AVERAGE WEEKLY WAGE

Average weekly wage is a Bureau of Labor Statistics (BLS) statistic intended to cover all industries, and this metric presents wages in 2023 dollars. A rank of 1 means a state has the highest average weekly wages across all industries. Average weekly wage is a fundamental measure of economic health and competitiveness because it speaks to the composition of a state's economy and the skills of its labor force. However, it also potentially speaks to the cost structure in a state.

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National Ranking - MA 1st

MA 1st
$1,785

Massachusetts ranks first in the country for its average weekly wages.

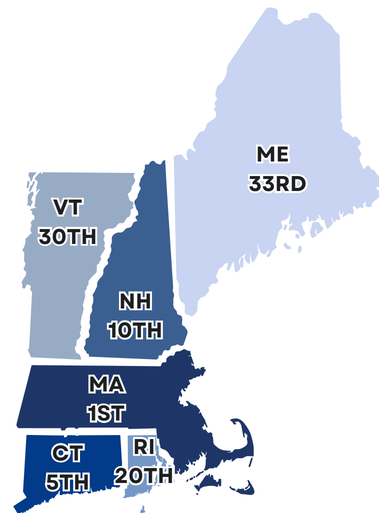
How MA is Changing

Current Data Trend

2018 Value: $1,704

The average weekly wage has gone up since 2018.

Regional Snapshot



Main Takeaways

- Average weekly wage is a major competitive strength for MA. It indicates a strong mix of high-wage economic sectors and a skilled labor force.
- Among competitors, MA's weekly wages are closely aligned with NY and CA, far higher than those of TX, FL, and NC.
- However, the high wages in MA also indicate a competitive risk: cost and affordability. As workers are more mobile, both people and employers may look to other states to reduce labor and other costs.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
MA	**1st**	**$1,785**	**-7.5%**	**4.4%**
NY	2nd	$1,780	-0.6%	7.8%
CA	3rd	$1,678	-3.9%	4.7%
TX	13th	$1,384	-4.5%	4.0%
FL	22nd	$1,267	-0.3%	5.5%
NC	23rd	$1,257	-0.9%	2.0%

MA and selected competitor states ordered by rank. Most recent available is 2022. Rank is based on 2022 value.
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Dollar amounts adjusted to 2023 values using the BLS Consumer Price Index.

REGIONAL PRICE PARITY (COST OF LIVING)

Regional price parity captures cost of living by measuring the differences in price levels across states for a given year. The values are expressed as a percentage of the overall national price level, meaning that a state with a price parity of 110 percent is 10 percent more expensive than the national average. A rank of 1 means that a state has the lowest cost of living. Cost of living is key to competitiveness because people and businesses are more likely to locate in regions where they can afford and prosper. The importance of cost of living is likely even more pronounced as remote work and job location flexibility have increased.

National Ranking - MA 47th

MA 47th 109.4%

AR 1st 86.6%

Massachusetts ranks 47th in the country for its cost of living.

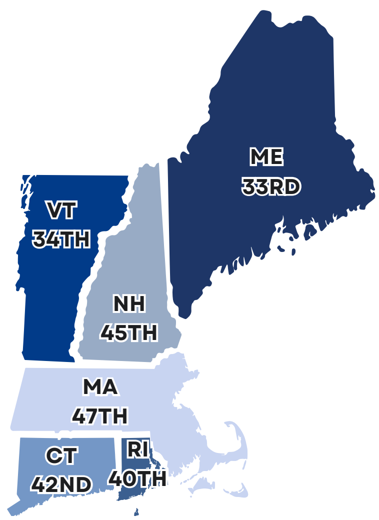
How MA is Changing

Current Data Trend ↑

2018 Value: 107.2%

The Regional Price Parity has gone up since 2018.

Regional Snapshot



Main Takeaways

- Cost of living is a major competitive disadvantage for MA, ranking near the bottom nationally and better than only CA among competitor states.
- It is 9 percent more expensive to live in MA compared to the national average, and 15 percent more expensive than in competitor states, like NC.
- Housing and utility costs are the biggest drivers of cost of living in MA, at 127 percent and 150 percent of the national price level, respectively. The cost of goods is slightly lower than the national price level at 98 percent.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
NC	24th	94.2%	0.5%	1.4%
TX	29th	97.5%	-0.9%	-0.2%
FL	38th	102.1%	0.7%	1.8%
NY	44th	107.6%	-1.9%	-1.8%
MA	**47th**	**109.4%**	**2.6%**	**2.0%**
CA	50th	112.5%	0.5%	0.4%

MA and selected competitor states ordered by rank. Most recent available is 2022. Rank is based on 2022 value.
Source: Bureau of Economic Analysis, Regional Price Parities by State.

GINI INDEX

The GINI index (or coefficient) is a measure of income inequality and is based on the evenness of the distribution of income. It ranges from 0 to 1, indicating total equality at its lowest (a coefficient of 0) and total inequality at the maximum (a coefficient of 1). A rank of 1 in this category means that a state has the lowest GINI coefficient, indicating the least amount of inequality among residents. The GINI index speaks to a state's competitiveness because it provides insight into the general economic position of different segments of the workforce in a state, which can be masked by measures like average weekly wage.

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National Ranking - MA 48th

MA 48th
0.4976

UT 1st
0.4264

Massachusetts ranks 48th in the country for its GINI index.

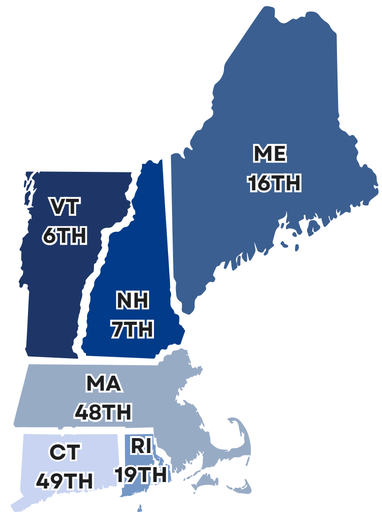
How MA is Changing

Current Data Trend ↑

2018 Value: 0.4875

The GINI index in Massachusetts has gone up since 2018.

Regional Snapshot



Main Takeaways

- Income inequality is a major competitive weakness in MA nationally, regionally, and among its competitors.
- Income inequality has been rising nationally, but growth in MA since 2018 outpaces national growth; meaning it is becoming a bigger disadvantage.
- The high level of income inequality in MA is particularly problematic given our high cost of living. This means that large segments of our population, who do not make high wages, are finding the state increasingly unaffordable.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
NC	34th	0.4768	-1%	0%
TX	36th	0.4796	0%	-1%
FL	45th	0.4902	1%	0%
CA	47th	0.4953	1%	1%
MA	**48th**	**0.4976**	**2%**	**2%**
NY	50th	0.5208	1%	2%

MA & selected competitor states ordered by rank. Most recent available is 2022. Rank is based on 2022 value.
Source: U.S. Census Bureau, American Community Survey, 1-Year Estimates 2018-2022.

NUMBER OF BUSINESSES PER CAPITA

Businesses per capita is a measure of economic activity and entrepreneurship in a state. The number of businesses per capita is determined by dividing the number of business establishments in a state by the state's population. The number of business establishments was determined by adding together U.S. Bureau of Labor Statistics counts of employer establishments and U.S. Census Bureau counts of non-employer establishments. <u>A rank of 1 indicates that a state has the highest number of business establishments per capita.</u> Businesses per capita speaks to competitiveness because it indicates how likely business formation and retention is in a state. It can also be an indicator of regulatory burden within a state.

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National Ranking - MA 13th

MA 13th
0.123

FL 1st
0.163

Massachusetts ranks 13th in the country for its number of businesses per capita.

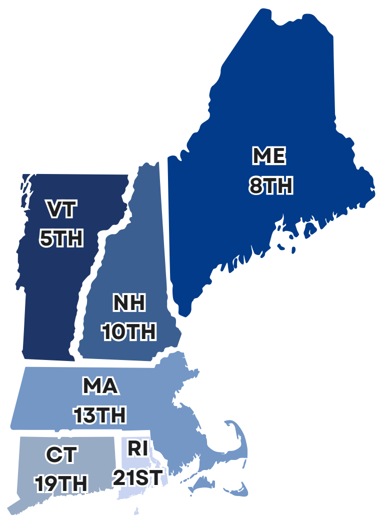
How MA is Changing

Current Data Trend ↑

2018 Value: 0.121

The number of businesses per capita has gone up since 2018.

Regional Snapshot



Main Takeaways

- MA ranks in the top third of all states for businesses per capita, but does not perform well when compared to competitor states, ranking ahead of only NC.
- Within New England, MA ranks behind ME, NH, and VT, the three area states that have experienced unexpected population growth since 2020.
- FL and CA rank first and second among competitor states, indicating that different economic ecosystems can support a business growth environment.

Competitor Ranking

State	Rank	2021 Value	1 Year Change	5 Year Change
FL	1st	0.163	4%	17%
CA	9th	0.130	3%	4%
NY	11th	0.123	3%	1%
TX	12th	0.123	5%	13%
MA	**13th**	**0.123**	**5%**	**4%**
NC	32nd	0.112	4%	11%

MA and selected competitor states ordered by rank. Most recent available is 2021. Rank is based on 2021 value.

Sources: US Census Bureau, Non-Employer Statistics and Population Estimates Program; US Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

POPULATION & LABOR FORCE TRENDS

Population and Labor Force Trends examines population characteristics that relate to the labor force and larger economy. Basic comparison points of the labor force (including unemployment, labor force participation rate, and labor force change) are explored, as are details about the working-age population (age distribution and educational attainment). Lastly, this category examines population change – natural change (accounting for births and deaths) and migration (both domestic and international). Domestic migration is also explored by income group as a detailed breakout.

This category presents a clear warning to policymakers regarding the state's competitiveness. Fundamentally, any economy is going to be a function of the size and productivity of its labor force. As noted in the prior section, Massachusetts benefits from a productive labor force – indicated in this section by our #1 ranking in the share of the 25+ population with a college degree – but the state has also seen its labor force decline by 2.4 percent since 2018, one of the worst marks in the nation. In comparison, Texas, Florida, and North Carolina saw their labor force grow by between 6 and 10 percent over the same time period.

This decline in our labor force is the result of several factors. First, Massachusetts, like other Northeastern states, has an increasing share of older residents, and natural population growth has flattened to just 0.1 percent in 2023. **As the state ages and the birth rate continues to decline, increasing pressure is placed on our labor force.**

Furthermore, domestic outmigration from Massachusetts increased significantly following the onset of the pandemic, exacerbating the downward pressure on the labor force. Massachusetts ranked 45th in the nation in terms of domestic outmigration in 2023, a slight improvement compared to the year before. **Given some of the other long-term demographic challenges in Massachusetts, we simply cannot afford to also lose a large number of residents each year to outmigration.**

In order to delve into the drivers of our troubling domestic outmigration figures, this section also includes a breakout analysis, which looks at working-age outmigration by income level. Massachusetts stands out nationally and among its competitors in the share of wealthy residents leaving the state. Families with incomes of more than $250,000 made up the largest share of the state's out-migrants in 2022, and we ranked last among our five competitor states in this category.

For policymakers, this data is sobering. For years, we have known that Massachusetts would face demographic pressures, which made retaining our workforce a top priority. However, the reverse is currently happening, with domestic outmigration contributing to a decline in our labor force and high-wealth families leading the way. Given Massachusetts' economic fundamentals – an economy that relies on high-wage sectors – and the fact that state revenues are disproportionately reliant on higher-wealth taxpayers, this trend must be reversed if Massachusetts is to compete.

LABOR FORCE PARTICIPATION RATE

Labor force participation rate measures the percentage of the total working-age population who are either employed or unemployed and actively looking for a job. A rank of 1 means that a state has the highest labor force participation rate in the country. Labor force participation is a key measure of competitiveness because it speaks to how efficient an economy is in using its available labor. Employers seek an accessible labor force; and labor force participation is a metric of this economic attribute.

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National Ranking - MA 13th

MA 13th 64.9% | UT 1st 69.3%

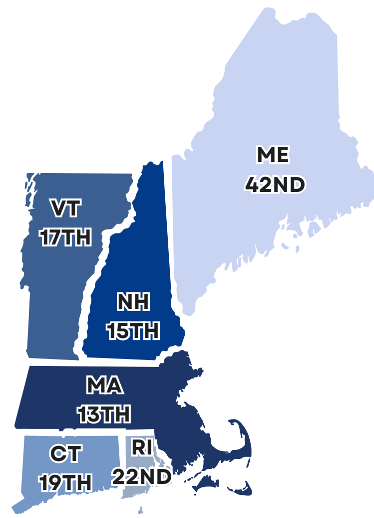
Massachusetts ranks 13th in the country for its labor force participation rate.

How MA is Changing

Current Data Trend ↑ | 2022 Value: 64.7%

The labor force participation rate has gone up since 2022.

