THE IMPACT OF RIGHT TO WORK LAWS ON STATE ECONOMIES



Prepared for

Virginia Chamber of Commerce

MANGUM economics®

4510 COX ROAD, SUITE 202
GLEN ALLEN, VIRGINIA 23060
804-322-7777

MANGUMECONOMICS.COM

JANUARY 2026

About Mangum Economics, LLC

Mangum Economics is a Glen Allen, Virginia based firm that was founded in 2003. Since then, we have become known as a leader in industry analysis, economic impact assessment, policy and program evaluation, and economic and workforce strategy development. The Mangum Team specializes in producing objective and actionable quantitative economic research that our clients use for strategic decision making in a variety of industries and environments. We know that our clients are unique, and that one size does not fit all. As a result, we have a well-earned reputation for tailoring our analyses to meet the specific needs of specific clients, with a specific audience.

Most of our research falls into four general categories:

- **Economic Development and Special Projects:** The Mangum Team has performed hundreds of analyses of proposed economic development projects. The Mangum Team has also authored multiple economic development plans, including identifying industry recruitment opportunities created by the high-speed MAREA and BRUSA sub-sea cable landings in Virginia Beach.
- **Energy:** The Mangum Team has produced analyses of the economic and fiscal impact of over 29 GW of proposed solar, wind, battery, and hydro projects spanning eighteen states. Among those projects was Dominion's 2.6 GW Coastal Virginia Offshore Wind project off of Virginia Beach. In addition, the Mangum Team has also performed economic and fiscal impact analyses for the natural gas, nuclear, oil, and pipeline industries.
- **Information Technology:** Working with some of the largest names in the business, the Mangum Team has produced analyses of the economic and fiscal impact of data centers at the state and local level across the country.
- **Policy Analysis:** The Mangum Team also has extensive experience in identifying and quantifying the intended and unintended economic consequences of proposed legislative and regulatory initiatives.

The Project Team

Fletcher Mangum, Ph.D., *Founder and CEO*

Connor Wills, M.A., *Research Analyst*

Katharine DeRosa, M.A., *Research Analyst*

Table of Contents

Executive Summary

In this report, we provide an empirical analysis of the impact that Right to Work (RTW) laws have on state economies and use that analysis to project the potential economic consequences if Virginia's RTW law was repealed.

The most salient findings from that analysis are:

1) **In advance of the 2026 General Assembly session, a bill was filed that would repeal all sections of the Code of Virginia pertaining to RTW:**
    - In general, RTW laws support an individual's right to work by prohibiting compulsory union membership, compulsory payment of union dues, or compulsory payment of agency fees, as a precondition of employment. Agency fees are charges that employees are required to pay to a union for the cost of collective bargaining and representation, even if they choose not to join the union.
    - In recent years, union activities have increasingly shifted from collective bargaining to political activism and political campaigns. According to a recent report, the country's four largest unions spent $915 million to fund those efforts in the 2024 election cycle alone.
    - As a result, concerns have arisen that agency fees constitute a form of compelled political speech. In 2018, those concerns led the U.S. Supreme Court to rule in *Janus v. American Federation of State, County, and Municipal Employees*, that agency fees were unconstitutional in the public sector.
    - As currently written, Virginia's RTW law prohibits both union membership, and the payment of union dues or agency fees as a precondition of employment.
2) Virginia's economy was slow to recover from the COVID-19 pandemic:
    - Over the five-year period from 2019 through 2024, only four out of ten of Virginia's major industry sectors outperformed the national average in employment growth: Professional and Business Services, Information, Manufacturing, and Natural Resources and Mining.
    - However, over that same period, seven out of ten of Virginia's major industry sectors outperformed the national average in wage growth: Leisure and Hospitality; Other Services; Construction; Financial Activities; Trade, Transportation, and Utilities; Education and Health Services; and Natural Resources and Mining.
3) Nationally, union membership has been steadily declining:
    - Between 2001 and 2024, the percentage of employees represented by unions in the private sector declined from 9.7 percent to 6.7 percent.
    - Between 2001 and 2024, the percentage of employees represented by unions in the government sector declined from 41.4 percent to 35.7 percent.

4) RTW laws have a long history.

- The National Labor Relations Act (NLRA), also known as the Wagner Act, was enacted in 1935. The NLRA granted private sector workers the right to organize if a majority of those workers voted for union representation.
- In 1947, Congress enacted the Taft-Hartley Act which, among other things, amended the NLRA to provide protections for the minority of workers who chose not to be represented by a union. That provision provided the legal basis for states to enact RTW laws.
- Virginia was among the earliest enactors, with legislation signed into law in 1947.
- Currently 26 states have RTW laws. Recent additions include Kentucky (2017), West Virginia (2016), Wisconsin (2015) and Indiana (2012).
- To date, Michigan is the only state to ever have repealed its RTW law.

5) Our analysis of the comparative economic performance of RTW and non-RTW states shows that RTW states **outperform non-RTW states across a wide range of economic metrics:**

- Between 2010 and 2023, RTW states experienced a cumulative net in-migration of 7.2 million people, while non-RTW states experienced a cumulative net out-migration of 7.1 million people.
- In the first three years of the post-pandemic recovery period (2021 to 2023), RTW states experienced a cumulative net in-migration of 2.5 million people, while non-RTW states experienced a cumulative net out-migration of 2.5 million people.
- Between 2001 and 2024, RTW states outperformed non-RTW states in average year-over-year growth in:
  - Real Gross State Product by 2.3 percent to 1.8 percent.
  - Real Personal Income by 2.4 percent to 2.0 percent.
  - Total Private Establishments by 2.2 percent to 1.4 percent.
  - Total Private Employment by 1.0 percent to 0.5 percent.
  - Total Private Annual Wages by 3.5 percent to 3.2 percent
  - Total Private Manufacturing Employment by minus 0.3 percent to minus 1.5 percent.
  - Total Private Manufacturing Annual Wages by 3.2 percent to 2.9 percent.
  - Total Private Construction Employment by 1.3 percent to 0.4 percent.
  - Total Private Construction Annual Wages by 3.6 percent to 3.1 percent.

6) **Using the above differentials to project where Virginia would be in ten years if it grew at the average year-over-year rate of non-RTW states over the 2001 to 2024 period, instead of the average year-over-year rate of RTW states, shows that:**

- Real Gross State Product would be $36.8 billion lower than it otherwise could be.
- Real Personal Income would be $25.8 billion lower than it otherwise could be.
- Total Private Establishments would be 28,986 establishments lower than they otherwise could be.
- Total Private Employment would be 180,181 jobs lower than it otherwise could be.
- Total Private Annual Wages would be $3,134 a year lower than they otherwise could be.
- Total Private Manufacturing Employment would be 26,821 jobs lower than it otherwise could be.
- Total Private Manufacturing Annual Wages would be $2,922 per year lower than they otherwise could be.
- Total Private Construction Employment would be 21,170 jobs lower than it otherwise could be.
- Total Private Construction Annual Wages would be $5,297 a year lower than they otherwise could be.

7) **In short, the repeal of Virginia's RTW law, or even the amendment of the law to allow unions to collect agency fees from non-union members, would likely have substantial and long-term negative consequences for Virginia's economy.**

Introduction

In this report, we provide an empirical analysis of the impact that Right to Work (RTW) laws have on state economies and use that analysis to project the potential economic consequences if Virginia's RTW law was repealed. This report was commissioned by the Virginia Chamber of Commerce and produced by Mangum Economics.

The Issue

In advance of the 2026 General Assembly session, a bill was filed that would repeal all sections of the Code of Virginia pertaining to RTW.[1] In the remainder of this report we use data from all fifty states to provide an empirical analysis of the economic consequences that would likely follow from the repeal of Virginia's long-standing RTW law.

In general, RTW laws support an individual's right to work by prohibiting compulsory union membership, compulsory payment of union dues, or compulsory payment of agency fees, as a precondition of employment. Agency fees are charges that employees are required to pay to a union for the cost of collective bargaining and representation, even if they choose not to join the union.

As currently written, Virginia's RTW law prohibits both union membership and the payment of union dues or agency fees as a precondition of employment. More specifically, as stated in the Code of Virginia:

> *§ 40.1-60: No person shall be required by an employer to become or remain a member of any labor union or labor organization as a condition of employment or continuation of employment by such employer.*
>
> *§ 40.1-62: No employer shall require any person, as a condition of employment or continuation of employment, to pay any dues, fees or other charges of any kind to any labor union or labor organization.*

The latter of these two prohibitions has gained significance in recent years as the focus of union activities has increasingly shifted from collective bargaining to political activism and political campaigns. According to a recent report, the country's four largest unions spent $915 million to fund those efforts in the 2024 election cycle alone.[2] As a result, concerns have arisen that agency fees and even union

[1] Senate Bill 32, would repeal §§ 40.1-58 through 40.1-69 of the Code of Virginia relating to abridgement or denial of the right to work.

[2] A recent report by the Commonwealth Foundation found that the U.S.'s four largest unions (*i.e.*, National Education Foundation, American Federation of Teachers, Service Employees International, and the American Federation of State, County, and Municipal Employees) spent $915 million on political activism during the 2024 election cycle, with 86 percent of that total coming from member dues. *See*, David Osborne, "How Government Unions Fund Politics Across the Country," Commonwealth Foundation, December 2025.

dues, constitute a form of compelled political speech. In 2018, those concerns led the U.S. Supreme Court to rule in *Janus v. American Federation of State, County, and Municipal Employees*, that agency fees were unconstitutional in the public sector. However, as of now, agency fees are still allowed in the private sector.

Background

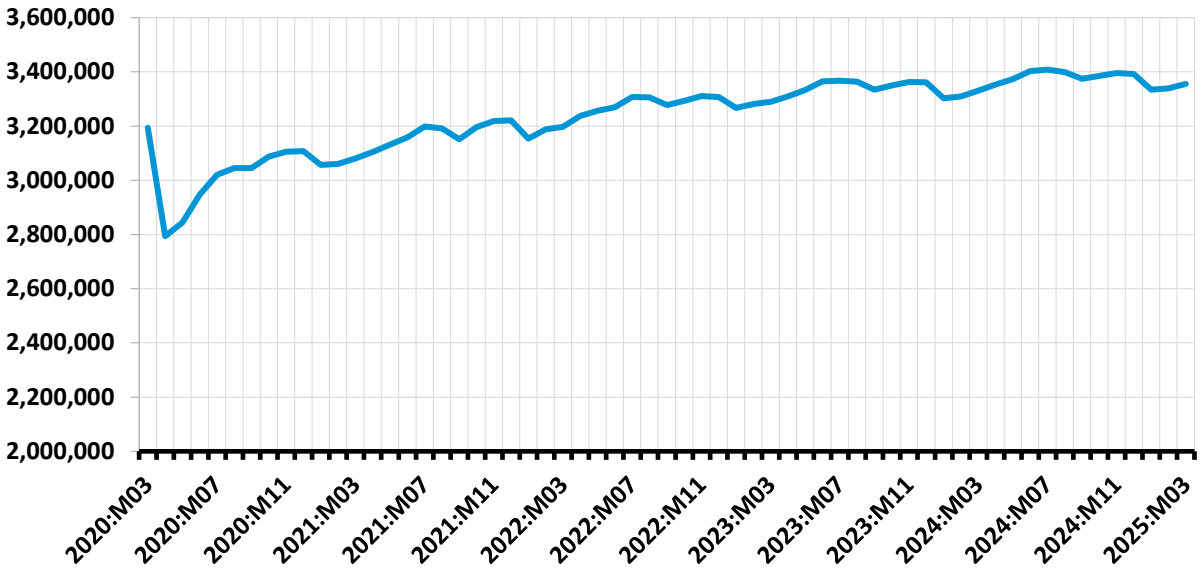
To provide a context for the analysis to follow, in this section we provide background information on Virginia's current economic performance, the direction of national trends in unionization, the history of RTW laws, and a brief summary of existing research on the economic effects of RTW laws.

Recent Trends in Virginia's Economy

Total Employment

Figure 1 depicts total private sector employment in Virginia, over the five-year period from March 2020 through March 2025. The sharp dip in employment shown in early-2020 is attributable to the COVID-19 pandemic. However, by mid-2021 Virginia had recovered to its pre-pandemic employment level. Overall total private employment in Virginia grew by 5.1 percent, as compared to a 5.5 percent growth rate at the national level over the period.

Figure 1: Total Private Sector Employment in Virginia – March 2020 to March 2025[3]

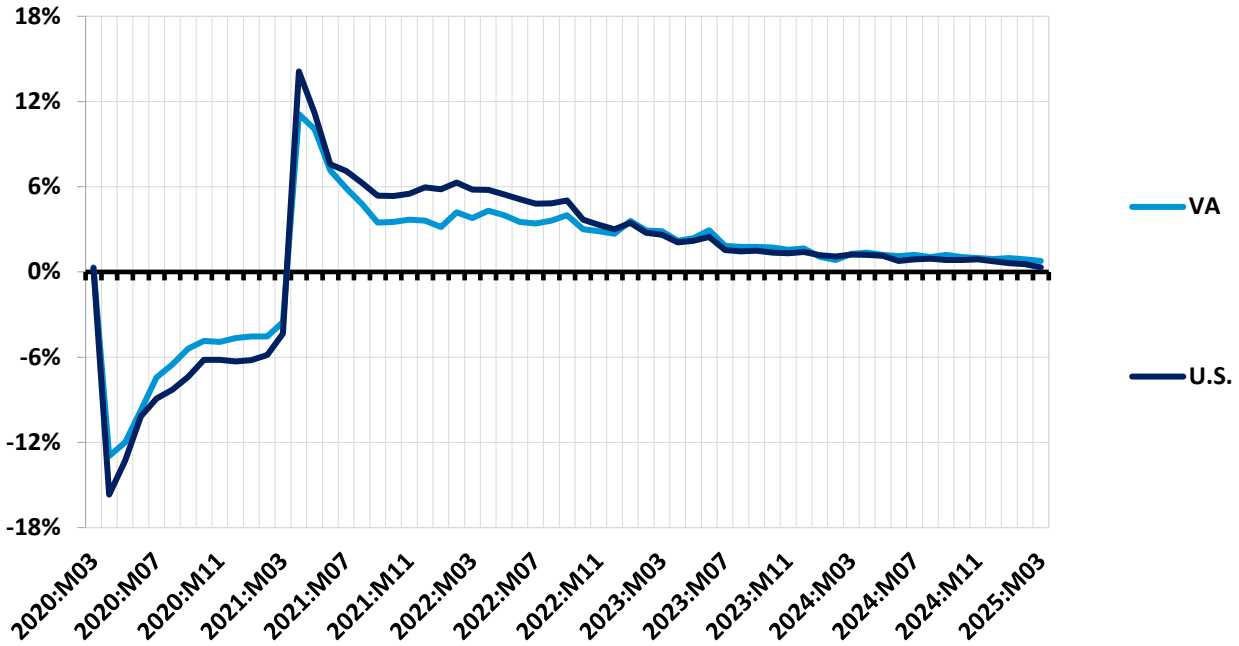


[3] Data Source: U.S. Bureau of Labor Statistics.

To control for seasonality and provide a point of reference, Figure 2 compares the year-over-year change in total employment in Virginia to that of the U.S. over the same five-year period. Virginia is represented by the light blue line, and the U.S. is represented by the dark blue line. Any point above the zero line in this graph indicates an increase in employment, while any point below the zero line indicates a decline in employment.

The dramatic economic disruption shown in Figure 2 in early-2020 is again attributable to the COVID-19 pandemic. As these data also show, however, from mid-2021 through the end of 2022 Virginia's post-pandemic economy underperformed the U.S., with average annual private employment growth in Virginia running 1.4 percent below the national norm. That changed in January 2023 when Virginia's annual employment growth rose above the national norm and continued to outpace U.S. annual private employment growth by 0.2 percent on average throughout the remainder of the period.

Figure 2: Year-Over-Year Change in Total Private Employment – March 2020 to March 2025[4]



Employment and Wages by Major Industry Sector

To provide a better understanding of the underlying factors motivating the total private employment trends depicted in Figures 1 and 2, Figures 3 through 6 provide data on private employment and wages in Virginia by major industry sector.

[4] Data Source: U.S. Bureau of Labor Statistics.

Figure 3 details the distribution of private employment across major industry sectors in Virginia in 2024. As these data indicate, the state's largest sectors that year were Professional and Business Services (809,072 jobs), followed by Trade, Transportation and Utilities (668,084 jobs), and Education and Health Services (567,750 jobs).

Figure 3: Private Employment by Major Industry Sector in Virginia – 2024[5]

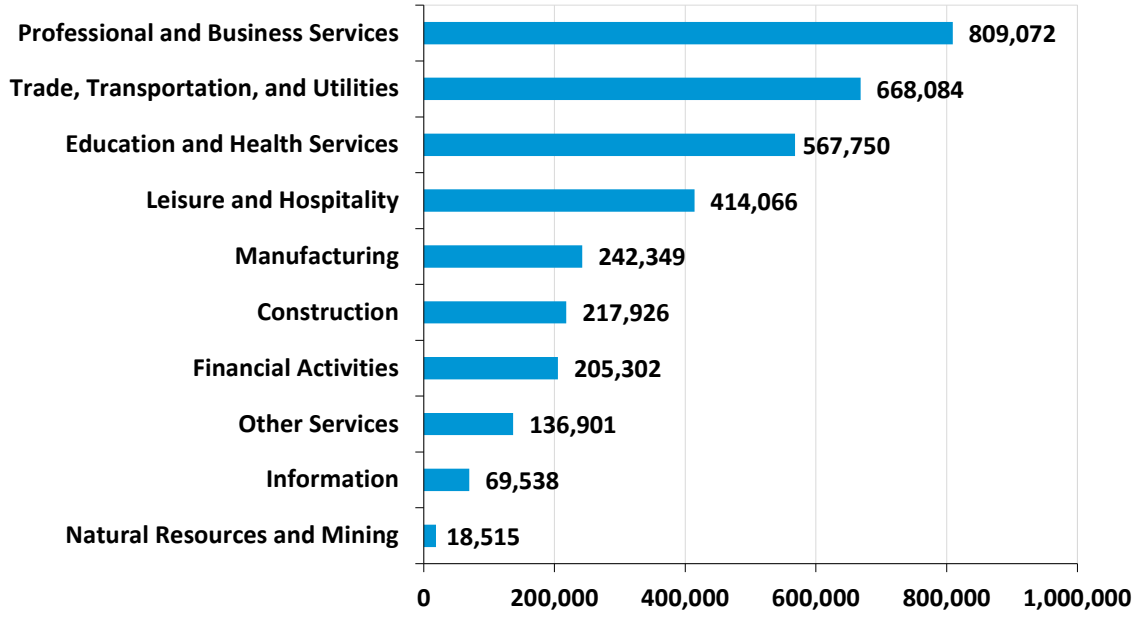


Figure 4 benchmarks Virginia's private sector employment growth in these major industry sectors over the five-year period from 2019 through 2024 against national growth rates. As these data indicate, over the period as a whole, Virginia outperformed the national average in four out of ten major industry sectors: 1) Professional and Business Services, 2) Information, 3) Manufacturing, and 4) Natural Resources and Mining.

[5] Data Source: U.S. Bureau of Labor Statistics.

Figure 4: Change in Private Employment by Major Industry Sector – 2019 to 2024[6]

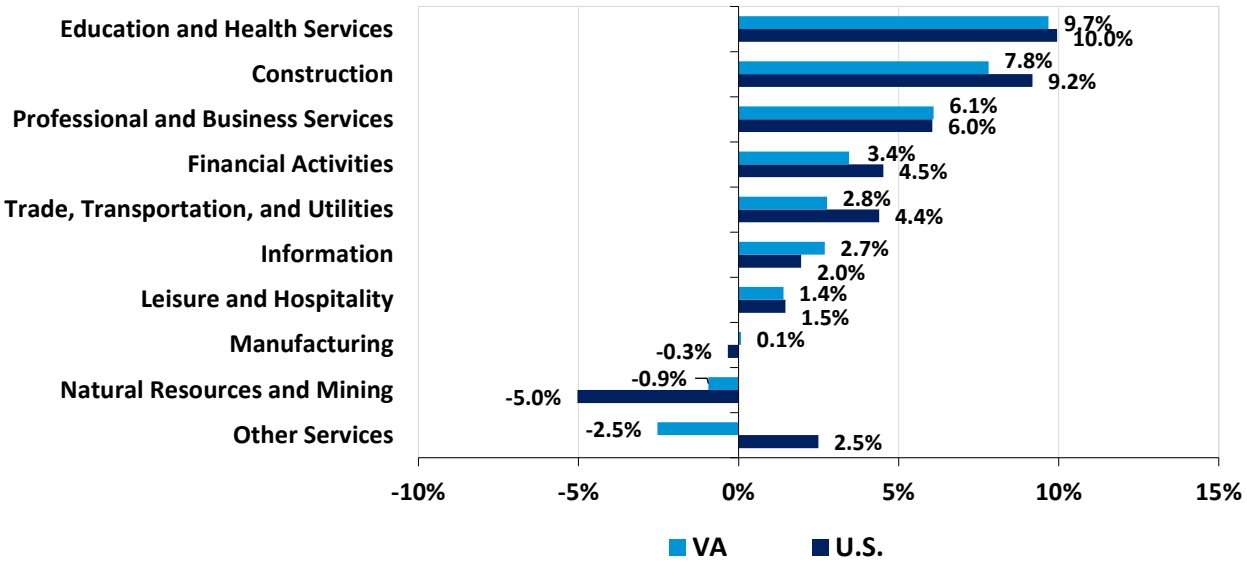
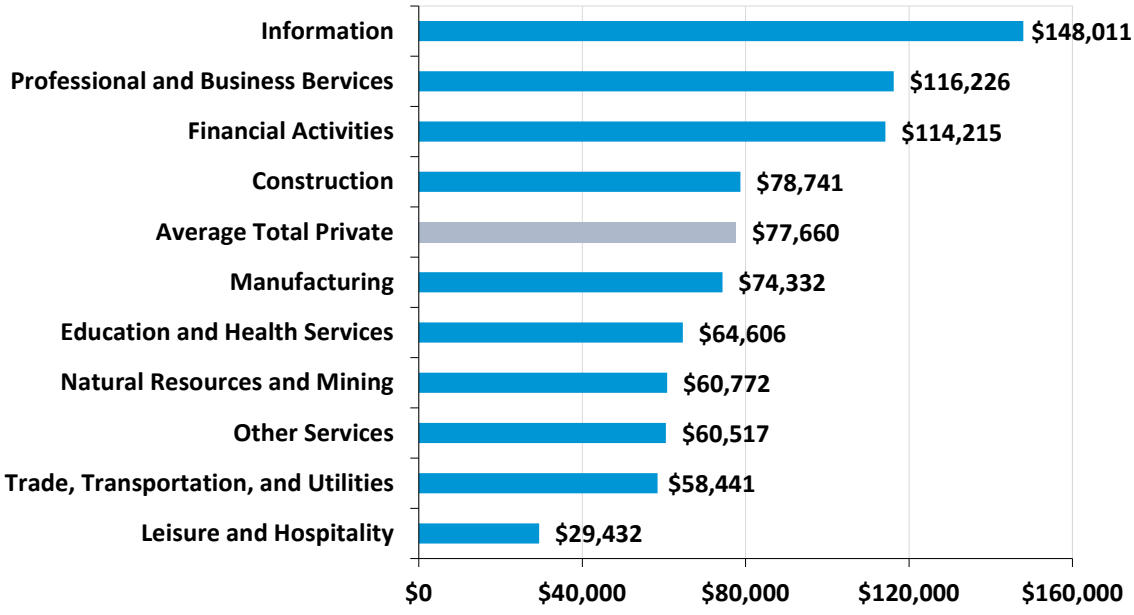


Figure 5 provides comparable data on average private annual wages in Virginia in 2024. As these data show, the highest paying major industry sectors in Virginia that year were Information ($148,011/yr.), Professional and Business Services ($116,226/yr.), and Financial Activities ($114,215/yr.). To provide a point of reference, the average private sector annual wage across all major industry sectors in Virginia that year was $77,660.