Regional Snapshot



Main Takeaways

- MA's labor force participation rate is a relative strength for the state, ranking first among our competitor states.
- Nationally, MA's rank is positive, but it does not stand out (ranking 13th). Historically, MA's labor force participation rate has been a competitive strength compared to other states.
- Our relatively high participation rate speaks to an efficient economy where MA gets a lot out of the resources at its disposal, most notably an educated workforce.
- However, the labor force participation rate tells only one part of the labor force story; the relative change in a state's total labor force – growing, stagnating, or shrinking – can say as much or more about the competitiveness of the underlying economy.

Competitor Ranking

State	Rank	Dec. 2023 Value	1 Year Change*	5 Year Change*
MA	**13th**	**64.9%**	**0.2%**	**-2.3%**
TX	19th	64.1%	0.7%	0.3%
CA	29th	62.2%	0.3%	-0.2%
NY	35th	61.6%	1.2%	1.0%
NC	37th	60.8%	0.3%	0.4%
FL	40th	59.6%	0.5%	0.3%

MA and selected competitor states ordered by rank. Rank is based on Dec 2023 value.
**Note: 1-Year and 5-Year Change are percentage point change, not percent change.*
Source: Bureau of Labor Statistics, Local Area Unemployment Statistics.

DOMESTIC MIGRATION

Domestic migration (inter-state moves) is estimated annually as a component of population change by the U.S. Census Bureau Population Estimates Program. A rank of 1 indicates the highest in-migration rates – the highest rate of people moving to a state from other states. A negative value in this metric means that a state is losing more people to other states than it is gaining. Domestic migration is a key competitiveness metric because it indicates the states that people are moving to and where they are leaving from. While people move for many reasons, rates of domestic migration speak to a state's economic opportunity, quality of life, and affordability.

National Ranking - MA 45th

MA 45th
-0.6%

SC 1st
1.5%

Massachusetts ranks 45th in the country for its rate of domestic in-migration.

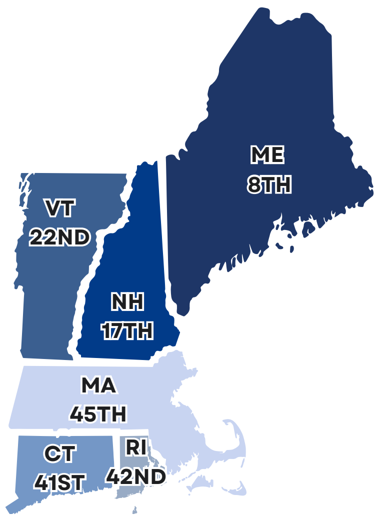
How MA is Changing

Current Data Trend ↓

2022 Value: -0.8%

The domestic rate of out-migration has gone down since 2022.

Regional Snapshot



Main Takeaways

- Domestic migration is a negative competitiveness indicator for MA, performing poorly nationally, regionally, and compared to NC, FL, and TX.
- MA's -0.6 percent domestic migration rate in 2023 equates to about 40,000 people leaving the state. The equivalent of the entire population of Shrewsbury leaving the state.
- In contrast, NC's 0.9 percent growth rate means they added just under 100,000 people from other states.
- Domestic migration has historically been a weakness in MA, but that weakness has intensified since 2020. Over a three-year period (2020 to 2023) MA has lost 149,466 through domestic outmigration.

Competitor Ranking

State	Rank	2023 Value	1 Year Change*	5 Year Change*
NC	3rd	0.9%	0.0%	0.2%
FL	5th	0.9%	-0.6%	0.3%
TX	9th	0.6%	-0.1%	0.3%
MA	**45th**	**-0.6%**	**0.3%**	**-0.2%**
CA	49th	-0.9%	0.0%	-0.5%
NY	50th	-1.1%	0.4%	-0.2%

MA and selected competitor states ordered by rank. Most recent available data is 2023.
Rank is based on 2023 value.
**Note: 1-Year and 5-Year Change are percentage point change.*
Sources: U.S. Census Bureau Population Estimates Program, Components of Population Change. American Community Survey, State-to-State Migration Flows

INTERNATIONAL MIGRATION

International migration is estimated annually as a component of population change by the U.S. Census Bureau Population Estimates Program. A rank of 1 indicates the highest in-migration rate, as defined as the total amount of international migration into a state divided by that state's population. International migration rates are a key competitiveness metric because they speak to one source of labor change, as well as to the strength of a state's economy through its ability to attract foreign talent.

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National Ranking - MA 2nd

MA 2nd 0.72% | FL 1st 0.79%

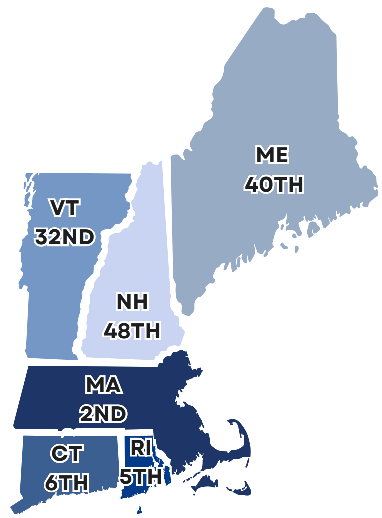
Massachusetts ranks 2nd in the country for its rate of international in-migration.

How MA is Changing

Current Data Trend ↑ 2022 Value: 0.6%

International in-migration has gone up since 2022.

Regional Snapshot



Main Takeaways

- International migration is a major competitive strength for MA, ranking second nationally and among competitors (FL ranks first).
- The data in this metric is from 2023 and could be impacted by recent surges in migration to MA, but international migration has been a historic strength of the state in the 21st century.
- MA's strength in international migration is likely linked to our greatest underlying economic strengths – higher education, health care, life sciences, and tech; which all attract highly educated workers.
- International immigrants to MA are typically more highly educated and skilled when they arrive here compared to other states, providing another competitive boost for our workforce talent.

Competitor Ranking

State	Rank	2023 Value	1 Year Change*	5 Year Change*
FL	1st	0.79%	0.24%	0.16%
MA	**2nd**	**0.72%**	**0.11%**	**0.18%**
TX	7th	0.42%	0.03%	0.18%
CA	8th	0.39%	0.06%	0.21%
NY	9th	0.38%	-0.02%	0.08%
NC	20th	0.27%	0.03%	0.12%

MA and selected competitor states ordered by rank. Most recent available is 2023.
Rank is based on 2023 value.
**Note: 1-Year and 5-Year Change are percentage point change.*
Sources: U.S. Census Bureau Population Estimates Program, Components of Population Change.

NATURAL POPULATION CHANGE

The U.S. Census Bureau tracks the components of population change annually, and natural population change is births minus deaths (it does not account for domestic or international migration). A rank of 1 indicates the state with the highest natural change rate (natural population change divided by the state's total population). This metric is a key measure of competitiveness because it speaks to a state's immediate and long-term demographic and labor force growth trends. States with declining natural population change face serious future challenges in supporting their current economy.

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National Ranking - MA 26th

MA 26th 0.1%

UT 1st 0.7%

Massachusetts ranks 26th in the country for its rate of natural population change.

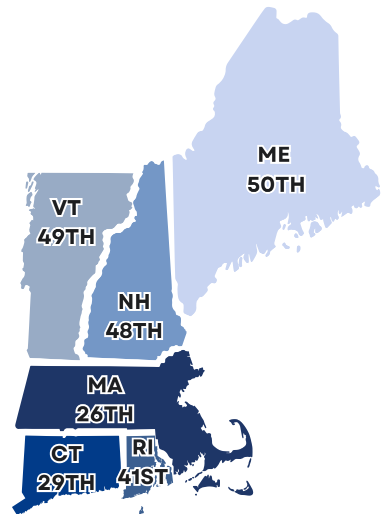
How MA is Changing

Current Data Trend

2022 Value: 0.08%

The rate of natural population change has increased since 2022.

Regional Snapshot



Main Takeaways

- MA ranks in the middle of all states when it comes to natural population change, but critically looks worse (ranking 5th out of 6) when compared to our competitor states.
- MA's ranking, and the poor ranking of other Northeastern states, is consistent with the relative aging of the region as well as long-term national demographic trends. The vast majority of population growth is taking place in the South and West, though this is due to migration patterns as well.
- MA's natural population growth has declined, but at a relatively slow rate, in recent decades.
- The low level of natural population growth in MA (0.1 percent in 2023) highlights the importance of domestic and international migration in growing the state's future labor force.

Competitor Ranking

State	Rank	2023 Value	1 Year Change*	5 Year Change*
TX	2nd	0.5%	0.1%	-0.1%
CA	10th	0.3%	0.0%	-0.2%
NY	15th	0.2%	0.0%	-0.2%
NC	23rd	0.1%	0.1%	-0.1%
MA	**26th**	**0.1%**	**0.02%**	**-0.07%**
FL	40th	0.0%	0.1%	-0.1%

MA & selected competitor states ordered by rank. Rank is based on 2023 value.
**Note: 1-Year and 5-Year Change are percentage point change, not percent change.*
Source: U.S. Census Bureau, Population Estimates Program, Components of Population Change.

PERCENTAGE OF POPULATION OVER 65

The U.S. Census Bureau estimates the share of a state's population over 65 through its American Community Survey. A rank of 1 means that a state has the lowest percentage of its population over 65 years old in the country. This metric is an important competitiveness indicator for two reasons. First, people over 65 are much less likely to be part of the labor force, speaking to current economic health. Second, the larger a state's share of residents over 65, the more likely it is to face longer-term population and labor force constraints.

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National Ranking - MA 28th

MA 28th 18.0%

UT 1st 11.9%

Massachusetts ranks 28th in the country for the percentage of its population over 65 years old.

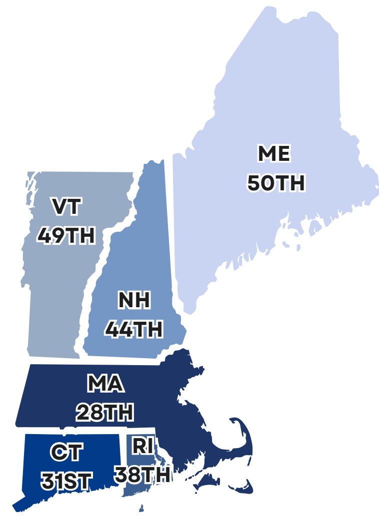
How MA is Changing

Current Data Trend

2018 Value: 16.5%

The percentage of the MA population over 65 has increased since 2018.

Regional Snapshot



Main Takeaways

- This metric is a competitive disadvantage for MA when compared to competitors in the South and West, ranking notably below NC, CA, and TX.
- MA does not stand out nationally in terms of its share of the population over 65, ranking 28th; and is relatively well-positioned compared to other New England and Northeastern states.
- MA residents have the second highest life expectancy nationally, a strength, which also contributes to the age of the population.
- As with natural population change, this metric underscores MA's long-term demographic challenges and how critical it is to retain younger residents and attract people from other areas.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
TX	2nd	13.4%	0.3%	0.9%
CA	6th	15.8%	0.6%	1.5%
NC	22nd	17.4%	0.4%	1.2%
MA	**28th**	**18%**	**0.6%**	**1.6%**
NY	29th	18.1%	0.6%	1.7%
FL	48th	21.6%	0.4%	1.1%

MA and selected competitor states ordered by rank. Rank is based on 2022 value.
Source: U.S. Census Bureau, American Community Survey, 1 year dataset.

POPULATION 25 YEARS AND OLDER WITH A BACHELOR'S DEGREE OR MORE

The American Community Survey conducted by the U.S. Census Bureau provides estimates by age and educational level at various stages. A rank of 1 means that a state has the highest population share of those with a bachelor's degree or higher in the country. The education level of a state's population is a key competitiveness metric because it indicates the talent level of the workforce. It also has implications for a state's quality of life in terms of its underlying education system.

National Ranking - MA 1st

MA 1st
46.6%

Massachusetts ranks 1st in the country for the percentage of its population 25 years and older with a bachelor's degree or more.

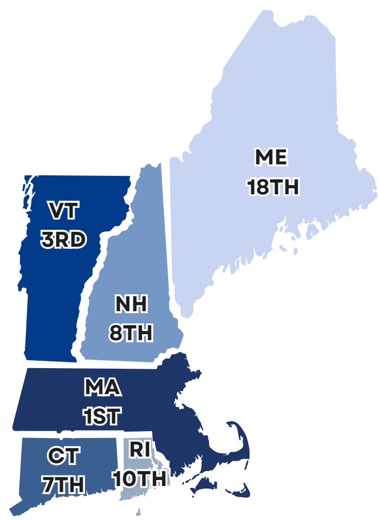
How MA is Changing

Current Data Trend

2018 Value: 44.5%

The share of the MA population 25 years and older with a bachelor's degree or more has increased since 2018.

Regional Snapshot



Main Takeaways

- The education level of its population is a major competitiveness strength for MA, ranking first nationally and far outpacing all competitors.
- MA has maintained its #1 ranking in this category for years, and its lead remains somewhat sizable.
- However, competitors are gaining ground. Over the last five years, each competitor state's population share with a bachelor's degree grew by a greater percentage than MA.
- This metric speaks to the fundamental economic advantage MA has and must protect: a highly skilled workforce supported by strong K-12 and higher education systems.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
MA	**1st**	**46.6%**	**0.0%**	**2.1%**
NY	9th	40%	0.1%	2.8%
CA	15th	37%	0.8%	2.8%
NC	19th	35.9%	1.0%	4.0%
FL	26th	34.3%	1.1%	3.9%
TX	27th	33.9%	0.8%	3.6%

MA and selected competitor states ordered by rank. Rank is based on 2022 value.
Source: U.S. Census Bureau, American Community Survey, one-year dataset.