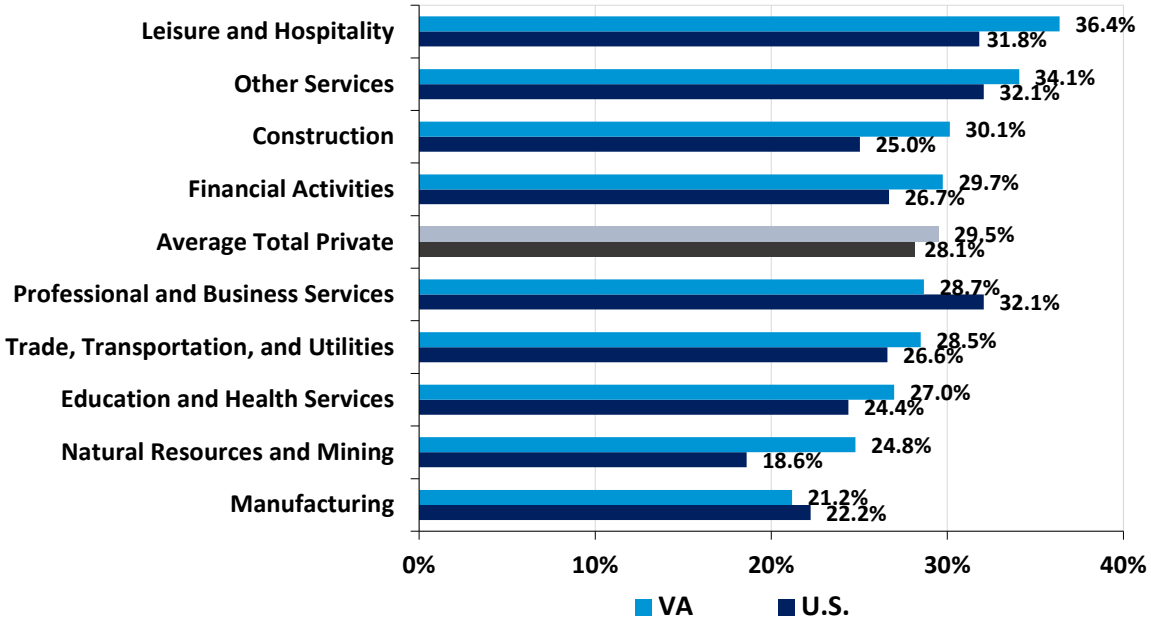
Figure 5: Private Annual Wages by Major Industry Sector in Virginia – 2024[7]



[6] Data Source: U.S. Bureau of Labor Statistics.
[7] Data Source: U.S. Bureau of Labor Statistics.

Figure 6 benchmarks Virginia's private annual wage growth in these major industry sectors over the five-year period from 2019 through 2024 against national growth rates. As these data indicate, over the period as a whole, Virginia outperformed the national average in seven out of ten major industry sectors and the total average private sector. Those seven major sectors were: 1) Leisure and Hospitality, 2) Other Services, 3) Construction, 4) Financial Activities, 5) Trade, Transportation, and Utilities, 6) Education and Health Services, 7) Natural Resources and Mining, and Total Private Sector.

Figure 6: Change in Private Annual Wages by Major Industry Sector – 2019 to 2024[8]



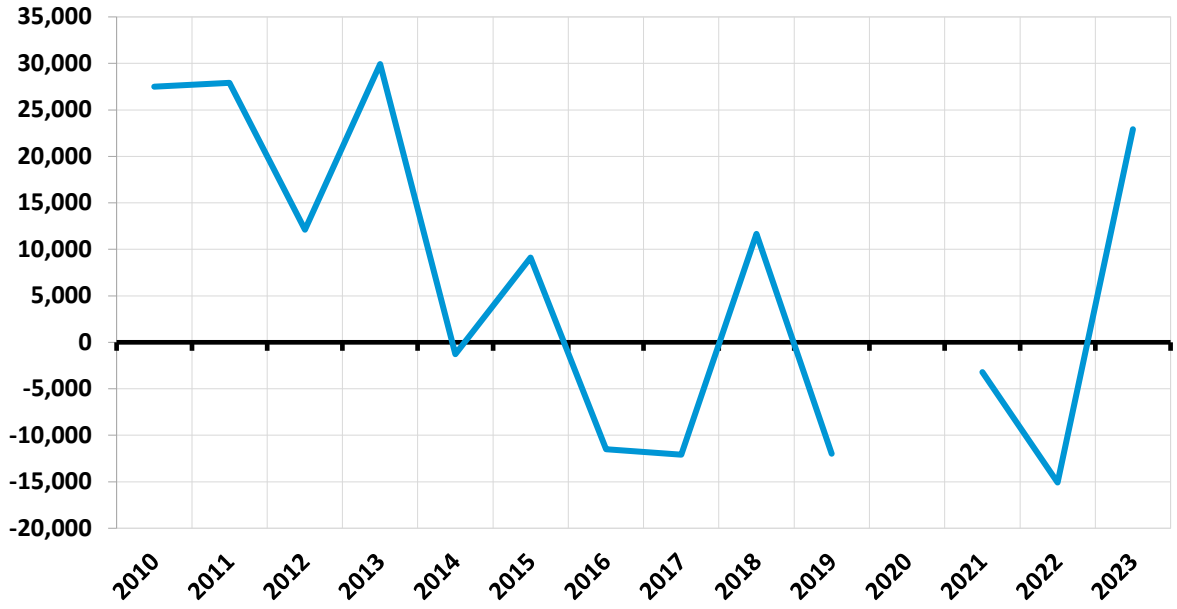
Lastly, Figure 7 provides data on what is possibly Virginia's most important economic indicator – net migration. One of the more useful concepts in economics is called revealed preference. It simply means that people signal their true preferences through their actions, not their words. And one of the most concrete ways they do that is by voting with their feet. The reason net-migration qualifies as a revealed preference and strong economic indicator is that states with robust economies tend to attract people looking for economic opportunity, while states with stagnant or declining economies tend to lose people who have expertise or skill sets that are in greater demand elsewhere.

[8] Data Source: U.S. Bureau of Labor Statistics.

As the data in Figure 7 demonstrate, starting in 2014 Virginia uncharacteristically experienced net out-migration. On average between 2014 and 2022, Virginia suffered an annual 4,297 person net out-migration of population, which means on average 4,297 more people moved out of the state each year than moved into it. By way of reference, the top ten states for net out-migration of population over that same period were: 1) New York, 2) California, 3) Illinois, 4) New Jersey, 5) Massachusetts, 6) Maryland, 7) Minnesota, 8) Louisiana, 9) Michigan, and 10) Alaska.

The most recently available data, however, indicate that Virginia's situation may have changed with migration jumping from a net out-migration of 15,080 people in 2022 to a net in-migration of 22,921 people in 2023.

Figure 7: Net Migration in Virginia – 2010 to 2023[9]



In Sum:

- From mid-2021 through the end of 2022, Virginia's post-pandemic economy underperformed the U.S., with average annual employment growth running 1.4 percent below the national norm.
- In January 2023 Virginia's annual employment growth rose above the national norm and continued to outpace U.S. growth by 0.2 percent on average.
- Over the five-year period from 2019 through 2024, only four out of ten of Virginia's major industry sectors outperformed the national average in employment growth: Professional and Business Services, Information, Manufacturing, and Natural Resources and Mining.

[9] Data Source: U.S. Census Bureau. Data for 2020 were not collected due to the COVID-19 pandemic.

- Over the five-year period from 2019 through 2024, in addition to outperforming the national average in total wage growth, seven out of ten of Virginia's major industry sectors also outperformed the national average: Leisure and Hospitality; Other Services; Construction; Financial Activities; Trade, Transportation, and Utilities: Education and Health Services; and Natural Resources and Mining.

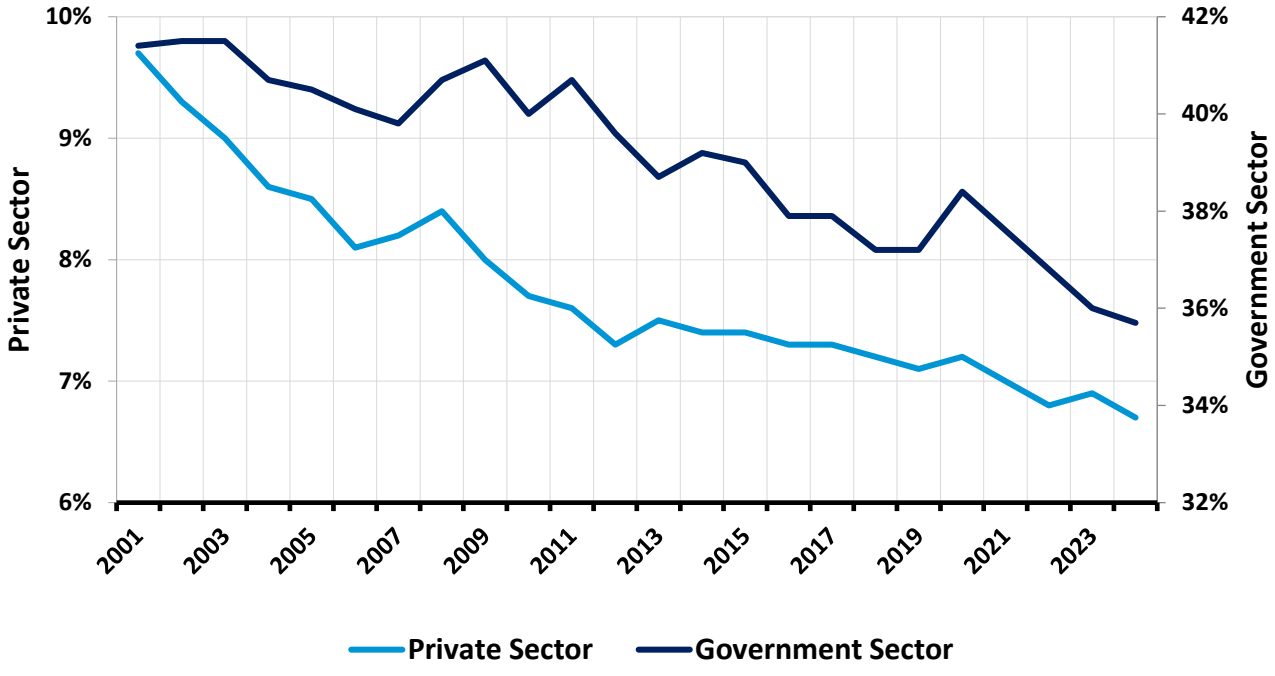
National Trends in Unionization

National Trends in Private and Government Sector Unionization

Figure 8 provides data on the percentage of those employed in the private and government sectors that were represented by unions between 2001 and 2024. As these data indicate, the percentage of employees represented by unions in the private sector (light blue line at bottom of graph and left vertical axis) is much lower than the percentage of employees represented by unions in the government sector (dark blue line at top of graph and right vertical axis).

However, the percentage of employees represented by unions in both sectors has been declining steadily. Between 2001 and 2024, the percentage of employees represented by unions in the private sector declined from 9.7 percent to 6.7 percent (a drop of 3.0 percentage points), while the percentage of employees represented by unions in the government sector declined from 41.4 percent to 35.7 percent (a drop of 5.7 percentage points).

Figure 8: Percentage of Employees Represented by Unions – 2001 to 2024[10]

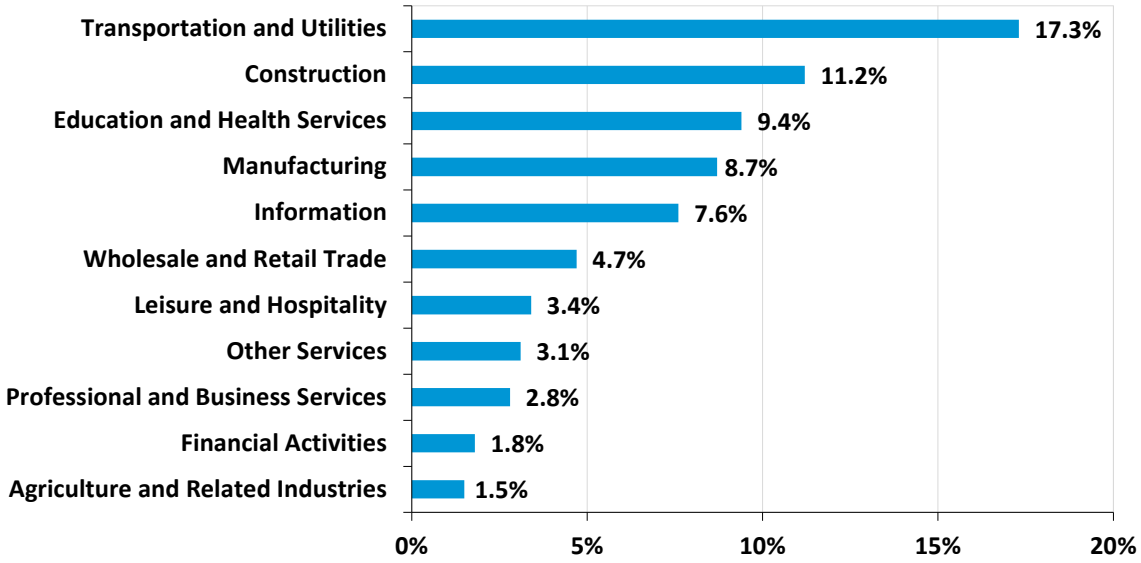


[10] Data Source: U.S. Bureau of Labor Statistics.

Unionization by Industry

Figure 9 details the percentage of employees represented by unions nationally by major industry sector in 2024. As these data show, Transportation and Utilities exhibited the highest percentage of employees represented by unions that year (17.3 percent), followed by Construction (11.2 percent), and Education and Health Services (9.4 percent).

Figure 9: National Percentage of Employees Represented by Unions by Major Industry Sector – 2024[11]

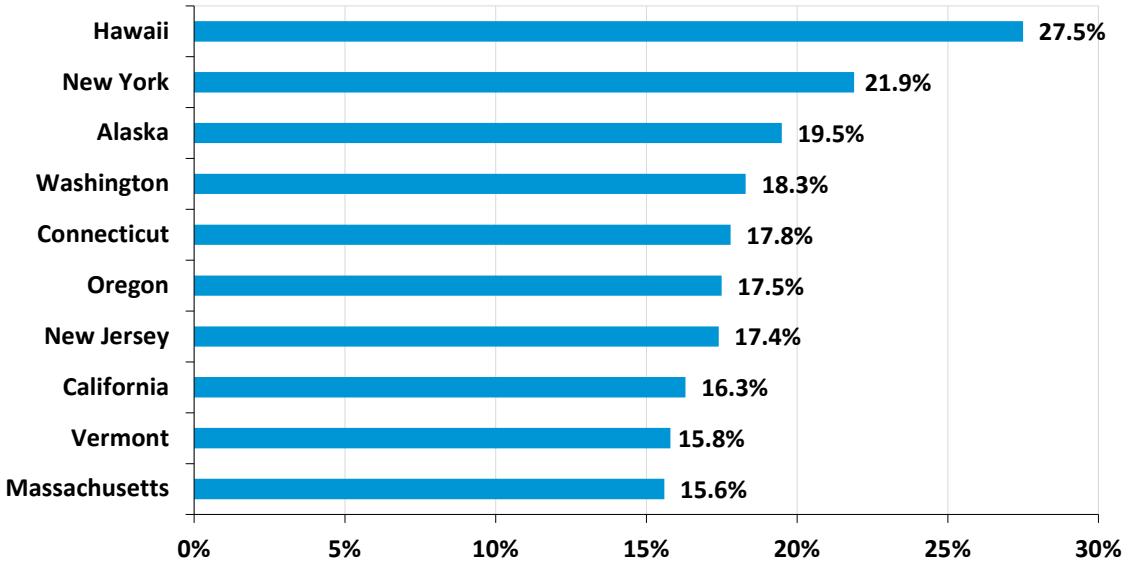


Unionization by State

Figure 10 provides a ranking of the top ten states for percentage of employees represented by unions in 2024. As detailed in this graph, Hawaii topped the list at 27.5 percent, followed by New York (21.9 percent), Alaska (19.5 percent), Washington (18.3 percent), Connecticut (17.8 percent), Oregon (17.5 percent), New Jersey (17.4 percent), California (16.3 percent), Vermont (15.8 percent), and Massachusetts (15.6 percent).

[11] Data Source: U.S. Bureau of Labor Statistics.

Figure 10: Top Ten States for Percentage of Employees Represented by Unions – 2024[12]



In Sum:

- Over the period from 2001 to 2023, the national percentage of employees represented by unions in both the private and government sectors has consistently declined.
- Nationally, the percentage of employees represented by unions in the private sector is much lower than the percentage of employees represented by unions in the government sector (in 2024, 6.7 percent vs. 35.7 percent respectively).
- Transportation and Utilities, Construction, and Education and Health Services are the most heavily unionized major industry sectors nationally.
- Hawaii, New York, and Alaska are the most heavily unionized states.

History of RTW Laws

The National Labor Relations Act (NLRA), also known as the Wagner Act, was passed by Congress and signed into law by President Franklin D. Roosevelt in 1935. The NLRA granted private sector workers the right to organize if a majority of those workers voted for union representation. Union representation could take three forms: 1) a closed shop where all workers were compelled to join the union, 2) a union shop where employers could hire non-union labor, but new hires were compelled to join the union within a given time frame, or 3) an agency shop where workers were not compelled to join the union, but the union could collect agency fees from non-union workers.

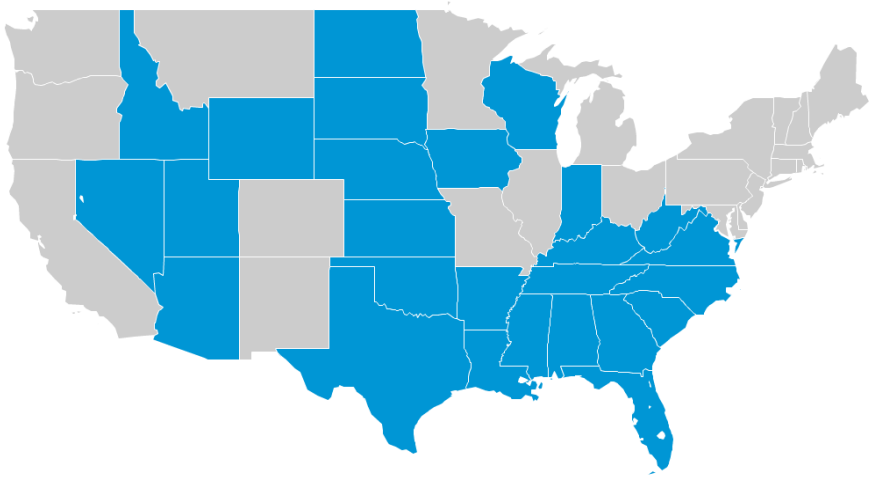
[12] Data Source: U.S. Bureau of Labor Statistics.

In 1947, Congress overrode a veto by President Harry S. Truman to enact the Taft-Hartley Act which, among other things, amended the NLRA to provide protections for the minority of workers who chose not to be represented by a union. More specifically, it stated that "nothing in this subchapter shall be construed as authorizing the execution or application of agreements requiring membership in a labor organization as a condition of employment in any State or Territory in which such execution or application is prohibited by State or Territorial law."[13] This provision provided the legal basis for states to enact RTW laws. Virginia was among the earliest enactors, with legislation signed into law in 1947.

As discussed earlier in *The Issue* section, RTW laws support an individual's right to work by prohibiting compulsory union membership, compulsory payment of union dues, and compulsory payment of agency fees, as a precondition of employment. Agency fees are charges that employees are required to pay to a union for the cost of collective bargaining and representation, even if they choose not to join the union. In 2018, the U.S. Supreme Court ruled in *Janus v. American Federation of State, County, and Municipal Employees*, that agency fees were unconstitutional in the public sector. However, as of now, agency fees are still allowed in the private sector.

RTW laws currently exist in 26 states, with recent additions including Kentucky (2017), West Virginia (2016), Wisconsin (2015) and Indiana (2012).[14] Michigan passed right-to-work legislation in 2012 and repealed that legislation in 2024. To date, Michigan is the only state to have repealed its RTW law. Figure 11 provides a graphical depiction of the states that currently have RTW laws. RTW states are colored in blue and non-RTW states are colored in gray.

Figure 11: RTW (blue) and non-RTW (gray) States[15]



[13] 29 U.S. Code § 164(b).
[14] Data Source: National Right to Work Committee
[15] Data Source: National Right to Work Committee.

Summary of Existing Research on RTW Laws

The effects of RTW laws have been extensively studied and the empirical literature on this topic spans decades. As is often the case, however, because these studies often employ different methodological and theoretical approaches, they also often arrive at different conclusions.

Economic Performance

Economic performance is one of the few areas where there appears to be a general consensus on the effect of RTW laws.

Most, if not all, studies that compare economic performance over time between RTW and non-RTW states have shown that RTW states outperform non-RTW states.

- In a 2002 study, William Wilson found that between 1977 and 1999 RTW states experienced average annual growth in Real Gross State Product of 3.4 percent compared to 2.9 percent in non-RTW states. Wilson also found that RTW states outperformed non-RTW states in average annual growth in: Total Non-Farm Employment, Manufacturing Employment, Construction Employment, and Per-Capita Disposable Income.[16,17]
- In a 2014 study, Richard Vedder and Jonathan Robe determined that over the 35-year period from 1977 to 2012: Total Employment in RTW states grew by 105 percent compared to 50 percent in non-RTW states, Total Real Personal Income grew by 165 percent compared to 99 percent in non-RTW states, and Real Per-Capita Income grew by 65 percent compared to 50 percent in non-RTW states.[18]

  Vedder and Robe then augmented these straightforward comparisons by performing a multi-variate regression analysis that estimated the effect of RTW laws on economic performance, while also controlling for cross-state differences in educational attainment and other factors. The results from that analysis showed that, even after controlling for other potential causal factors, states with RTW laws experienced growth rates that were 11.5 percentage points higher than non-RTW states.

[16] William Wilson, "The Effect of Right-to-Work Laws on Economic Development," *Mackinac Center of Public Policy*, (2002).
[17] More specifically, between 1970 and 2000 annual growth in RTW states outperformed non-RTW states in: Total Non-Farm Employment (2.9 percent vs. 2.0 percent), Manufacturing Employment (1.5 percent vs. minus 0.2 percent), Construction Employment (3.0 percent vs. 2.0 percent), and Per-Capita Disposable Income (6.8 percent vs. 6.6 percent).
[18] Richard Vedder and Jonathan Robe, "An Interstate Analysis of Right to Work Laws," *Competitive Enterprise Institute*, (2014).

- In a 2018 study, Jeffrey Eisenach found that between 2001 and 2016 RTW states outperformed non-RTW states in average annual growth in: Private Sector Employment, Manufacturing Employment, Construction Employment, Real Private Sector Output, Real Manufacturing Output, and Real Personal Income.[19,20] Importantly, in an effort to capture the impact of RTW laws on business development and migration, Eisenach also determined that between 2001 and 2016 the number of firms grew by 10.2 percent in RTW states compared to 1.5 percent in non-RTW states.

Although RTW laws are generally seen as a reliable proxy for the larger basket of characteristics that make up a "favorable business climate," one of the methodological concerns about straightforward comparisons of economic performance between RTW and non-RTW states is that they fail to control for factors other than RTW. Where Vedder and Robe addressed that concern by augmenting their analysis with multi-variate regression, other researchers have employed a different approach called "cross-border analysis."

Cross-Border studies examine counties that are in close proximity, and can therefore be expected to share similar climate, cultural, demographic, and economic characteristics, but where one county is in a RTW state and the other is in a non-RTW state. Even using this alternative methodological approach, most studies generally support the conclusion that RTW states outperform non-RTW states.