UNEMPLOYMENT

Unemployment rates reflect workers who are seeking work and are within the benefit period after a layoff and are determined using the annual average of monthly Local Area Unemployment Statistics produced by the Bureau of Labor Statistics. A rank of 1 means that a state has the lowest annual unemployment rate for a given year. The unemployment rate is a strong competitiveness metric because it indicates the strength of a state's current job market and the likelihood that a willing worker can find employment.

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National Ranking - MA 21st

MA 21st 3.0%

SD 1st 2.0%

The unemployment rate in Massachusetts is the 21st lowest in the country.

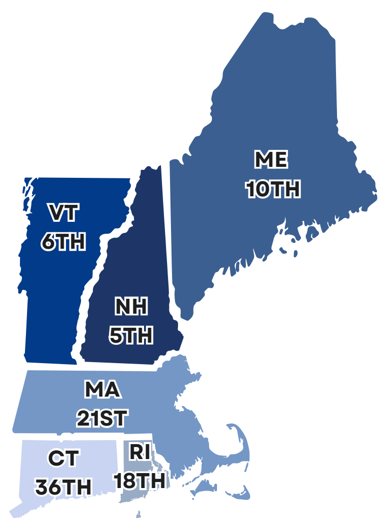
How MA is Changing

Current Data Trend

2018 Value: 3.5%

The unemployment rate has gone down since 2018.

Regional Snapshot



Main Takeaways

- MA's unemployment rate stands out among competitor states, a full percentage point or more lower than TX, NY, and CA.
- The unemployment rate is not a key competitiveness differentiator for MA nationwide, ranking 21st among all states.
- Pandemic aside, MA and the rest of the country have experienced historically low unemployment rates in recent years – the state's 2023 rate was its 3rd lowest annual rate since 1976.
- MA's low unemployment rate may also indicate labor force shortages and can place upward pressure on wages and costs.

Competitor Ranking

State	Rank	2023 Value	1 Year Change	5 Year Change
FL	11th	2.7%	-6.6%	-16.7%
MA	**21st**	**3.0%**	**-20.8%**	**-1.1%**
NC	31st	3.5%	-5.3%	-10.8%
TX	44th	4.1%	4.5%	14.9%
NY	46th	4.1%	-3.7%	6.3%
CA	49th	4.6%	10.2%	12.4%

MA and selected competitor states ordered by rank. Rank is based on 2023 value.
Source: Bureau of Labor Statistics, Local Area Unemployment Statistics.

LABOR FORCE SIZE, FIVE-YEAR CHANGE

Change in labor force size is calculated using U.S. Bureau of Labor Force statistics and shows the percent change in a state's labor force over the prior five years. A rank of 1 means the highest positive change in a state's labor force size over five years. This is a key competitiveness metric because it speaks fundamentally to the workforce available in a state to support the existing economy and new jobs. By using a five-year time horizon, this metric gauges state economic recoveries from the COVID-19 pandemic.

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National Ranking - MA 48th

MA 48th -2.4%

UT 1st 13.3%

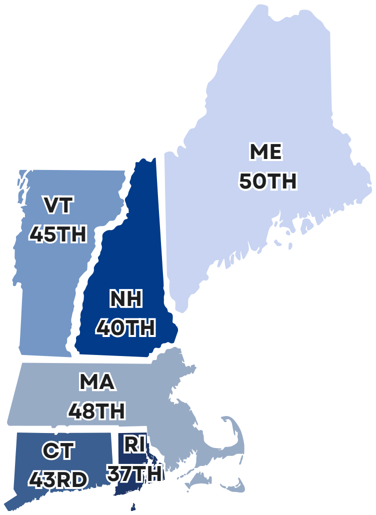
Massachusetts ranks 48th in the country in its five-year labor force change.

How MA is Changing

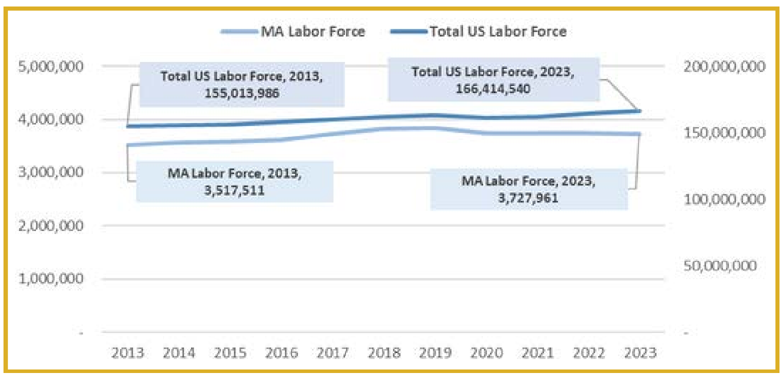
Current Data Trend ↓ 2017-2022: 0.6%

The five-year change in the labor force size has gone down since 2017-2022.

Regional Snapshot



Labor Force Size Trend



Competitor Ranking

State	Rank	2018-2023 % Change	Last Year's Change in 5-Year Change*
TX	4th	9.6%	0.8%
FL	5th	9.2%	1.3%
NC	8th	6.4%	0.3%
CA	32nd	0.5%	0.2%
NY	42nd	-1.0%	1.2%
MA	**48th**	**-2.4%**	**-2.9%**

Note: The column 2018 - 2023 % Change is equal to: (annual average labor force in 2023 - annual average labor force in 2018) / annual average labor force in 2018. Last Year's Change in five-year Change is equal to: (2018 - 2023 % Change) - (2017 - 2022 % Change), in other words, the percentage point difference between the five-year change from one year prior.

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics.
Note: 2018 - 2023 % change is the annualized percentage change of five-year labor force size change between 2018 and 2023.
**Last Year's Change is percentage point change, not percent change. Most recent yearly data is 2023.*

Main Takeaways

- MA's declining labor force is a major competitive disadvantage, ranking 48th nationally and dead last among competitors.
- MA's labor force declined by 2.4 percent between 2018 and 2023, while the labor force in TX, FL, and NC all grew by at least 6 percent.
- A declining labor force is an existential threat to the state's economic health - limiting our ability to service our current economy, increasing cost pressures, and making employment expansion less attractive for businesses.

DETAIL BREAKOUT

Migration by Income Level

One of the key questions before policymakers is the makeup of the troubling domestic outmigration numbers in MA. Exactly who is leaving has critical implications for how we address the issue.

The U.S. Census Bureau makes available individual and household income data from the American Community Survey as a Public Use Microdata Sample (PUMS). The dataset allows for the calculation of different income groups' migration rates (interstate movers divided by total population). Comparisons of migration numbers for families with incomes greater than $250,000 in 2022 show MA ranking near the bottom of all states, with one of the highest shares of high-income families leaving the state. All income groups were net out-movers in 2022 for MA, and though households with incomes greater than $250,000 represent the third largest share of the population, they comprised the largest number of people leaving the state. These data make clear that higher rates of wealth outmigration existed even prior to the implementation of the state's Income Surtax, which provides an added cost incentive for wealthy families to move.

Migration trends in MA show a troubling combination for the state, with those at the highest income levels and those at low-income levels (family income $35K - $50K) leaving at higher rates than their share of the population. MA cannot compete if it doesn't retain these critical segments of our labor force and population.

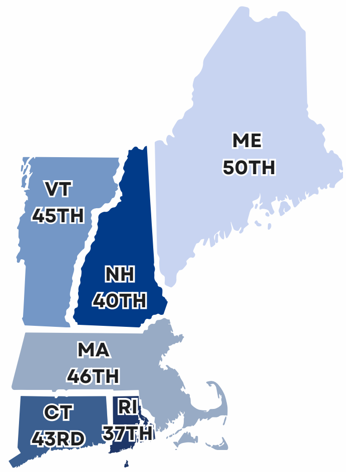
Migration for families with household income greater than $250,000

National Ranking - MA 46th

MA 46th 0.07%

WY 1st 0.22%

Regional Snapshot



Domestic Migration for Family Income > $250K, 2022

State	Rank	2022 Value as % of Total Pop.	2022 Value
FL	5th	0.11%	23,589
NC	12th	0.04%	3,848
TX	13th	0.03%	9,724
CA	35th	-0.02%	-7,549
NY	45th	-0.07%	-14,257
MA	**46th**	**-0.07%**	**-5,192**

Population and Migration for all Income Groups in Massachusetts, 2022

Family Income	Population Share	Net Migration Share
<$35K	12%	11%
$35-50K	7%	15%
$50-75K	11%	10%
$75-100K	11%	16%
$100K-$150K	20%	15%
$150-$250K	23%	16%
>$250K	16%	17%

Source: U.S. Census American Community Survey PUMS via IPUMS, UMDI calculations.
Note: Migration values are for individuals aged 25-64 only (working-age population beyond college-age).

Job-to-Job Interstate Flows

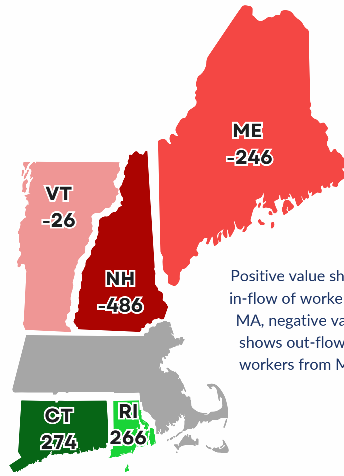
This Index defines MA's competitors by looking at the states to whom we lose the most jobs.

The U.S. Census Bureau produces the Job-to-Job Explorer, an interactive tool that shows the movement of employed people between states, including industry details. Multiple quarters can be combined to produce longer-term measures of the number of workers who move between states. By subtracting the out-movers from the in-movers by state, an indicator of net moves for job holders was created. High-ranked states attracted more MA workers, and lower-ranked states attracted fewer MA workers on a net basis. For instance, MA lost more workers than it gained from FL, so net moves to FL are negative. In New England, MA had negative job flows to three states: NH, ME, and VT; and positive job flows from two states: RI and CT. The churn in job flows means that the net numbers are relatively low, but they provide a credible snapshot of the economies with whom MA must compete.

Assessing the most common industries for job loss in MA in each of our competitor states also provides important information for policymakers. Professional, Scientific, and Technical Services are heading south to FL, NC, and TX; while NY is gaining Financial and Insurance jobs from MA. Interestingly, Manufacturing comprises the largest sector of job loss to CA.

Flows of MA Workers to and from other New England States

Regional Snapshot



Positive value shows in-flow of workers to MA, negative value shows out-flow of workers from MA.

Job-to-Job Flows of Workers from MA

State	FY 2022 Net Moves	National FY 2022 Rank
FL	-765	1
CA	-411	3
NY	-375	4
NC	-292	5
TX	-278	6

NH ranks 2nd in job-to-job flows from Massachusetts, and is included in the regional snapshot chart.

Job-to-Job Flows from MA by Industry

State	Top Industry for Worker Moves out of MA, FY 2022
FL	Professional, Scientific, and Technical Services
CA	Manufacturing
NY	Finance and Insurance
NC	Professional, Scientific, and Technical Services
TX	Professional, Scientific, and Technical Services

Source: U.S. Census Bureau Jobs-to-Jobs Flows, Longitudinal Employer-Household Dynamics. UMDI Calculations.

BUSINESS, EMPLOYMENT, & INVESTMENT FACTORS

Business, Employment, and Investment Factors explores metrics that influence business and investment decisions. The availability of workforce talent matters, but in an era when workers have never had more location flexibility, other cost factors, like taxation, energy, and employee benefits also have major impacts on business location decisions. This category assesses these cost factors, as well as states' innovation and entrepreneurship ecosystems, as measured by research and development funding and business formation data.

Business costs are Massachusetts' most consistent and striking competitive disadvantage captured in this Index. From taxation to unemployment insurance, and corporate tax to energy cost, Massachusetts not only ranks in the bottom tier of all states, but consistently ranks last or second to last among our competitor states. While this relative disadvantage is most evident compared to our Southern competitors: Florida, North Carolina, and Texas; it should be notable for policymakers that Massachusetts also ranks below New York in three out of four cost indicators.

The relative position of Massachusetts compared to competitor states in measures of business and investment costs is important, but more important is the distance between Massachusetts and the states to whom we are most likely to lose jobs. According to US Department of Labor Data, Massachusetts' unemployment cost per covered employee in 2022 was more than double the costs in Florida, North Carolina, and Texas; and 60 percent greater than the equivalent cost in California.

Energy costs provide just as stark an indication of the disadvantage a Massachusetts company has compared to a competitor in another state. The cost of energy per kilowatt hour in Massachusetts is more than double that of North Carolina and Texas and is 17 percent more than in New York.