- In an early 1998 study, Thomas Holmes employed cross-border analysis to estimate the impact of RTW laws on the manufacturing sector. What he found was that "manufacturing employment in a county as a percentage of total employment in the county increases, on average, by approximately one-third when on crosses the border into the [RTW] side."[21]
- In a 2017 study, Kent Bausman *et al.* used cross-border analysis to examine the effect of RTW laws on economic performance and other indicators in Missouri counties and bordering counties in Missouri's eight neighboring states (AR, IL, IA, KS, KY, NE, OK, and TN). Their analysis showed that counties in RTW states recovered faster from the Great Recession of 2007-09 with respect to Real Median Household Income and Real Mean Weekly Wage growth than counties in non-RTW states. In addition, counties in RTW states had a lower share of long-term unemployed and a lower share of part-time workers in their workforces than counties in non-RTW states.[22]

[19] Jeffrey A. Eisenach, "Right-to-Work Laws: The Economic Evidence," *NERA Economic Consulting*, (May 2018).
[20] More specifically, between 2001 and 2016 annual growth in RTW states outperformed non-RTW states in: Private Sector Employment (26.7 percent vs. 15.4 percent), Manufacturing Employment (minus 19.2 percent vs. minus 24.5 percent), Construction Employment (6.3 percent vs. 0.2 percent), Real Private Sector Output (37.6 percent vs. 28.5 percent), Real Manufacturing Output (30.4 percent vs. 20.8 percent), and Real Personal Income (39.3 percent vs. 25.8 percent).
[21] Thomas Holmes, "The Effect of State Policies on the Location of Manufacturing: Evidence from State Borders," *Journal of Political Economy*, 36:1 (Winter 2016).
[22] Kent Bausman, Alden Craddock, and Felix Kwan, "Show-Me Right to Work: A regional comparison of right to work and non-right to work states," *Journal of Management and Marketing Research*, 20 (2017).

- In a recent 2023 study, Mathew Lilley evaluated pairs of adjacent counties in the continental U.S. with similar demographics, but different RTW status, to assess the impact of RTW on economic performance. What he found was that: Manufacturing Employment was 28 percent larger in RTW counties than in non-RTW counties, the Employment to Population Ratio was 3.5 percentage points higher in RTW counties than in non-RTW counties, Average Weekly Wages were $29.97 higher in RTW counties than in non-RTW counties, and the Poverty Rate was 1.4 percentage points lower in RTW counties than in non-RTW counties.

  Also of note, Lilley found that RTW counties exhibited greater inter-generational economic mobility – children of parents in the 25th income percentile were 1.7 percent more likely to reach the top percentile income quartile as adults than their peers in non-RTW counties.[23]

In short, these and other studies continue to support the conclusion that William Moore reached in his seminal 1998 review of the RTW literature:

> *Anecdotal and survey evidence indicate that a "favorable business climate," as proxied by RTW laws, has a positive impact on state industrial development. The econometric evidence, although mixed, tends to support this conclusion. The stronger methodological studies … which cover an array of industries, find that RTW laws have a significant, positive influence on industrial growth and development.*[24]

Wages

Unlike economic performance, the empirical literature on the effect of RTW laws on wages has been characterized by mixed results. In his 1998 review of the literature, Moore concluded that:

> *RTW laws have little or no influence on average wages, union wages, or nonunion wages in the private or public sectors. … A few studies find that RTW laws increase union wage premiums, but given the other wage study findings, this conclusion should be accepted cautiously.*[25]

More recent studies have done little to increase the clarity. As an example of the wide divergence in findings:

- In 2003 study, W. Robert Reed used state-level data from before and after states adopted RTW to estimate the effect of RTW laws on wages. He finds that "after accounting for the influence of economic conditions that were present when states adopted Right-to-Work laws, RTW states have significantly higher wages than would otherwise be expected."[26] In other words, RTW was associated with higher overall wages.

---

[23] Mathew Lilley, "Workers, Wages, and Economic Mobility: The Long-Run Effects of Right-to-Work Laws," *Manhattan Institute*, (September 2023).
[24] William J. Moore, "The Determinants and Effects of Right-To-Work Laws: A Review of the Recent Literature," *Journal of Labor Research*, 29:3 (Summer 1998).
[25] Moore (Summer 1998).
[26] W. Robert Reed, "How Right to Work Laws Affect Wages," *Journal of Labor Research*, 24:4 (Fall 2003).

- In a 2016 study, Jeffrey L. Jordan *et al.* used data from the only four states (Idaho, Louisiana, Oklahoma, and Texas) that passed RTW laws between the 1960s and 2000s to assess the impact of RTW income inequality and other variable such as wages. Based on that analysis, they concluded: "We find no significant impact of RTW on a comprehensive set of measures of [income] inequality. We also look at some possible pathways through which these laws are commonly perceived to impact inequality, namely, investment, wages, and salaries. Our finding of a lack of impact of RTW laws on inequality is further supported by findings of a lack of impact of the law on these variables."[27] In other words, RTW had no statistically significant impact on overall wages.
- In a 2020 study, Sudheer Chava *et al.* used data from collective bargaining agreements (CBAs) to test the impact of RTW laws on union wages. The authors hypothesize that, "the passage of … RTW laws has a negative impact on union bargaining power and thus has a negative impact on the wage growth of unionized workers in [RTW] states" and based on their empirical findings they conclude that, "the introduction of RTW laws reduces wage growth for workers covered by CBAs."[28] In other words. RTW was associated with lower union wages.

In Sum

There is a general consensus in the empirical literature that RTW states outperform non-RTW states across a wide range of economic performance measures. However, there is a lack of consensus in the empirical literature on the effect that RTW laws have on wages. This inconsistency between the two sets of findings is puzzling, as, all else equal, one would expect that the generally more robust and dynamic economies exhibited by RTW states would provide better outcomes for workers over time.

In the conclusion to his recent 2023 study, Mathew Lilley addresses this issue with respect to his finding that RTW laws have a positive impact on business formation, poverty rates, and inter-generational economic mobility, and points to what is certainly the most convincing empirical evidence in support of the superiority of RTW laws in ensuring greater economic opportunity for workers:

> In recent years, lawmakers in several non-RTW states, including Missouri, New Hampshire, and Ohio have considered introducing RTW laws. Amid competing claims from union and business lobbyists, our findings shed light on the likely benefits that these states could, in time, bring to their economies – especially their manufacturing sectors – and their workers, by doing so. For the last 75 years, workers have been taking notice – commuting and moving with their feet. Politicians might consider taking notice too.[29]

---

[27] Jeffrey L. Jordon, Aparna Mathur, Abdul Munasib, and Devesh Roy, "Do right-to-work laws impact income inequality? Evidence from U.S. states using the Synthetic Control Method," *American Enterprise Institute*, (March 2016).
[28] Sudheer Chava, Andras Danis, and Alex Hsu, "The economic impact of right-to-work laws: Evidence from collective bargaining agreements and corporate policies," *Journal of Financial Economics*, 137 (2020).
[29] Lilley (September 2023).

As Lilley points out, workers signal their revealed preference for greater economic opportunity through inter-state migration. Table 1 lists the top 10 states for net in-migration and net out-migration in 2023 according to U.S. Census Bureau data. RTW states are highlighted in light blue, while non-RTW states are highlighted in gray. As these data show, all of the top 10 states for net in-migration in 2023 were RTW states, while seven of the top 10 states for net out-migration were non-RTW states.[30] Moreover, as will be demonstrated more comprehensively in the *Empirical Analysis* section that follows, this asymmetry between RTW states and non-RTW states is not isolated to 2023.

Table 1: Net Inter-State Migration in 2023[31]

Top 10 States for Net In-Migration in 2023		Top 10 States for Net Out-Migration in 2023	
State	Net-Migration	State	Net-Migration
Texas	133,372	California	-268,052
Florida	126,008	New York	-178,709
North Carolina	106,592	Illinois	-93,247
South Carolina	68,667	New Jersey	-69,179
Arizona	62,533	Massachusetts	-39,513
Georgia	59,968	Maryland	-36,090
Indiana	29,773	Pennsylvania	-34,935
Oklahoma	23,370	Louisiana	-31,716
Virginia	22,921	Michigan	-20,415
Tennessee	22,749	Kansas	-15,575

Empirical Analysis

In this section, we provide a comparison of the relative economic performance of RTW and non-RTW states across ten individual performance metrics. Those metrics are cumulative Net Migration and the average annual change in: Real Gross Domestic Product, Real Personal Income, Number of Private Establishments, Total Private Employment and Wages, Private Manufacturing Employment and Wages, and Private Construction Employment and Wages. The data used for these comparisons generally comprise the period from 2001 to 2024.

Six states – Indiana, Kentucky, Michigan, Oklahoma, West Virginia, and Wisconsin – enacted RTW laws during the period from 2001 to 2024.[32] In addition to evaluating the performance of all states over the

[30] Michigan did not repeal its RTW law until 2024, therefore it is counted as a RTW state in 2023.
[31] Data Source: U.S. Census Bureau.
[32] Oklahoma enacted its RTW law in 2001, Indiana and Michigan in 2012, Wisconsin in 2015, West Virginia in 2016, and Kentucky in 2017.

entirety of the study period, with the exception of Oklahoma, we also provide an analysis of the pre-RTW and post-RTW performance of those "switcher" states.[33]

Data and Methods

The data used to perform this analysis come from three sources: the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, and the U.S. Bureau of Labor Statistics. Average annual changes are computed as a compound annual growth rate (CAGR).

To account for those states that enacted RTW laws during the 2001 to 2024 period, in computing the average performance of RTW and non-RTW states over the period as a whole, we use a weighted average that controls for the number of years that each state was RTW and non-RTW. States are reclassified as RTW states one year after enactment of their RTW law.

RTW States vs. non-RTW States

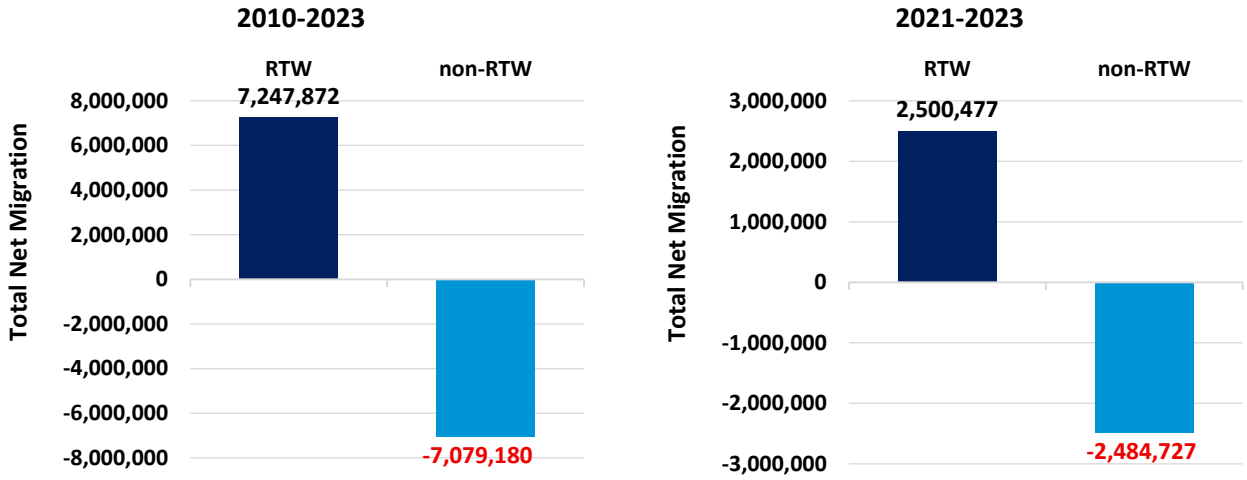
Net Migration

Figure 12 depicts the cumulative Net Migration in RTW and non-RTW states over the period from 2010 to 2023, as well as the first three years of the post-pandemic recovery period (2021 to 2023).[34] As these data show, over the 14-year period from 2010 through 2023, RTW states experienced a cumulative net in-migration of 7.2 million people, while non-RTW states experienced a cumulative net out-migration of 7.1 million people. These data exclude states that switched from non-RTW to RTW within the time period (Indiana, Kentucky, Michigan, West Virginia, Wisconsin). Focusing just on the first three years of the post-pandemic recovery, RTW states experienced a cumulative net in-migration of 2.5 million people, while non-RTW states experienced a cumulative net out-migration of 2.5 million people.

[33] Because Oklahoma enacted its RTW law in 2001, there is effectively no pre-RTW data available for that state in our 2001 to 2024 data set.