Massachusetts companies and investors have always had to contend with high costs. The problem now is that the historic calculation - sacrificing costs for a 'can't find anywhere else' workforce - has been altered. Workers, particularly high-wage workers, are more mobile than ever due to the proliferation of remote work opportunities. **Massachusetts' high costs have continued to set us apart from other states. Left unchecked, this is a disastrous combination for Massachusetts.**

This section also captures metrics related to the innovation ecosystem in states; and here, the news for Massachusetts is more positive, but remains mixed. The good news is that Massachusetts continues to attract more research and development funding as a share of Gross State Product (GSP) than almost any other state and that investment is growing. Massachusetts' unique combination of higher education, health, life sciences, and technology sectors gives our economy an identity and center of gravity that is the envy of our competitors. Less positive is the state's ranking in terms of business formations. Ideally, the concentration of talent and research and development support in Massachusetts would make us stand out in terms of new businesses, but Massachusetts ranks 35th nationally and last among competitor states. **Ultimately, translating innovation into business and economic growth will be determined by our ability to rebalance the talent and cost calculation.**

AVERAGE EMPLOYER U.I. TAX AMOUNT PER COVERED EMPLOYEE

Average employer unemployment insurance tax amount per covered employee is calculated by the Department of Labor Employment and Training Administration and is published in their annual Tax Measure reports. A rank of 1 means that employers in a state have the smallest contribution to the state's UI trust fund per covered employee. Employer UI taxes are a key competitiveness metric that provides a consistent comparison of a major source of employer costs between states.

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National Ranking - MA 43rd

MA 43rd $524 | FL 1st $66

Massachusetts ranks 43rd in the country for employer contributions to the state's UI trust fund.

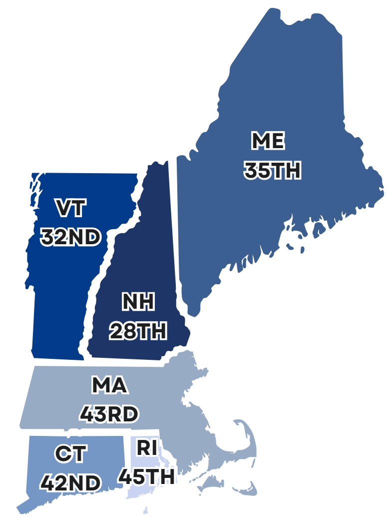
How MA is Changing

Current Data Trend ↓

2019 Value: $631

The average employer U.I. tax amount per covered employee has gone down since 2019.

Regional Snapshot



Main Takeaways

- Average employer UI taxes are a competitive disadvantage for MA, both nationally and among competitor states.
- The high cost of UI taxes in MA is a function of several things: notably the scope of UI benefits offered in MA, eligibility standards, and the funding level of the state's UI trust fund.
- The most striking aspect of UI taxes in MA is the magnitude of the difference with competitor states. MA's rate is more than 7X that of FL and even 60 percent higher than in CA.
- The high level of UI taxes speaks to a theme of MA's competitive position: a major outlier for costs that disincentivize location and investment in the state.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
FL	1st	$66	0%	5%
NC	15th	$178	13%	31%
TX	23rd	$260	9%	15%
CA	30th	$328	-18%	-21%
NY	41st	$466	-22%	40%
MA	**43rd**	**$524**	**-12%**	**4%**

MA and selected competitor states ordered by rank. Most recent available is 2022. Rank is based on 2022 value.

Source: US Department of Labor Employment and Training Administration Tax Measure Annual Reports, 2018-2022

ENERGY COST

Energy cost is measured by the overall average annual price in cents per kilowatt hour as reported by the U.S. Energy Information Administration. <u>A rank of 1 means that a state has the lowest energy cost in the country.</u> Energy cost is a key aspect of business competitiveness because energy is a fundamental fixed cost to operate facilities. Especially in sectors like manufacturing, that require significant energy use, big differences in energy costs between states can be a major factor in location decisions

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National Ranking - MA 48th

MA 48th $0.21

WY 1st $0.08

Massachusetts ranks 48th in the country for its energy cost.

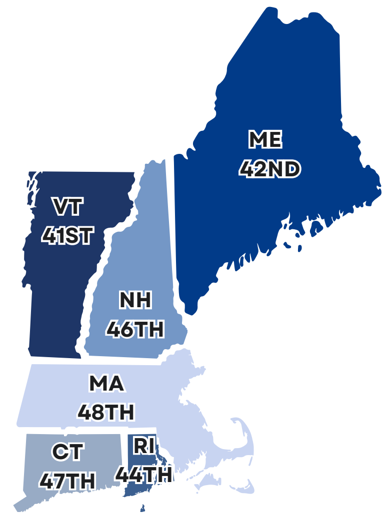
How MA is Changing

Current Data Trend

2021 Value: $0.19

Energy costs have gone up since 2021.

Regional Snapshot



Main Takeaways

- Energy cost is a major competitive disadvantage for MA nationally and among competitor states.
- In addition to being a disincentive for businesses with high energy uses, high costs are also a major cost burden for residents, especially low-wage workers and those on fixed incomes.
- Electricity in MA is double the cost of that in competitor states like NC and TX, and even notably more expensive than in NY.
- MA imports almost all of its energy and has high demand, two factors that contribute to higher costs and are unlikely to change in the near future.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
NC	9th	$0.10	3%	6%
TX	15th	$0.10	10%	17%
FL	37th	$0.13	15%	17%
NY	43rd	$0.18	12%	20%
MA	**48th**	**$0.21**	**10%**	**19%**
CA	49th	$0.22	12%	28%

MA & selected competitor states ordered by rank. Most recent available is 2022. Rank is based on 2022 value.

Source: US Energy Information Administration

CORPORATE INCOME TAX COLLECTIONS PER CAPITA

Corporate income tax collections per capita are collected and published by the Tax Foundation. Revenue from gross receipts taxes, which are collected in some states, are not classified as corporate income taxes by the U.S. Census Bureau. NV, TX, WA, WY, OH, and SD are excluded from this ranking due to data limitations. <u>A rank of 1 means that a state has the lowest per capita corporate income tax collections in the country.</u> Corporate income tax collections are a key aspect of business competitiveness because they directly relate to an employer's cost structure for investing or engaging in a state.

National Ranking - <u>MA 40th</u>

MA 40th
$526

NM: 1st
$72

Massachusetts ranks 40th out of 44 states with comparable corporate tax data published by the Tax Foundation.

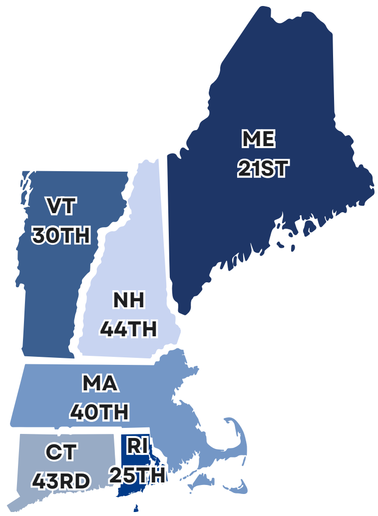
<u>How MA is Changing</u>

Current Data Trend

2020 Value: $360

Corporate income tax collections per capita have gone up since 2020.

Regional Snapshot



Main Takeaways

- Corporate income taxes per capita are a major competitive disadvantage for MA nationally and compared to competitor states.
- As noted above, the differing nature of corporate taxes in states makes it difficult to use just one metric to assess corporate tax burden, but more than 40 states apply a form of corporate income taxes.
- Because this metric is captured on a per-capita basis, it can increase significantly during strong economic times, such as the unexpected boom during 2021 and 2022.
- Corporate taxes contribute to MA's problematic business cost and affordability themes, along with other metrics like energy costs and UI taxes.

Competitor Ranking

State	Rank	2021 Value	1 Year Change	5 Year Change
NC	7th	$144	56%	27%
FL	10th	$156	26%	29%
NY	29th	$250	4%	16%
MA	**40th**	**$526**	**32%**	**35%**
CA	42nd	$665	63%	62%

MA and selected competitor states ordered by rank. Most recent available is 2021. Rank is based on 2021 value.

Note: TX imposes a gross receipt tax and not a corporate income tax.

Source: The Tax Foundation

HEALTH INSURANCE PAID BY EMPLOYER

Health insurance costs paid by an employer are measured using the average employer contribution to health insurance premiums per covered employee as reported by the Kaiser Family Foundation. <u>A rank of 1 means that a state has the lowest average employer health insurance cost in the country.</u> Health insurance paid by an employer is a key metric of competitiveness because it directly relates to cost structure, especially for hiring in a state.

Massachusetts Taxpayers Foundation | UMassAmherst Donahue Institute Economic and Public Policy Research | MACP Massachusetts Competitive Partnership

National Ranking - MA 36th

MA 36th
$6,248

AL: 1st
$4,970

Massachusetts ranks 36th in the country for average employer contributions to health insurance.

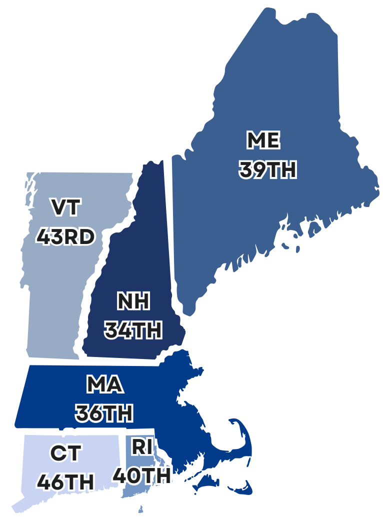
How MA is Changing

Current Data Trend ↑

2021 Value: $6,109

Health insurance costs paid by an employer have increased since 2021.

Regional Snapshot



Main Takeaways

- Employer health insurance premiums are a competitive disadvantage for MA nationally and among competitors.
- MA ranks in the bottom half of all states for employer health insurance cost, just as it does in other business cost drivers related to tax and energy.
- Between 2017 and 2022, health insurance premiums in MA have not grown as much as in competitor states (NC, FL, CA, and NY).
- The cost of premiums could also speak to the quality of health care in a state, and MA generally scores well in subjective health care quality state rankings.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
TX	15th	$5,670	1%	15%
NC	23rd	$5,906	6%	16%
FL	25th	$5,942	4%	22%
CA	33rd	$6,099	3%	20%
MA	**36th**	**$6,248**	**2%**	**15%**
NY	50th	$7,044	3%	18%

MA and selected competitor states ordered by rank. Most recent available is 2022. Rank is based on 2022 value.

Source: Kaiser Family Foundation.

BUSINESS FORMATIONS

Business formations are measured by the first instance of payroll tax liabilities associated with a business application. This indicates how many businesses were established and officially began paying employees. A rank of 1 means that a state has the highest rate of business formations per employer business. The number of businesses per capita is a key metric of business competitiveness because it speaks to a state's climate for creating new businesses with employees.

National Ranking - MA 35th

MA 35th
0.02

WY 1st
0.04

Massachusetts ranks 35th among states with new business formations per employer business (2020).

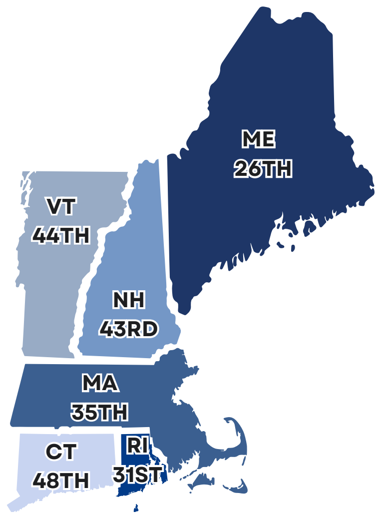
How MA is Changing

Current Data Trend

2019 Value: 0.023

The number of business formations per employer business has gone down since 2019.

Regional Snapshot



Main Takeaways

- Business formations are indicative of competitive disadvantages for MA, especially among competitor states.
- More troubling, MA has declined in this metric since 2008, with a particularly steep drop in 2020.
- While a number of factors contribute to location decisions for businesses, the availability of a labor force and cost are two critical elements - and two areas where MA is at a consistent competitive disadvantage.

Competitor Ranking

State	Rank	2020 Value	1 Year Change	5 Year Change
TX	6th	0.034	-6%	-17%
FL	7th	0.033	-2%	-19%
NC	11th	0.029	-2%	-10%
CA	18th	0.025	-9%	-20%
NY	21st	0.024	-25%	-53%
MA	**35th**	**0.021**	**-9%**	**-26%**

MA and selected competitor states ordered by rank. Most recent available is 2020. Rank is based on 2020 value.

Source: U.S. Census Bureau, Business Formation Statistics, Business Formations of Previous Four Quarters. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

RESEARCH & DEVELOPMENT FUNDING AS A SHARE OF GROSS STATE PRODUCT

Research and Development (R&D) funding as a share of gross state product measures how much funding the state has for R&D compared with the size of its overall economy, as measured by the National Science Foundation. <u>A rank of 1 means that a state has the largest amount of R&D funding compared to its overall economy (GSP).</u> R&D funding is a key measure of business competitiveness because it not only indicates potential sources of financial support, but also speaks to the composition of the economy in a state; with advanced, high-tech sectors more likely to receive R&D funding.

MTF Massachusetts Taxpayers Foundation | UMassAmherst Donahue Institute Economic and Public Policy Research | MACP Massachusetts Competitive Partnership

National Ranking - MA 2nd

MA 2nd 8% | NM 1st 9%

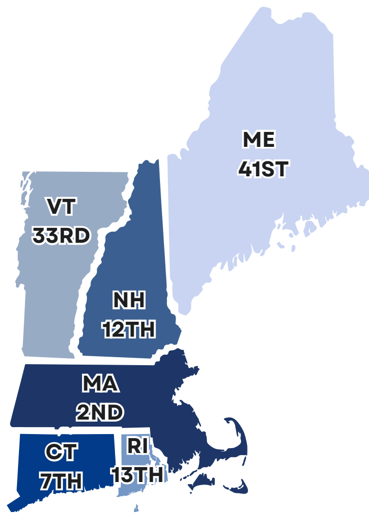
Massachusetts ranks 2nd in the country for R&D funding as a share of its GSP.

How MA is Changing

Current Data Trend ↑ | 2020 Value: 7.6%

R&D funding as a share of gross state product has increased since 2020.

Regional Snapshot



Main Takeaways

- R&D funding is a major competitive strength for MA, ranking 2nd nationally and 1st among competitor states, according to the most recent NSF data.
- Just as importantly, R&D funding as a share of GSP in MA grew at a faster rate compared to competitors over the last five years.
- This strong ranking is not surprising, given MA's higher education, health care, life sciences, and tech sectors.
- Strong R&D funding is also consistent with one of MA's thematic economic strengths: a cutting-edge economy with a highly skilled labor force.

Competitor Ranking

State	Rank	2021 Value	1 Year Change	5 Year Change
MA	**2nd**	**8%**	**5%**	**29%**
CA	4th	7%	-4%	25%
NC	16th	3%	2%	16%
NY	29th	2%	-5%	23%
TX	30th	2%	-8%	18%
FL	35th	1%	1%	2%

MA and selected competitor states ordered by rank. Most recent available is 2021. Rank is based on 2021 value.

Source: National Science Foundation

Industry Employment Concentration

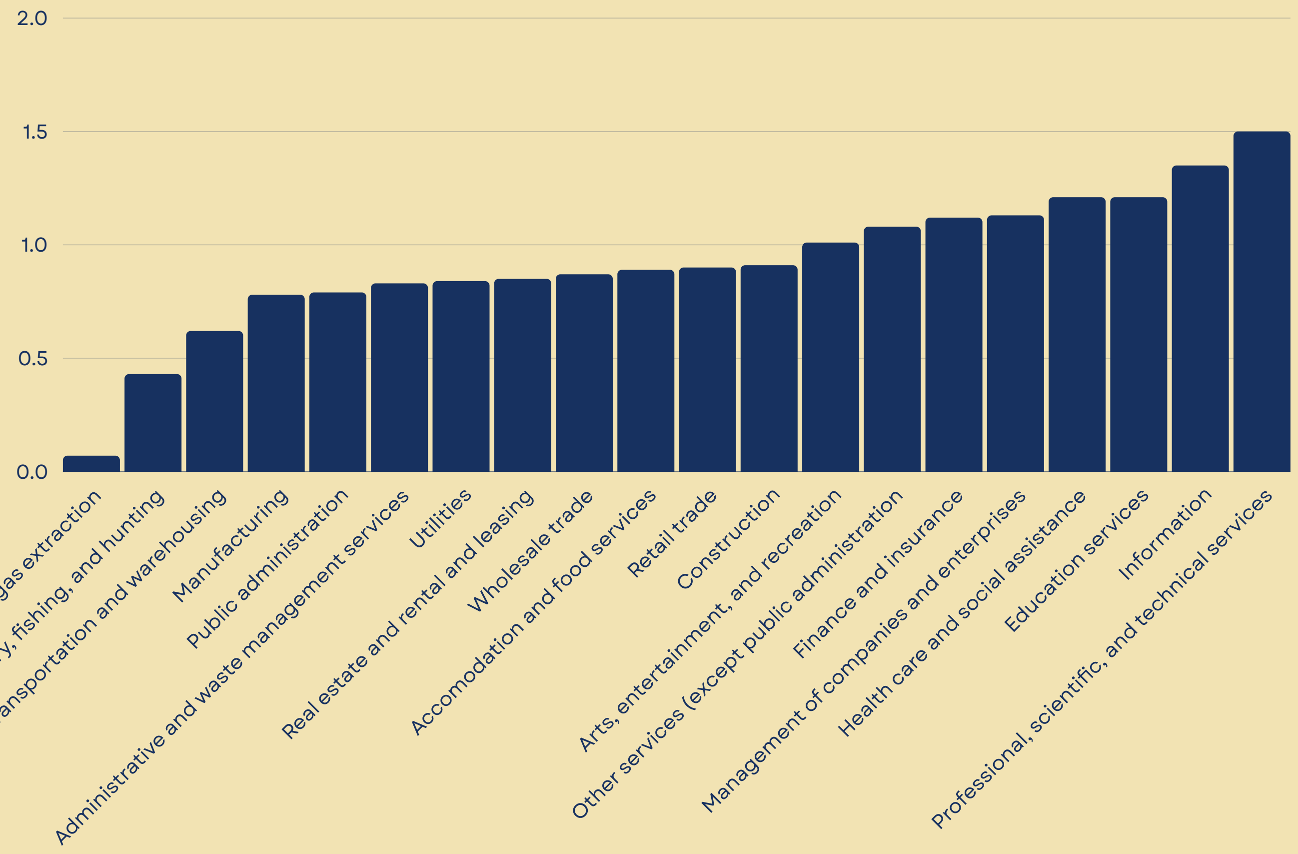
One of the most important steps to creating a competitiveness roadmap for MA is to clearly understand our economic strengths. **In the following Detail Breakouts, we provide more information on the Location Quotient of MA's key industries.**

Location Quotient (LQ) is a metric used to measure an industry's concentration within a state or region, compared to the overall concentration in the United States, thereby providing a clear sense of the economic sectors of strength. The LQ is expressed as a ratio of a particular industry's concentration of employment in a particular state divided by that industry's employment concentration in the United States overall.

The most highly concentrated industries in MA are Professional, Scientific, and Technical Services (with an LQ of 1.50, or 50% more concentrated than the country overall) and Information (35% more concentrated than the U.S.). These sectors include high technology, research and development, consulting, legal, and engineering industries; all drivers of the MA economy.

Education, Health Care, Management, Finance, and Insurance sectors are all more concentrated in MA than in the country at large. These sectors are all consistent with MA's strengths and often positively reinforce one another. These sectors generally pay high wages and rely on a highly skilled labor force. The competitive imperative for MA is to ensure that we grow that skilled labor force and reduce cost disparities with other states.

Location Quotients for MA Industries, 2022



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.
Note: Location quotients are based on combined private and government employment.

DETAIL BREAKOUT

Scientific Research and Development Sector

Scientific Research and Development, a component of the Professional, Scientific, and Technical Services category, is a prominent, high-wage sub-industry in MA focused on cutting-edge technology and producing new knowledge or experimental processes. Scientific R&D is closely linked with life sciences, which are highly clustered within Eastern MA, though this sub-industry also encompasses nanotechnology, biotechnology, and engineering, as well as the social sciences and humanities. Higher education institutions are frequently key contributors to R&D.

MA’s strength in this sector is significant – with an LQ of 4.56, the second highest in the nation. This means that this industry is more than 4.5X more concentrated in MA than in the nation at large. The good news is that the strength of this sector is growing, with an LQ that increased from 2021 to 2022. Maintaining the right talent, and regulatory and cost environment for this sector should be a major priority for the state’s competitiveness.

National Ranking - MA 2nd

How MA is Changing

Current Data Trend ↑ **2021 Value: 4.45**

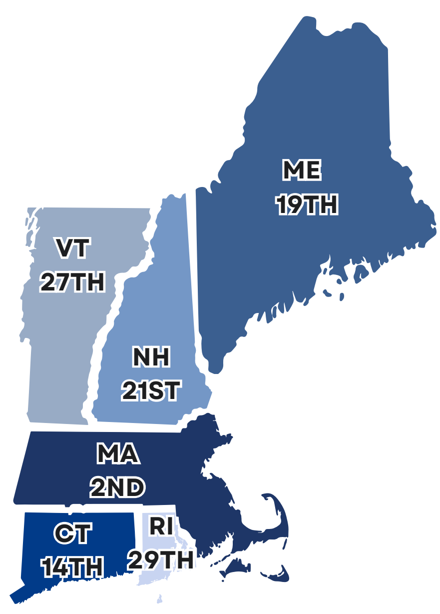
The scientific R&D location quotient has gone up since 2021.

Scientific Research & Development Location Quotient

State	Rank	2022 Value	1 Year Change	5 Year Change
MA	**2nd**	**4.56**	**2.6%**	**21.5%**
CA	5th	1.80	0.6%	8.0%
NC	11th	1.27	5.3%	13.3%
NY	12th	1.07	-2.9%	-12.5%
FL	31st	0.46	1.4%	2.3%
TX	32nd	0.45	3.8%	1.1%

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Regional Snapshot



Financial Activities Sector

The Financial Activities super-sector combines the categories of finance and insurance with real estate, rental, and leasing. This super-sector, which has been a historic strength in MA, is shrinking within the state and provides a competitiveness warning to policymakers.

MA ranks in the middle of the pack among all states for the LQ of Financial Activities at 1.02, meaning the sector is just slightly more concentrated in MA than in the nation at large. More troubling is that this sector continues to decline in MA. Over the last five years, while the sector has grown significantly in FL, TX, and NC, it has shrunk in MA. In fact, in those five years, NC and MA have switched places in the competitor state rankings for this category, with the sector now more concentrated in NC than here.

National Ranking - MA 18th

How MA is Changing

Current Data Trend ↓ **2021 Value: 1.03**

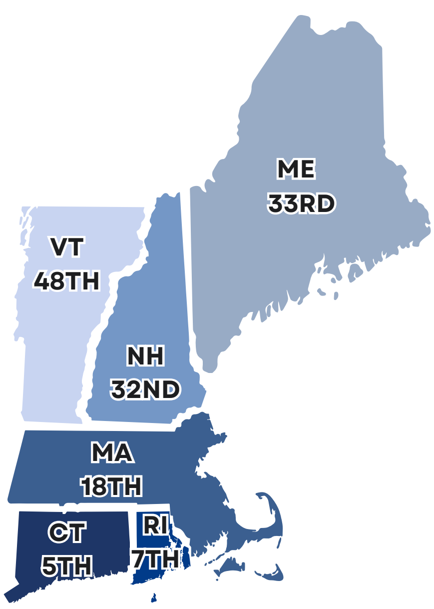
The financial activities location quotient has gone down since 2021.

Financial Activities Location Quotient

State	Rank	2022 Value	1 Year Change	5 Year Change
NY	2nd	1.36	-0.6%	-0.1%
FL	6th	1.18	1.8%	4.0%
TX	9th	1.13	1.2%	2.5%
NC	14th	1.07	3.5%	13.6%
MA	**18th**	**1.02**	**-0.7%**	**-3.0%**
CA	39th	0.82	-2.2%	-5.2%

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Note: The financial activities sector comprises the combination of two supersector industries: finance and insurance; and real estate and rental and leasing.

Regional Snapshot



DETAIL BREAKOUT

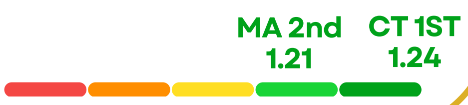
Education Services Industry

The Educational Services industry includes schools of all levels, colleges and universities, professional schools, and private educational support services. This Detail Breakout combines government jobs in education with jobs in private schools and education-related businesses.

MA is a state with a strong K-12 system and world-renowned higher education institutions. The strength of the Education sector is clearly demonstrated in our LQ, with MA ranking second nationally. Educational Services jobs are 21 percent more heavily concentrated in MA than in the nation at large.

The strength of this sector appears to be growing, as well. Over the last five years, the LQ of this sector grew more in MA than in any other competitor state. Educational Services is a competitive weakness in NC, CA, and FL.

National Ranking - MA 2nd



How MA is Changing

Current Data Trend ↑ 2021 Value: 1.19

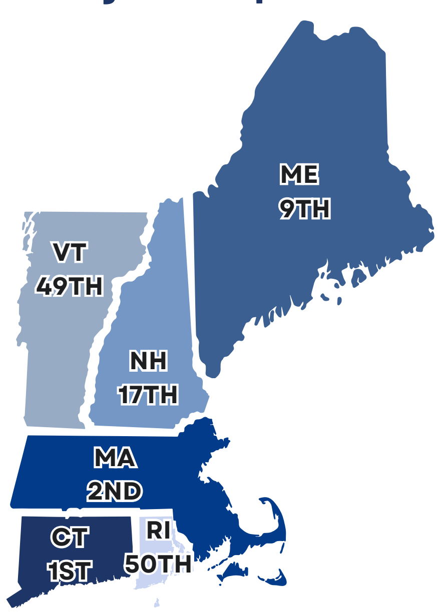
The educational services location quotient has gone up since 2021.