[34] U.S. Census Bureau data on net-migration are only available for 2010 through 2023 and exclude data for 2020.

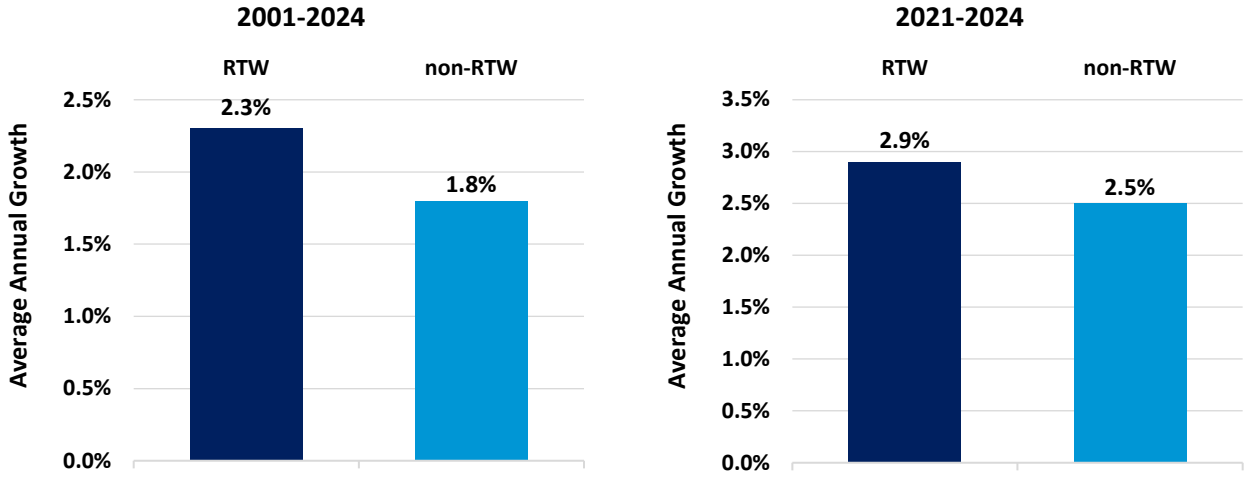
Figure 12: Cumulative Net Migration[35,36]



Real Gross State Product

As the data in Figure 13 indicate, over the 24-year period from 2001 through 2024, average year-over-year growth in Real Gross State Product in RTW states outperformed that of non-RTW states by 2.3 percent vs. 1.8 percent CAGR. Focusing on the first four years of the post-pandemic recovery, average year-over-year growth in Real Gross State Product in RTW states outperformed that of non-RTW states by 2.9 percent vs. 2.5 percent CAGR.

Figure 13: Real Gross State Product (2017 dollars)[37]

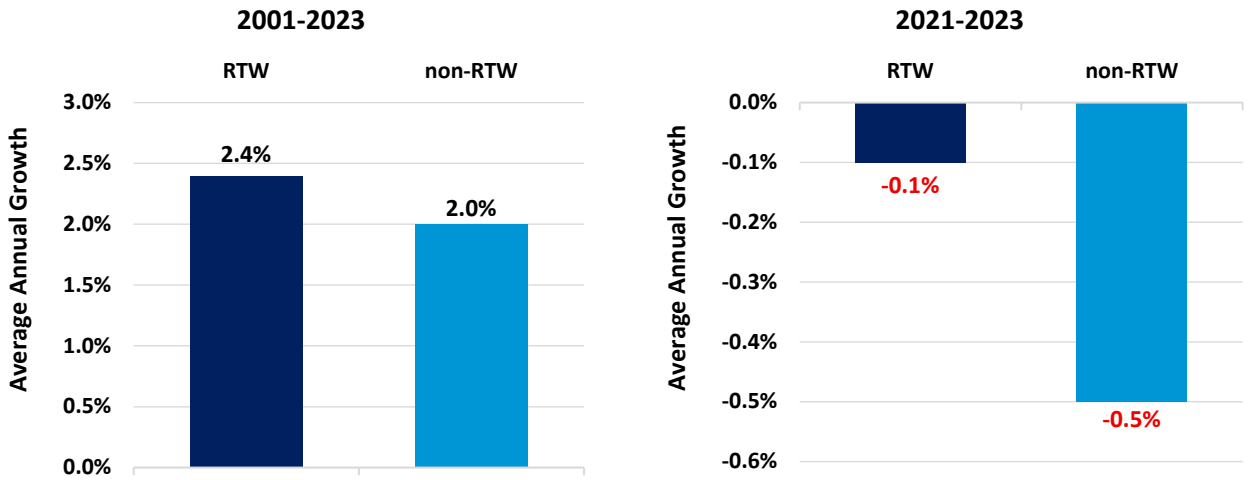


[35] Data Source: U.S. Census Bureau.
[36] For the period from 2001 through 2023, the data exclude switcher states (*i.e.*, Indiana, Kentucky, Michigan, West Virginia, and Wisconsin). Periods reflect data availability.
[37] Data Source: U.S. Bureau of Economic Analysis.

Real Personal Income

As shown in Figure 14, between 2001 and 2023, average year-over-year growth in Real Personal Income in RTW states outperformed that of non-RTW states by 2.4 percent vs. 2.0 percent CAGR. While in the first thee years of the post-pandemic recovery (2021 to 2023), the average year-over-year change in Real Personal Income in RTW states outperformed that of non-RTW states by minus 0.1 percent vs. minus 0.5 percent CAGR.

Figure 14: Real Personal Income (2017 dollars)[38]

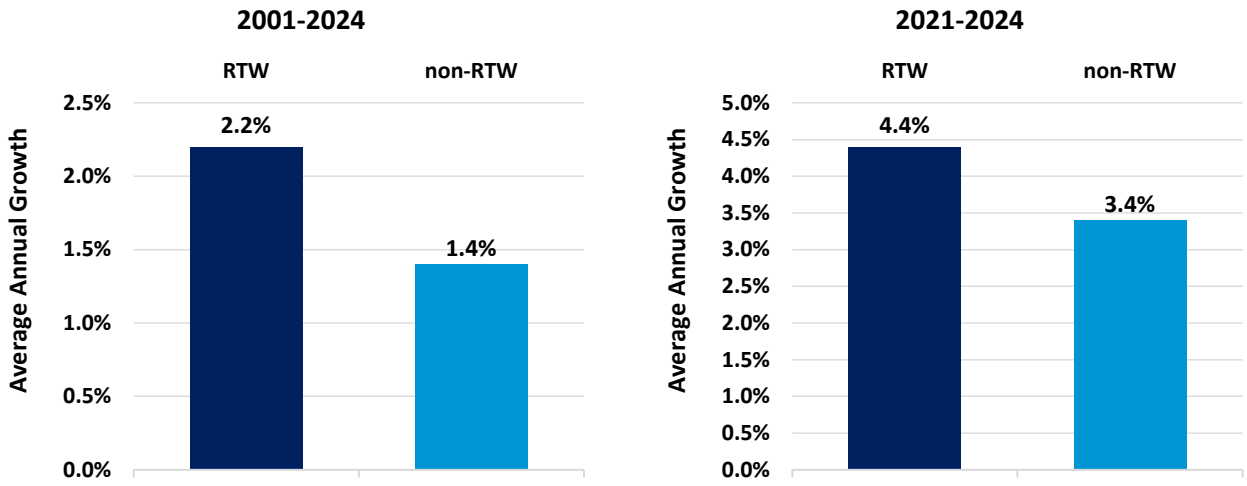


Total Private Establishments

Figure 15 depicts average year-over-year growth in Total Private Establishments. This metric provides a proxy for the pace of new business formation. As these data indicate, over the 24-year period from 2001 through 2024, average year-over-year growth in Total Private Establishments in RTW states outperformed that of non-RTW states by 2.2 percent vs. 1.4 percent CAGR. While in the first four years of the post-pandemic recovery, average year-over-year growth in Total Private Establishments in RTW states outperformed that of non-RTW states by 4.4 percent vs. 3.4 percent CAGR.

[38] Data Source: U.S. Bureau of Economic Analysis. 2023 is the most recently available year for these data.

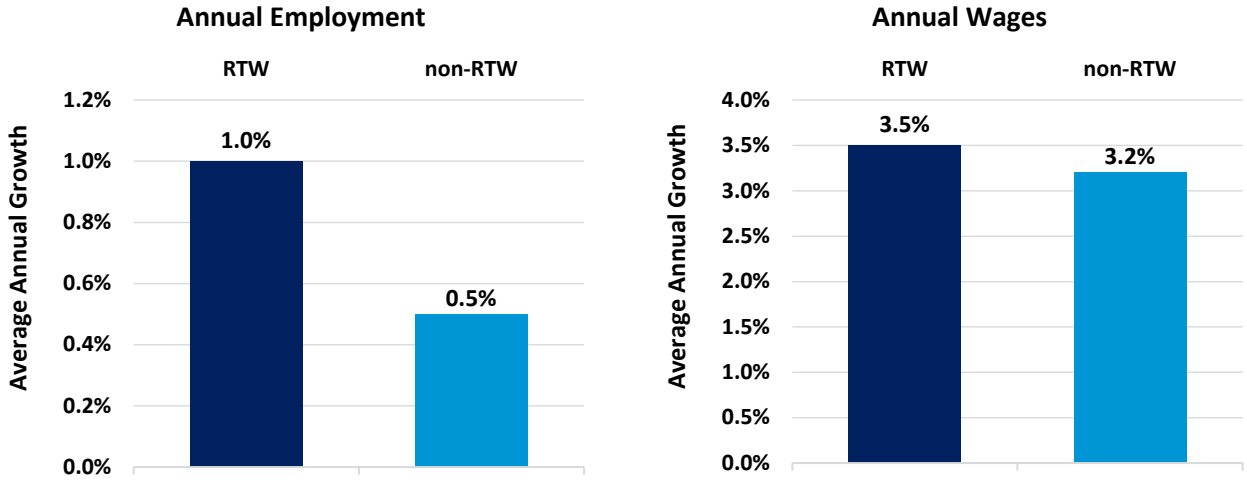
Figure 15: Total Private Establishments[39]



Total Private Employment and Wages

As depicted in Figure 16, between 2001 and 2024 average, year-over-year growth in Total Private Employment in RTW states outperformed that of non-RTW states by 1.0 percent vs. 0.5 percent CAGR, while the average year-over-year growth in Total Private Annual Wages in RTW states outperformed that of non-RTW states by 3.5 percent vs. 3.2 percent CAGR.

Figure 16: Total Private Employment and Wages 2001-2024[40]

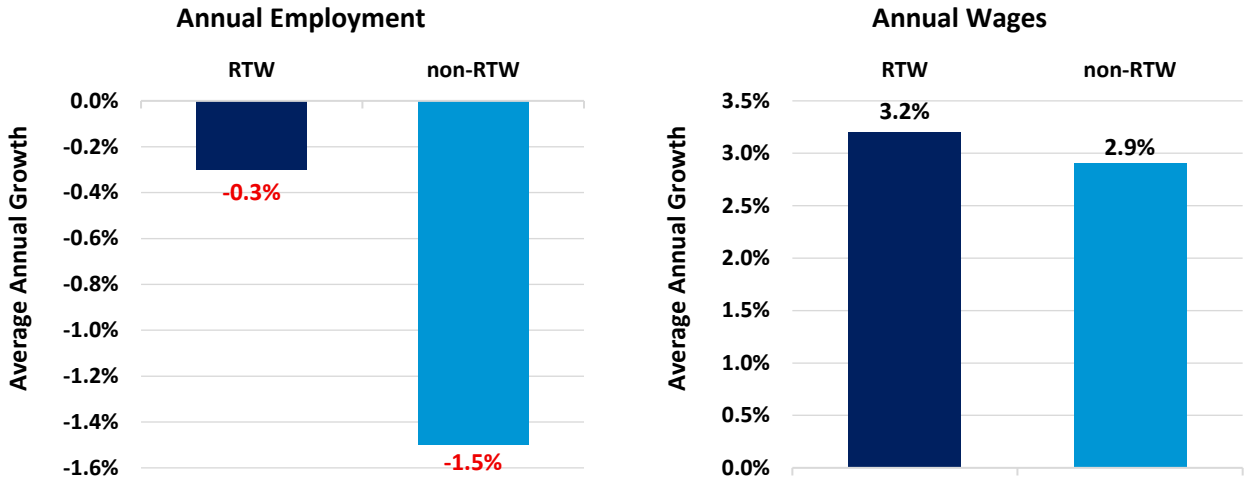


[39] Data Source: U.S. Bureau of Labor Statistics.
[40] Data Source: U.S. Bureau of Labor Statistics.