Educational Services Location Quotient

State	Rank	2022 Value	1 Year Change	5 Year Change
MA	**2nd**	**1.21**	**2.2%**	**6.2%**
NY	3rd	1.21	-1.1%	5.1%
TX	6th	1.13	-1.3%	-0.5%
NC	33rd	0.96	-1.0%	-4.8%
CA	34th	0.96	1.2%	-0.7%
FL	47th	0.77	-1.6%	-3.8%

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Regional Snapshot



Health Care and Social Assistance Industry

The Health Care and Social Assistance category includes laboratories, hospitals, other care facilities, family services, social service organizations, and childcare businesses. This sector is often regarded as a major pillar of MA's economy, and that is borne out by the data.

MA has the 4th highest LQ for Health Care and Social Assistance, with the industry 20 percent more concentrated in MA than in the nation on average. Among competitor states, MA ranks behind only NY and significantly ahead of other competitors. There has been a recent decline in the state's LQ – declining 2.6 percentage points over the last five years, while the LQ has continued to grow in NY and CA.

National Ranking - MA 4th

How MA is Changing

Current Data Trend ↓

2021 Value: 1.21

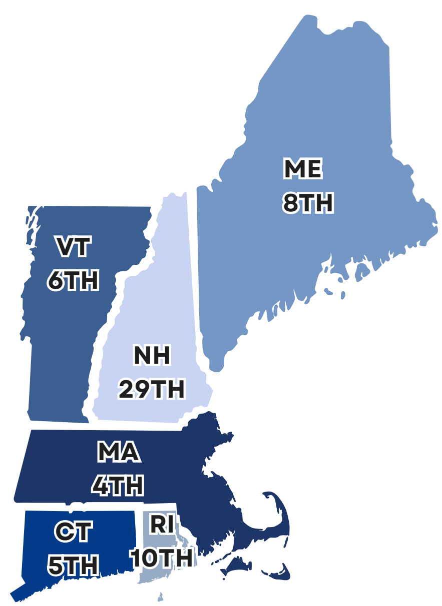
The health care and social assistance location quotient has gone down since 2021.

Health Care and Social Assistance Location Quotient

State	Rank	2022 Value	1 Year Change	5 Year Change
NY	2nd	1.26	0.4%	7.3%
MA	**4th**	**1.20**	**-0.8%**	**-2.6%**
CA	20th	1.02	0.3%	5.5%
FL	37th	0.92	0.1%	-2.0%
NC	40th	0.91	-0.7%	-4.0%
TX	42nd	0.89	-0.6%	-3.3%

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Regional Snapshot



DETAIL BREAKOUT

Invention Patents

Invention patents per 1,000 residents is an indicator of a state's innovation, and it is a key competitive strength for MA. According to the U.S. Patent and Trademark Office, MA ranks behind only CA in terms of patents per 1,000 residents, and both states rank far ahead of any other competitor state.

The innovation economy in MA also appears to be booming. The number of patents was up 14.9 percent between 2015 and 2020, the second-highest rate of growth among competitor states. One important caveat is that the most recent data is from 2020, so trends that developed or accelerated during the pandemic are not captured.

National Ranking - MA 2nd

How MA is Changing

Current Data Trend

2019 Value: 1.31

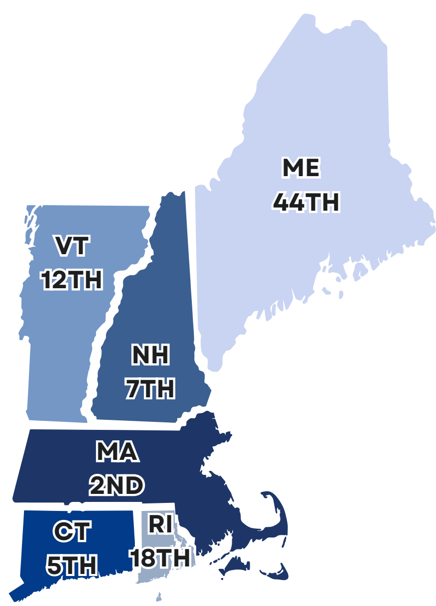
The number of patents per 1,000 residents has gone down since 2019.

Patents Per 1,000 Residents, 2020

State	Rank	2020 Value	1 Year Change	5 Year Change
CA	1st	1.28	-0.4%	11.6%
MA	**2nd**	**1.25**	**-4.6%**	**14.9%**
NY	14th	0.52	-6.3%	3.5%
TX	20th	0.45	-2.2%	17.1%
NC	24th	0.38	-8.2%	-0.1%
FL	35th	0.26	-0.8%	4.1%

Source: U.S. Patent and Trademark Office, Patent Technology Monitoring Team. U.S. Census Bureau Population Estimates.

Regional Snapshot



Venture Capital

Venture capital is used as a funding strategy for businesses, often at the beginning of their operations. It can allow a company to begin producing before it is feasible to turn a profit, and the strength of venture capital (VC) activity in a state is another indicator of innovation and emerging economic activity.

VC activity is a competitive strength for MA. According to data published by Pitchbook, MA ranked 3rd nationally in terms of VC deal value in 2022. Nominally, MA ranks third among competitor states, but this masks the state's strength. On a per capita basis, MA outperforms both CA and NY. This metric underlines the virtuous cycle that MA enjoys with its strong institutions of higher education, medical and life sciences sectors, and investment and financial services.

National Ranking - MA 3rd

MA 3rd 21,515 | CA 1st 101,595

How MA is Changing

Current Data Trend ↓ 2021 Value: 34,529

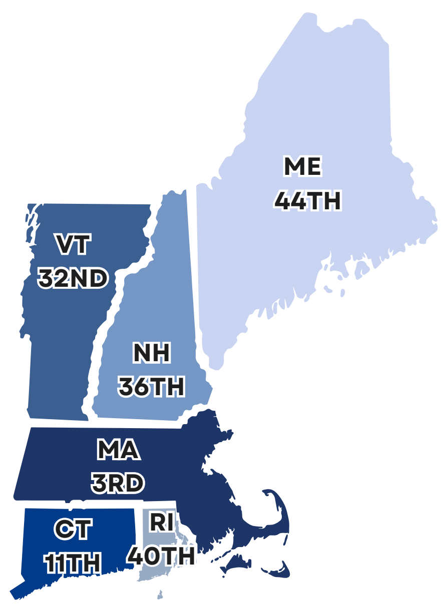
Venture capital activity has gone down since 2021.

Venture Capital Deal Value, Millions ($ 2022)

State	Rank	2022 Value	1 Year Change	5 Year Change
CA	1st	101,595	-37.5%	139.9%
NY	2nd	31,243	-36.8%	167.2%
MA	**3rd**	**21,515**	**-37.7%**	**119.7%**
TX	4th	10,744	-9.6%	207.8%
FL	6th	8,331	8.8%	438.2%
NC	10th	4,675	22.2%	325.9%

Source: Pitchbook, Deals by State.

Regional Snapshot



RESIDENT LIFE

Resident Life focuses on how the population at large experiences life in a state, covering a wide range of indicators that are intended to provide a snapshot of the factors that can impact quality of life. The measures fall broadly into two categories: indicators of quality of life and measures that assess the cost and time burdens faced by residents and families.

Massachusetts fares very well compared to our competitors on three measures that speak to quality of life. On average, Massachusetts residents have a longer life expectancy, lower rates of poverty, and access to a better education system as measured by national testing. These positive factors underline some of Massachusetts' relative advantages that have salience for policymakers. There is a virtuous interplay between our population and our sectors that has major economic and daily life benefits. This combination has to be at the foundation of Massachusetts' efforts to compete for people and investment.

Resident and family burdens tell a more negative, but not surprising, competitive story. Massachusetts asks a lot of its residents. The biggest cost residents face is housing, and the share of Massachusetts residents who are housing-burdened is one of the highest in the nation; we rank 45th amongst all states when comparing housing costs as a percent of income. However, the data also shows that housing burden is something with which most of our competitors struggle. Only North Carolina can boast that less than 30 percent of its residents have housing costs that are more than 30 percent of their income.

In addition to housing, childcare costs and commute times are two primary factors that motivate employment and location choices for residents; and both are major competitive disadvantages for Massachusetts. Families living in Massachusetts pay more for childcare and spend more time traveling to their jobs than other states. Massachusetts ranks 47th in the nation in both metrics. Among competitors, Massachusetts is dead last in childcare costs and ahead of only New York in commute time.

The story that emerges in the Resident Life category supports and amplifies the themes of this inaugural Competitiveness Index. **Massachusetts retains unique strengths that speak to the talent of our residents and the productivity of our economy, but those strengths are being eroded by high costs that make it difficult to build a life or a business.** In a time when people and organizations have never had more location options, Massachusetts cannot rely on momentum or history to ensure future success.

LIFE EXPECTANCY AT BIRTH

Life expectancy at birth measures how long, in years, the average person is expected to live and is collected by the U.S. Center for Disease Control and Prevention. The most recent data available is from 2018-2020. A rank of 1 means that a state has the highest life expectancy at birth in the country. Life expectancy at birth is a key quality of life competitiveness metric because it speaks holistically to a variety of public health, health care, environmental, and safety factors in a state.

Massachusetts Taxpayers Foundation | UMassAmherst Donahue Institute Economic and Public Policy Research | MACP Massachusetts Competitive Partnership

National Ranking - MA 4th

MA 4th 79 | HI: 1st 81

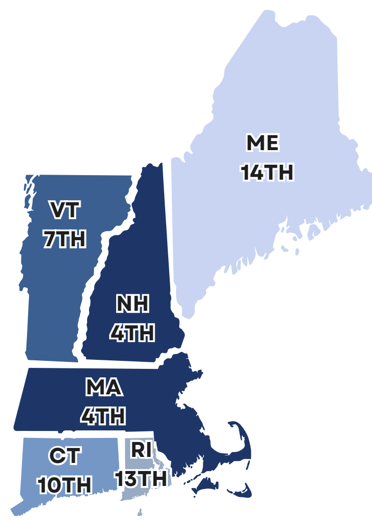
Massachusetts ranks 4th in the country for its life expectancy at birth.

How MA is Changing

Current Data Trend ↓ 2019 Value: 80

Life expectancy at birth has gone down since 2019.

Regional Snapshot



Main Takeaways

- Life expectancy is a major competitive advantage for MA nationally and among competitors, among whom MA ranks first.
- This metric does not capture pandemic- era data, which will likely reduce life expectancy, but MA's relative strength is likely to remain consistent.
- MA's strong rank speaks to widespread health care access, a well-regarded public health system, and relatively low levels of crime and environmental hazards – all quality of life benefits.

Competitor Ranking

State	Rank	2020 Value	1 Year Change
MA	**4th**	**79**	**-2%**
CA	4th	79	-2%
NY	15th	77.7	-4%
FL	19th	77.5	-2%
TX	30th	76.5	-3%
NC	35th	76.1	-2%

MA and selected competitor states ordered by rank. Most recent available is 2020. Rank is based on 2020 value.

Note: Data is not available pre-2018 so 5-year change is not included.

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics

POVERTY RATE

Poverty rate measures the number of people whose income falls below the federal poverty line, as estimated by the U.S. Census Bureau's American Community Survey. A rank of 1 means that a state has the lowest share of its population under the poverty threshold. Poverty rate is a key quality of life competitiveness metric because it speaks to the share of a state's residents living without the means to support themselves. It also indicates the level of economic hardship in a state.

Massachusetts Taxpayers Foundation | UMassAmherst Donahue Institute Economic and Public Policy Research | MACP Massachusetts Competitive Partnership

National Ranking - MA 11th

MA 11th 10.4%

NH: 1st 7.2%

Massachusetts ranks 11th in the country for the percent of its population below the federal poverty line.

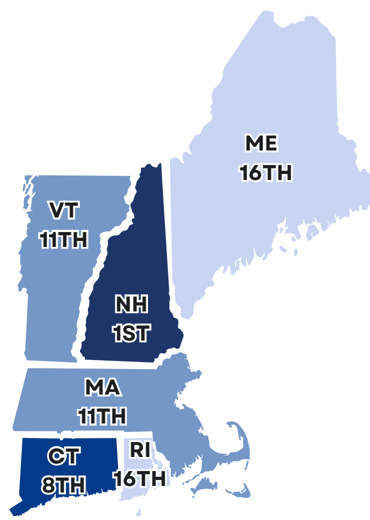
How MA is Changing

Current Data Trend

2021 Value: 10.4%

The poverty rate has remained unchanged since 2021.

Regional Snapshot



Main Takeaways

- MA does not stand out in terms of its poverty rate nationally, but it is a competitive advantage among competitor states, among whom MA ranks first.
- MA is located in a region with generally low poverty – all states in New England rank in the top 20 for the lowest poverty rate in the country, and NH ranks first.
- MA's poverty rate has increased over the last five years. NY is the only other competitor state that has not experienced a drop in its poverty rate during the same time frame.

Competitor Ranking

State	Rank	2022 Value	1 Year Change	5 Year Change
MA	**11th**	**10.4%**	**0.0%**	**0.4%**
CA	28th	12.2%	-0.1%	-0.6%
FL	33rd	12.7%	-0.4%	-0.9%
NC	35th	12.8%	-0.6%	-1.2%
TX	40th	14.0%	-0.2%	-0.9%
NY	42nd	14.3%	0.4%	0.7%

MA and selected competitor states ordered by rank. Rank is based on 2022 value.

Source: U.S. Census Bureau, American Community Survey, 1-Year, 2022.

STATE AND LOCAL TAX COLLECTIONS PER CAPITA

State and local tax collections per capita is tracked by the Tax Foundation. It is calculated as the total taxes collected by a state and its localities divided by the state's population. This provides a more holistic tax measure, covering all revenues through taxation that states and local governments collect, including income tax. To compare dollar amounts over time, tax collections have been inflation-adjusted to 2023 dollars. A rank of 1 means that a state has the lowest individual tax collections per capita. Tax collections are a key quality of life competitiveness metric because they provide a direct comparison of costs borne by residents from state to state.

Massachusetts Taxpayers Foundation | UMass Amherst Donahue Institute Economic and Public Policy Research | MACP Massachusetts Competitive Partnership

National Ranking - MA 46th

MA: 46th
$9,120

AK: 1st
$4,840

Massachusetts ranks 46th in the country for state and local taxes per capita.

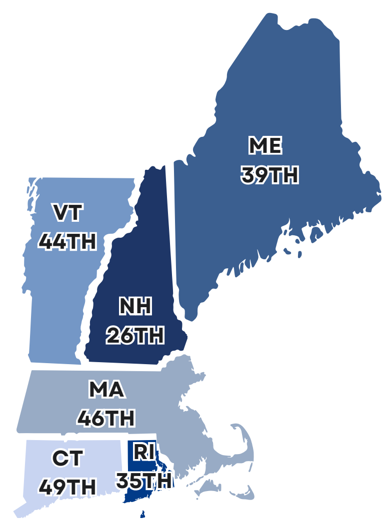
How MA is Changing

Current Data Trend

2019 Value:
$8,751

State and local tax collections per capita have gone up since 2019.

Regional Snapshot



Main Takeaways

- Taxes per capita are a major competitive disadvantage for MA nationally, ranking 46th.
- A high level of taxes can also indicate a higher level of public services, which can be a quality-of-life benefit for states.
- Among competitors, MA fares better than CA and NY, but far behind FL, TX, and NC.
- These values are from 2021, prior to the implementation of the state's income surtax and 2023 tax relief legislation. Combined, these changes will likely worsen MA's rankings.

Competitor Ranking

State	Rank	2021 Value	Recent Change*	5 Year Change
FL	4th	$4,879	2.7%	10.5%
TX	15th	$5,422	-3.4%	6.2%
NC	18th	$5,464	7.7%	9.8%
MA	**46th**	**$9,120**	**4.2%**	**11%**
CA	48th	$10,378	18.9%	34.5%
NY	50th	$11,672	-4.1%	2.6%

*MA and selected competitor states ordered by rank. Most recent available is 2021. *Note: Fiscal Year 2020 is not reported, and so recent change denotes change from 2019 to 2021. Rank is based on 2021 value.*

Source: The Tax Foundation

8TH GRADE READING/MATH TEST SCORES

Reading and math test scores are measured using states' average National Assessment of Educational Progress (NAEP) reading and math scores of eighth grade students. A rank of 1 means that a state has the highest average reading or math scores for eighth grade students. K-12 education scores are a key quality of life competitiveness metric because they speak to the quality of an education system, which families value, and indicate the strength of the future labor force.

National Ranking - MA 2nd/1st

MA: 2nd/1st
Reading - 269 / Math - 284

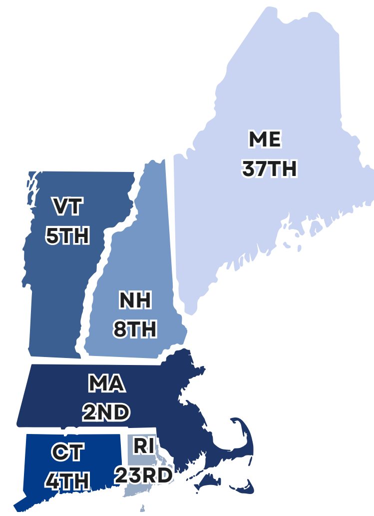
Massachusetts ranks 2nd in reading and 1st in math 8th grade test scores in the country.

How MA is Changing

Current Data Trend ↓ 2019 Value: 273/294

8th grade reading and math test scores have gone down since 2019.

Regional Snapshot



Main Takeaways

- 8th grade NAEP scores are a major competitive advantage for MA nationally and among competitor states.
- For the last two decades, MA has consistently ranked first or second in both assessments each year, demonstrating the comparative strength of its K-12 school system.
- The gap in the quality of schools among competitor states is particularly striking, with the next closest competitor (NY) ranking 13th in reading and 23rd in math.
- Good schools provide a strong inducement for families to live in a community and contribute to MA's future talent base.

Competitor Ranking

State	Reading Rank	Reading Value	Math Rank	Math Value
MA	**2nd**	**269**	**1st**	**284**
NY	13th	262	23rd	274
FL	21st	260	24th	274
CA	29th	259	25th	273
NC	40th	256	32nd	271
TX	41st	255	38th	270

MA & selected competitor states ordered by rank. Most recent available is 2022. Ranks are based on 2022 values.
**Note: Recent change is calculated from 2019-2022, as 2021 data is not available.*
Source: National Center for Education Statistics: National Assessment of Education Progress

HOUSING COST BURDEN

Housing cost burden reflects the relationship between income and the amount paid for housing. A household is considered housing cost-burdened if 30 percent or more of its income is spent on housing. Data from the U.S. Census Bureau's American Community Survey is available for three types of households: owner-occupied (with a mortgage), owner-occupied (without a mortgage), and renter-occupied. The data presented below is the combination of these three categories to represent the cost burden proportion of all households. A rank of 1 means that a state has the lowest percentage of households who are housing cost burdened. Housing burden is a key quality of life competitiveness metric because it indicates whether or not residents can afford to live in a state.

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National Ranking - MA 45th

MA: 45th
36.5%

WV: 1st
22.3%

Massachusetts ranks 45th in the country for its housing cost burden.

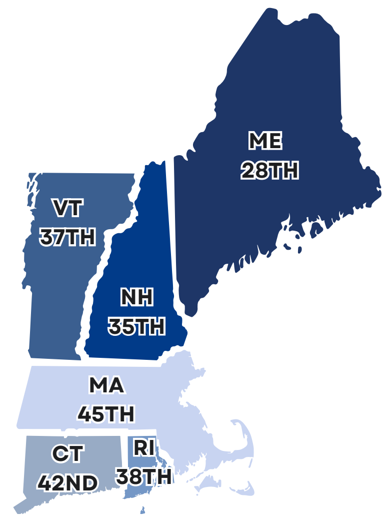
How MA is Changing

Current Data Trend

2021 Value: 35.4%

The housing cost burden has gone up since 2021.

Regional Snapshot



Main Takeaways

- Housing burden is a major competitive disadvantage for MA nationally.
- MA does not stand out among competitor states, ranking behind NC and TX, but ahead of FL, NY, and CA.
- More than one-third of MA residents are required to spend more than 30 percent of their income on housing – despite MA having the highest average wage in the nation.
- With remote work much more common, MA's high housing cost is likely a prime contributor to increasing numbers of young working-age residents leaving the state.

Competitor Ranking

State	Rank	2022 Value	1 Year Change*	5 Year Change*
NC	22nd	28.3%	-0.2%	0.1%
TX	39th	33.8%	1.3%	3.4%
MA	**45th**	**36.5%**	**1.1%**	**1.6%**
FL	47th	37.4%	1.1%	1.5%
NY	48th	38.9%	0.2%	-0.1%
CA	50th	41.9%	0.2%	-0.3%

*MA and selected competitor states ordered by rank. Most recent available is 2022. *Note: recent change and 5-year change are percentage point change, not percent change. Most recent data available is 2022.*

Source: U.S. Census Bureau, American Community Survey, 1-Year Estimates. Table DP04.

COMMUTE TIME

The U.S. Census Bureau American Community Survey estimates the average commute time to work in minutes. A rank of 1 indicates that a state has the shortest average commute time. Commute time is a key quality of life competitiveness metric because it compares the lost time a worker faces from state to state and can be a major factor in location decisions.

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National Ranking - MA 47th

MA: 47th
28.6 min

WV: 1st
18 min

Massachusetts ranks 47th in the country for its commute time.

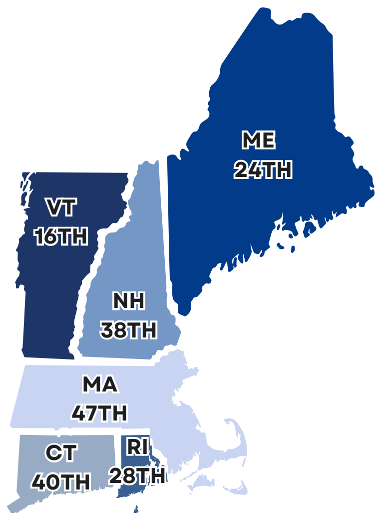
How MA is Changing

Current Data Trend

2021 Value: 27.5

Commute times have gone up since 2021.

Regional Snapshot



Main Takeaways

- Commute time is a major competitive disadvantage for MA nationally and among competitor states.
- It is worth noting that all competitor states rank in the bottom half nationally, and four rank 44th or worse.
- In MA, commute time is primarily a function of traffic, as opposed to distance traveled. Boston ranks as having the 8th worst traffic in the world according to the most recent Inrix Global Traffic Scorecard.
- While not a financial metric, traffic adds to the weight of evidence that MA is a costly state for residents in time and money, a major concern when people are more mobile than ever.

Competitor Ranking

State	Rank	2022 Value (minutes)	1 Year Change	5 Year Change
NC	27th	25.1	2.5%	0.8%
TX	38th	26.7	3.1%	0.8%
FL	44th	28.0	3.3%	0.7%
CA	46th	28.3	2.5%	-5.0%
MA	**47th**	**28.6**	**4.0%**	**-4.0%**
NY	50th	33.0	5.1%	-2.1%

MA and selected competitor states ordered by rank. 2022 is the most recent available. Rank is based on 2022 value.

Source: U.S. Census Bureau, American Community Survey, 1-Year Estimates. Table S0801.

CHILDCARE COST

Childcare cost is measured as the average cost paid for childcare by a family with at least one child younger than school age, as collected by the U.S. Department of Labor Women's Bureau. The most recent available data is from 2018 and CO, IN, and NM do not have sufficient data to be included. A rank of 1 indicates the state with the least expensive average childcare cost. Childcare cost is a key quality of life competitiveness metric because it is a comparison of one of the primary childrearing costs between states, a cost which could have a major effect on location decisions.

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National Ranking - MA 47th

MA: 47th
$17,309

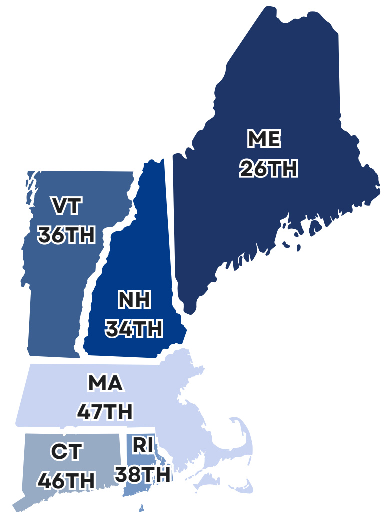
MS: 1st
$4,365

Massachusetts ranks 47th out of 47 states for the average cost families pay for childcare.

Current Data Trend

N/A: only 2018 data available

Regional Snapshot



Main Takeaways

- While the most recent DOL data available is somewhat dated, MA's relative costliness is consistent with a 2023 analysis published by the Annie E. Casey Foundation.
- MA ranks lowest among its competitors, with childcare costs more than double the highest-ranked state, FL.
- MA is even notably worse than its closest competitor (NY), more than $2,000 more expensive per child.
- Childcare cost differentials partially reflect wage differences between states, but given MA's relatively high GINI Coefficient, this means that a large share of the population likely cannot afford childcare.

Competitor Ranking

State	Rank	2018 Value
FL	16th	$8,731
TX	18th	$8,804
NC	23rd	$9,590
CA	43rd	$14,432
NY	45th	$15,198
MA	**47th**	**$17,309**

MA and selected competitor states ordered by rank. 2018 is the most recent available, however, dollars are adjusted to 2022 dollars. Rank is based on 2018 value.

Source: U.S. Department of Labor Women's Bureau: National Database of Childcare Prices.

Methodology

To provide nuance, an index approach was chosen that does not boil down to one number, but rather explores several important categories and measures to summarize the competitiveness of the Massachusetts economy compared to other states and against itself over time. Four broad categories: Economic Health; Population and Labor Force Trends; Business, Employment, and Investment Factors; and Resident Life – were selected to cover different aspects of the economy that might impact the choice to start a business or work in Massachusetts versus another state.