Total Private Manufacturing Employment and Wages

As shown in Figure 17, between 2001 and 2024, the average year-over-year change in Total Private Manufacturing Employment in RTW states outperformed that of non-RTW states by minus 0.3 percent vs. minus 1.5 percent CAGR, while the average year-over-year growth in Total Private Manufacturing Annual Wages in RTW states outperformed that of non-RTW states by 3.2 percent vs. 2.9 percent CAGR.

Figure 17: Total Private Manufacturing Employment and Wages 2001-2024[41]

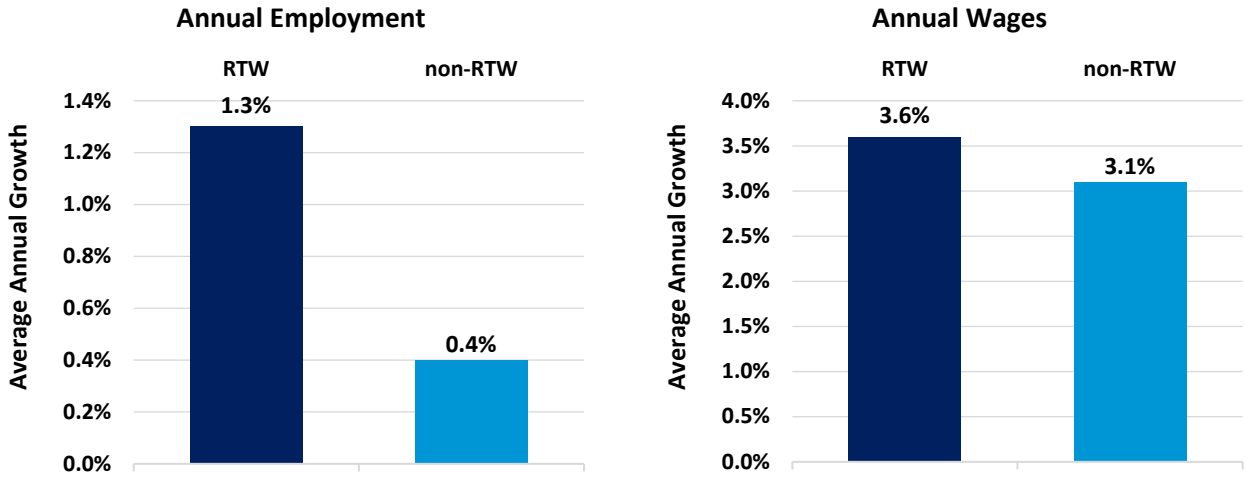


Total Private Construction Employment and Wages

As shown in Figure 18, between 2001 and 2024, the average year-over-year growth in Total Private Construction Employment in RTW states outperformed that of non-RTW states by 1.3 percent vs. 0.4 percent CAGR, while the average year-over-year growth in Total Private Construction Annual Wages in RTW states outperformed that of non-RTW states by 3.6 percent vs. 3.1 percent CAGR.

[41] Data Source: U.S. Bureau of Labor Statistics.

Figure 18: Total Private Construction Employment and Wages 2001-2024[42]



States that "Switched" from non-RTW to RTW

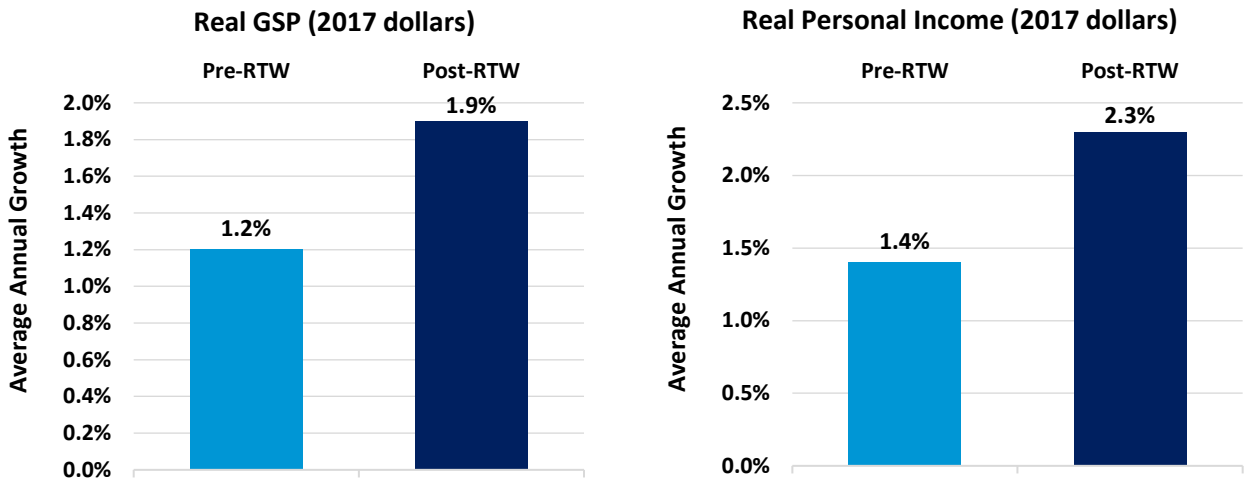
As discussed earlier, during the period from 2001 to 2024, six states – Indiana, Kentucky, Michigan, Oklahoma, West Virginia, and Wisconsin – enacted RTW laws.[43] In this portion of the section, we provide a comparison of the pre-RTW and post-RTW performance of those "switcher" states. Because Oklahoma enacted its RTW law in 2001, our 2001 to 2024 data set contains no pre-RTW data on that state and it is therefore excluded from this analysis.

Real GSP and Real Personal Income

Figure 19 depicts the pre-RTW and post-RTW year-over-year growth in Real Gross State Product (GSP) between 2001 and 2024 and Real Personal Income in switcher states between 2001 and 2023. As these data show, post-RTW year-over-year growth in Real Gross State Product outperformed pre-RTW performance in these states by 1.9 percent vs. 1.2 percent CAGR. Similarly, post-RTW year-over-year growth in Real Personal Income outperformed pre-RTW performance in these states by 2.3 percent vs. 1.4 percent CAGR.

[42] Data Source: U.S. Bureau of Labor Statistics. Whereas data for Real Gross State Product are available for 2024, the most recently available data for Real Personal Income are for 2023.
[43] Oklahoma enacted its RTW law in 2001, Indiana and Michigan in 2012, Wisconsin in 2015, West Virginia in 2016, and Kentucky in 2017.

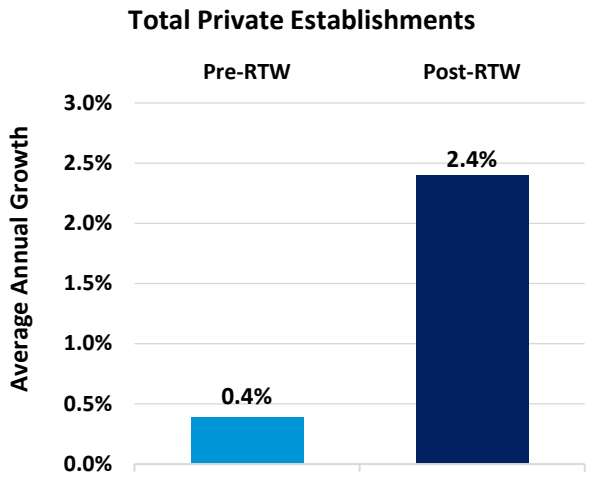
Figure 19: Real Gross State Product (GSP) and Real Personal Income 2001 to 2024/2023[44]



Total Private Establishments

Figure 20 provides a similar comparison for pre-RTW and post-RTW year-over-year growth in Total Private Establishments in switcher states over the period between 2001 and 2024. As these data show, post-RTW year-over-year growth in number of Private Establishments outperformed pre-RTW performance in these states by 2.4 percent vs. 0.4 percent CAGR.

Figure 20: Total Private Establishments 2001 to 2024[45]

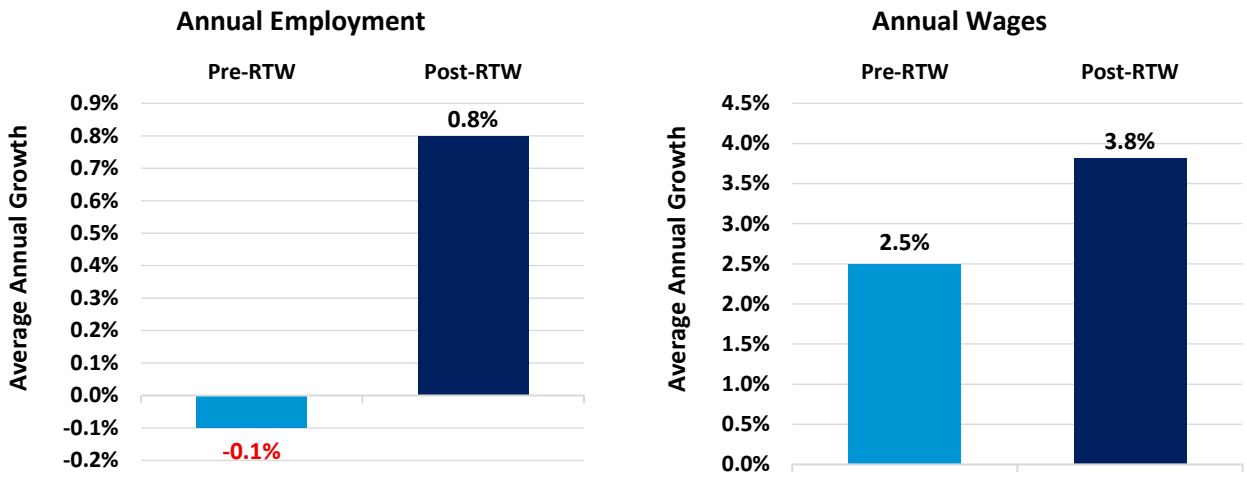


[44] Data Source: U.S. Bureau of Economic Analysis.
[45] Data Source: U.S. Bureau of Labor Statistics.

Total Private Employment and Wages

As shown in Figure 21, post-RTW year-over-year change in Total Private Employment outperformed pre-RTW performance in switcher states by 0.8 percent vs. minus 0.1 percent CAGR over the period from 2001 to 2024, while post-RTW year-over-year change in Total Private Annual Wages outperformed pre-RTW performance in these states by 3.8 percent vs. 2.5 percent CAGR.

Figure 21: Total Private Employment and Wages 2001 to 2024[46]

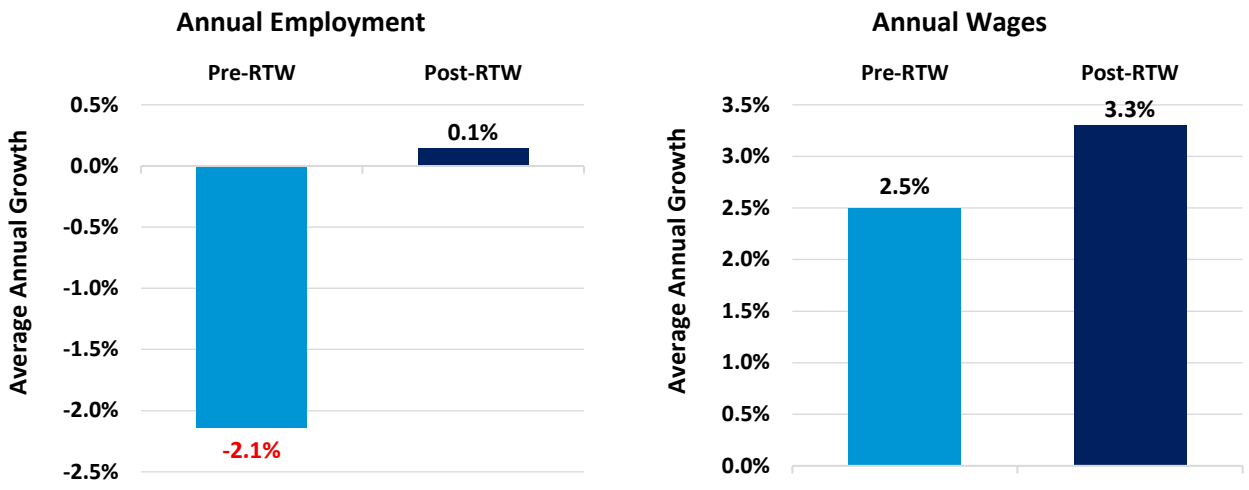


Total Private Manufacturing Employment and Wages

As depicted in Figure 22, post-RTW year-over-year change in Total Private Manufacturing Employment outperformed pre-RTW performance in switcher states by 0.1 percent vs. minus 2.1 percent CAGR over the period between 2001 and 2024, while post-RTW year-over-year change in Total Private Manufacturing Annual Wages outperformed pre-RTW performance in these states by 3.3 percent vs. 2.5 percent CAGR.