Measures were chosen by gathering sources used in similar index constructions and considering important data points in gauging the competitiveness of Massachusetts as compared to other states. In addition, in selecting measures, we prioritized measures that were current, updated regularly, and available for all states. The measures were discussed with outside experts to ensure completeness. In cases where the data does not meet all of these selection criteria, but the metric was included to better understand the competitiveness of the economy, the exceptions are noted.

There were some topics that were considered, but not included, due to not being reliably measurable. Regulatory burden is an example of this. It is difficult to measure due to regional differences and challenges in creating a unified interpretation of legislation, particularly for comparison across states. However, the breadth of other metrics included is intended to provide a sense of larger competitiveness factors, such as regulatory burden.

The following table lists and describes each measure in detail, in sections organized for the four broad categories of Economic Health; Population and Labor Force Trends; Business, Employment, and Investment Factors; and Resident Life, along with the reason for inclusion or exclusion and its source.

Measure	Description	Why Measure is Included	Source
Economic Health			
Gross State Product per Capita	Gross State Product is reported by the Bureau of Economic Analysis by state. GSP refers to the total value of goods and services produced within a state. This was divided by the total population of the state from the U.S. Census Bureau to get a per capita value.	Gross state product speaks to the competitiveness of the state economy's productiveness.	Bureau of Economic Analysis & U.S. Census Bureau
Average Weekly Wage	Average weekly wage is reported by the Bureau of Labor Statistics in the Quarterly Census of Employment and Wages. The dollar values were adjusted to 2023 values using the Bureau of Labor Statistics Consumer Price Index. Average weekly wage refers to the average wage earned per week across all occupations in the state.	The average wage relates to a state's labor market competitiveness for attracting workers.	Bureau of Labor Statistics
Regional Price Parity (Cost of Living)	Regional Price Parity is reported by the Bureau of Economic Analysis by state. It measures the difference in price levels across states as an estimate for cost of living.	The regional price parity speaks to a state’s labor market competitiveness in terms of workers being able to afford to live there.	Bureau of Economic Analysis
GINI Index	The GINI index is a measure of income inequality. It is reported in the US Census American Community Survey. Also known as the GINI coefficient, this statistic is based on the evenness of the distribution of income, and it ranges from 0 to 1, indicating total equality at its lowest and total inequality at the maximum. In other words, a value of 0 represents a scenario in which everyone receives an equal share of income, while a value of 1 represents a scenario in which a single household or individual receives all the income.	The GINI index speaks to a state's labor market competitiveness in that it provides insight into the general economic position of different parts of the workforce of a state, providing detail on the distribution of income beyond the overall total or average income.	U.S Census Bureau

Measure	Description	Why Measure is Included	Source
Economic Health			
Number of Businesses per Capita	The estimate of the total number of businesses was determined by combining the U.S. Census Bureau Non-Employer Statistics estimate of non-employer businesses with the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages estimate of employer businesses. This was then divided by the state population estimate from the U.S. Census Bureau.	The number of businesses per capita speaks to a state's business climate competitiveness because it shows how many businesses, on average, are able to exist relative to population density.	U.S. Census Bureau & U.S. Bureau of Labor Statistics
Population & Labor Force Trends			
Labor Force Participation Rate	The Bureau of Labor Statistics reports monthly labor force participation rate by state through the Local Area Unemployment Statistics dataset. This measure represents the proportion of the working-age population engaged in the labor force.	This was included because it reflects a state's competitiveness for those assessing the potential talent available and work activity among its residents.	U.S. Bureau of Labor Statistics
Domestic Migration	The U.S. Census Population Estimates Program produces annual measures on the components of population change by state. Domestic migration measures the inter-state moves to and from any particular state as a percentage of that state's population; this rate is negative if more residents moved away from rather than to the state, and is positive if more residents moved to rather than away from the state.	This measure can reflect competitiveness in attracting residents, and therefore the ability for a state to grow its tax base as well as its labor force and state gross domestic product.	U.S. Census Bureau
International Migration	The U.S. Census Population Estimates Program produces annual measures on the components of population change by state. International migration measures the number of moves to the state originating from outside the U.S. as a percentage of that state's population.	This rate can indicate competitiveness through an increasing labor force as well as competitiveness in attracting foreign talent through universities and in specialized fields such as technology.	U.S. Census Bureau
Natural Population Change	The U.S. Census Population Estimates Program produces annual measures on the components of population change by state. Natural population change refers to the number of births minus the number of deaths that occur in the state as a percentage of that state's population, and is positive if the number of births outweighs the number of deaths, and is negative if deaths outweigh births.	Natural change is one component of population change (the other being migration) and can contribute to competitiveness by increasing the size of the labor force.	U.S. Census Bureau

Measure	Description	Why Measure is Included	Source
Population & Labor Force Trends			
Percentage of Population Over 65 Years Old	The U.S. Census reports the share of the population that is over 65 years old. This population is generally excluded from the labor force.	This was included as a refinement of overall population total measures because it affects the share of the population that is available to work.	U.S. Census Bureau
Population 25 Years+ with a Bachelor's Degree or More	The U.S. Census American Community Survey reports on educational attainment. The percent of the population over 25 with at least a bachelor's degree is taken from this data.	This is included because it is an important indicator for the evaluation of the workforce.	U.S. Census Bureau
Unemployment	The Bureau of Labor Statistics Local Area Unemployment Statistics reports the unemployment rates by state. The unemployment rate represents the share of the population that is not currently employed, are looking for work, and are within the benefit period after their job loss. Essentially those who are collecting unemployment benefits.	This is included because it is an important consideration for the general health of the job market and workforce as it represents layoffs and the ability of workers to find new employment.	U.S. Bureau of Labor Statistics
Labor Force Size, Five-Year Percent Change	The Bureau of Labor Statistics reports monthly labor force by state through the Local Area Unemployment Statistics dataset. This measure reflects the change in the overall labor force over the previous five years.	Change in the size of the labor force can be used as a gauge of the relative trajectory of a state's workforce growth, including labor's recovery from the COVID-19 pandemic.	U.S. Bureau of Labor Statistics
Detail Breakout: Migration by Income Level	Domestic migration by income at the state level can be computed using the U.S. Census American Community Survey Public Use Microdata Sample (PUMS), available via IPUMS. This person-level dataset includes characteristics on what state a person currently lives in; if they moved in the past year; what state they lived in previously; as well as information on family incomes.	This detail breakout categorizes movers by income groups (this analysis looked specifically at family incomes above $250,000) to identify which states are attracting high-income households and which states are losing high-income households.	U.S. Census Bureau
Detail Breakout: Job-to-Job Interstate Flows	The U.S. Census Bureau provides estimates of state-to-state migration of job holders including an industry detail through the interactive tool called the Job-to-Job Explorer. This tool uses the Longitudinal Employer-Household Dynamics dataset from the Census.	This detail breakout informs competitiveness by providing more detail on where Massachusetts workers are relocating. Worker net migration is calculated by subtracting workers who moved to a job in Massachusetts from workers who moved from Massachusetts for another job.	U.S. Census Bureau

Measure	Description	Why Measure is Included	Source
Business, Employment, & Investment Factors			
Average Employer UI Tax Amount per Covered Employee	The average employer UI tax amount per covered employee is reported in the Department of Labor Employment and Training Administration Tax Measure annual reports. Taxable wage caps and benefits offered vary across states.	The average UI tax paid by employers relates to a state's business cost competitiveness and is an outcome of the state's regulations.	U.S. Department of Labor Employment and Training Administration
Energy Cost	Energy cost is reported as an overall annual average price by the U.S. Energy Information Administration. It is measured in cents per kilowatt hour.	The energy cost relates to a state's business cost competitiveness, as well as labor market competitiveness related to the cost of living for workers.	U.S. Energy Information Administration
Corporate Income Tax Collections per Capita	Corporate income tax collections per capita are reported by the Tax Foundation. NV, TX, WA, WY, OH, and SD are not included because they do not use a corporate income tax structure.	The average corporate income tax paid by employers relates to a state's business cost competitiveness, but higher taxes may contribute to a state's labor market competitiveness in that it affects the level of service provided in the state.	The Tax Foundation
Health Insurance Paid by Employer	Health insurance paid by employer is reported by the Kaiser Family Foundation. It refers to the average employer contribution to health insurance premiums paid by the employer per covered employee.	Health insurance paid by employers is an indicator of business cost competitiveness.	The Kaiser Family Foundation
Business Formations per Employer Business	Business formations in the last four quarters are reported by the U.S. Census Bureau in their Business Formation Statistics. This is divided by the number of employer businesses as reported by the Bureau of Labor Statistics Quarterly Census of Employment and Wages. Business formations are measured by the first instance of payroll tax liabilities associated with a business application.	The number of businesses per capita speaks to a state's business climate competitiveness because it shows how many new businesses on average are able to expand to become employer businesses relative to the total number of businesses.	U.S. Census Bureau and Bureau of Labor Statistics
Research & Development Funding as a Share of Gross State Product	Research and development funding as a share of GSP is reported by the National Science Foundation. It compares the funding the state has for R&D compared with the size of its overall economy.	This is included because it gives insight into an important sector of the economy that businesses might be able to gain funding from. It relates to business climate competitiveness.	National Science Foundation

Measure	Description	Why Measure is Included	Source
Business, Employment, & Investment Factors			
Detail Breakout: Industry Employment Concentration	The Location Quotient is a metric used to measure an industry's regional concentration within the United States. It is expressed as a ratio of a particular industry's concentration of employment in a particular state divided by that industry's employment concentration in the United States overall. States with a high concentration in a particular industry can be more competitive in attracting new, similar businesses or in creating new spin-off industries in related fields. The Bureau of Labor Statistics reports employment by industry through the Quarterly Census on Employment and Wages (QCEW) for the nation and for all states.	These detail breakouts provide a sense of the economic sectors and industry on which Massachusetts has historically relied and how those industries are changing within Massachusetts.	U.S. Bureau of Labor Statistics
Detail Breakout: Invention Patents	The U.S. Patent and Trademark Office reports the number of patents granted annually by state. Dividing these patent counts by states' populations from the U.S. Census can give us the number of patents per 1,000 residents for all states.	This detail breakout shows the density of patents in a way that accounts for differences in population.	U.S. Patent and Trademark Office
Detail Breakout: Venture Capital	Venture capital funding by state is tracked by the company Pitchfork. This measure can inform competitiveness in certain fields within professional and technical services, as well as for technology companies and in financial activities.	This detail breakout is included because states that attract more venture capital may have attracted and leveraged more of this funding to start new businesses or expand existing operations.	Pitchbook
Resident Life			
Life Expectancy at Birth	The U.S. Center for Disease Control and Prevention reports on life expectancy at birth. The most recent available data is from 2020. It measures the number years the average infant is expected to live.	This is included because it gives insight into health factors for the population and workforce living in a state. It is an outcome of health risks from environmental factors as well as personal risk, and access to care and other resources.	U.S. Center for Disease Control and Prevention
Poverty Rate	The U.S. Census American Community Survey reports poverty rate. This refers to the share of people whose income falls below the poverty threshold. The Census Bureau poverty thresholds are consistent across states, but vary based on family size and age of the householder.	Poverty rate gives a better understanding of economic hardship at the state level. It informs the cost competitiveness of a state for the labor market.	U.S. Census Bureau

Measure	Description	Why Measure is Included	Source
Resident Life			
State & Local Tax Collections per Capita	The Tax Foundation reports per capita state and local tax collections in each state. It refers to the total taxes collected by states and localities divided by the state's population.	This measure gives insight into the tax burden on individuals living in a state. It relates to the cost competitiveness in the state.	The Tax Foundation
8th Grade Reading/Math Test Scores	The National Center for Education Statistics reports average scores by state on the National Assessment of Educational Progress for reading and math.	This measure is an evaluation of the quality of education in the state, which can affect a worker's choice to locate there if they have children.	National Center for Education Statistics
Housing Cost Burden	Housing cost burden is reported by the U.S. Census Bureau American Community Survey. It refers to the share of the population that spends 30 percent or more of their income on housing. It includes owner-occupied and renter-occupied households.	This measure indicates the share of a state's population facing financial strain to afford housing. The cost of housing can be a key competitiveness factor in location choices.	U.S. Census Bureau
Commute Time	The U.S. Census Bureau American Community Survey reports the average commute time for workers by state (in minutes). Lower commute times correspond to a more competitive rank, assuming workers prefer shorter commutes, and that shorter commutes are better for worker productivity. This measure also relates to the quality of life in a state, assuming that longer commute times correspond to more traffic congestion or workers being located further from job sites (both of which can lead to lower quality of life for residents).	This is included because it is an important consideration for workers and can affect both the quality of residential life of workers in and of itself as well as housing choices, a key expense. It is a factor in the cost competitiveness of a state for the labor market, and informs location choices for workers.	U.S. Census Bureau
Childcare Cost	Childcare cost is reported by the U.S. Department of Labor Women's Bureau National Database of Childcare Prices. The most recent is 2018. It is measured as the average of the cost paid for childcare for a family with at least one child younger than school age.	This is included because it is an important consideration for workers who plan to or already have children. It is a major cost for these workers.	U.S. Department of Labor