[46] Data Source: U.S. Bureau of Labor Statistics.

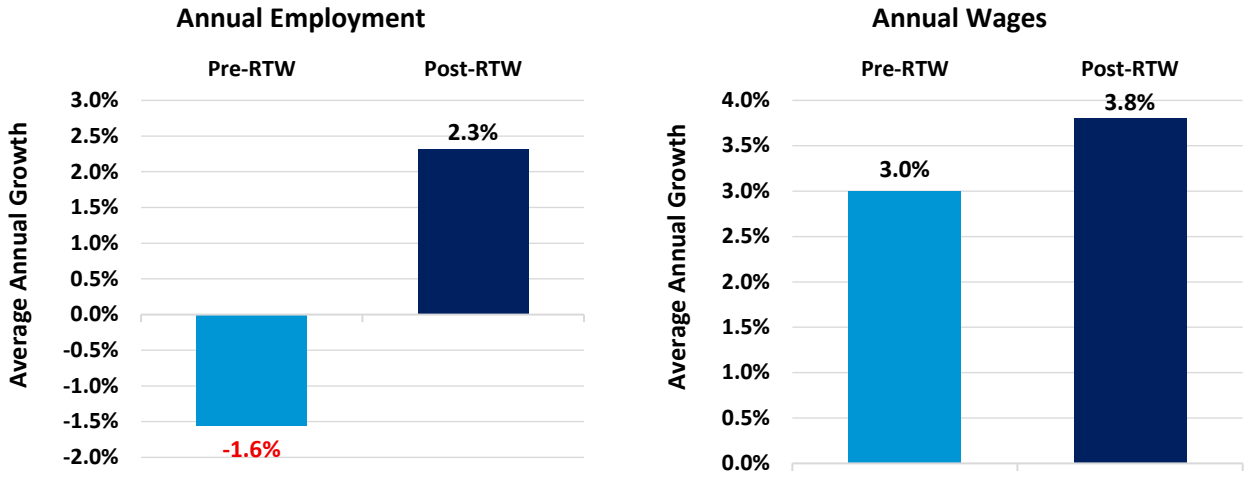
Figure 22: Total Private Manufacturing Employment and Wages 2001 to 2024[47]



Total Private Construction Employment and Wages

Lastly, Figure 23 compares the average pre-RTW and post-RTW year-over-year change in Total Private Construction Employment and Total Private Construction Annual Wages in switcher states between 2001 and 2024. As these data show, post-RTW performance in Total Private Construction Employment surpassed pre-RTW performance by 2.3 percent vs. minus 1.6 percent CAGR over this period, while post-RTW performance in Total Private Construction Annual Wages surpassed pre-RTW performance by 3.8 percent vs. 3.0 percent CAGR.

Figure 23: Total Private Construction Employment and Wages 2001 to 2024[48]



[47] Data Source: U.S. Bureau of Labor Statistics.
[48] Data Source: U.S. Bureau of Labor Statistics.

In Sum

Across all ten of the performance metrics employed in this analysis (*i.e.*, Net Migration and the average annual change in Real Gross Domestic Product, Real Personal Income, Number of Private Establishments, Total Private Employment and Wages, Private Manufacturing Employment and Wages, and Private Construction Employment and Wages):

- RTW states uniformly outperformed non-RTW states over the 2001 to 2024 study period.
- The post-RTW performance of states that enacted RTW laws during the period uniformly outperformed their pre-RTW performance over the 2001 to 2024 study period.

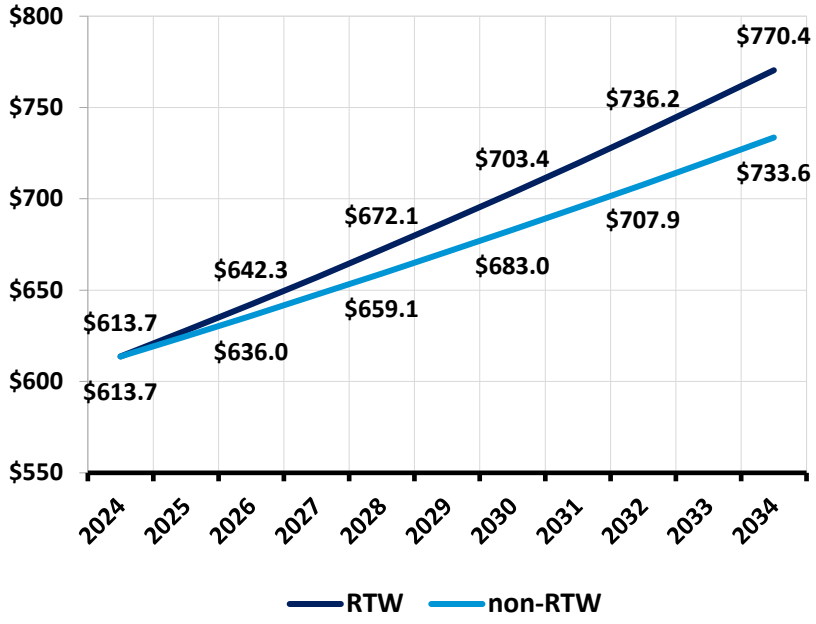
The Potential Cost of Repealing RTW

In this portion of the report, we use the findings from the *Empirical Analysis* section to illustrate what the loss to Virginia's economy could be over the next decade from the repeal of RTW. For nine of the performance metrics evaluated in the *Empirical Analysis* section, we project forward from actual data for 2024 what Virginia's growth trajectory would be if it mirrored the average compound annual growth rate (CAGR) of RTW states over the 2001 to 2024 period, compared to the average CAGR of non-RTW states. It is important to emphasize that these data are not intended as an actual projection, but rather as a heuristic to demonstrate the potential magnitude of the economic loss that Virginia could suffer from repeal of RTW.

Real Gross State Product

In 2024, Virginia's Real Gross State Product was $613.7 billion in inflation adjusted 2017 dollars. Figure 24 projects that number forward using the average 2.3 percent CAGR over the 2001 to 2024 period for RTW states compared to the average 1.8 percent CAGR for non-RTW states. As these data show, at the RTW growth rate Virginia's Real Gross State Product would be $770.4 billion in 2034, while at the non-RTW growth rate it would be $733.6 billion – a loss of $36.8 billion in Real Gross State Product.

Figure 24: Projected Virginia Real Gross State Product (in billions of 2017 dollars)[49]

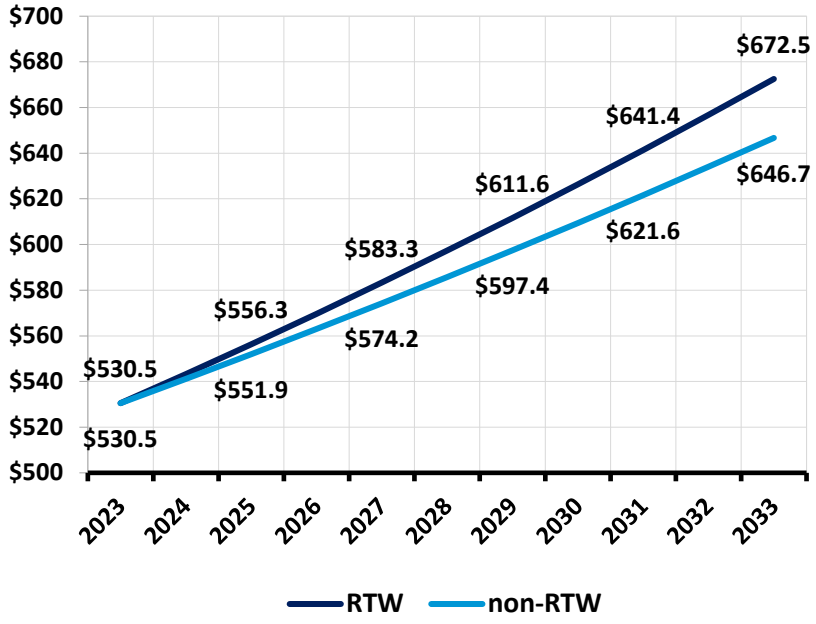


[49] Data Source: 2024 baseline data are from the U.S. Bureau of Economic Analysis.

Real Personal Income

In 2023, Virginia's Real Personal Income was $530.5 billion in inflation adjusted 2017 dollars.[50] Figure 25 projects that number forward using the average 2.4 percent CAGR over the 2001 to 2024 period for RTW states compared to the average 2.0 percent CAGR for non-RTW states. As these data show, at the RTW growth rate Virginia's Real Personal Income would be $672.5 billion in 2034, while at the non-RTW growth rate it would be $646.7 billion – a loss of $25.8 billion in Real Personal Income.

Figure 25: Projected Virginia Real Personal Income (in billions of 2017 dollars)[51]

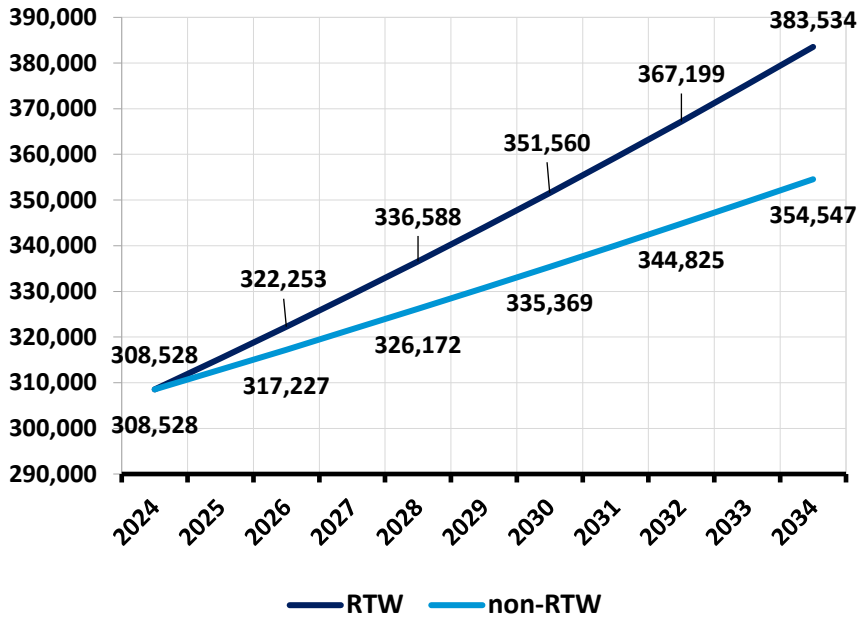


[50] 2023 is the most recent year for which Real Personal Income data are available.
[51] Data Source: 2023 baseline data are from the U.S. Bureau of Economic Analysis.

Total Private Establishments

In 2024, the number of Total Private Establishments in Virginia was 308,528. Figure 26 projects that number forward using the average 2.2 percent CAGR over the 2001 to 2024 period for RTW states compared to the average 1.4 percent CAGR for non-RTW states. As these data show, at the RTW growth rate the number of Total Private Establishments in Virginia would increase to 383,534 in 2034, while at the non-RTW growth rate that number would be 354,547 – a decrease in business formation of 28,986 establishments.

Figure 26: Projected Virginia Total Number of Private Establishments[52]

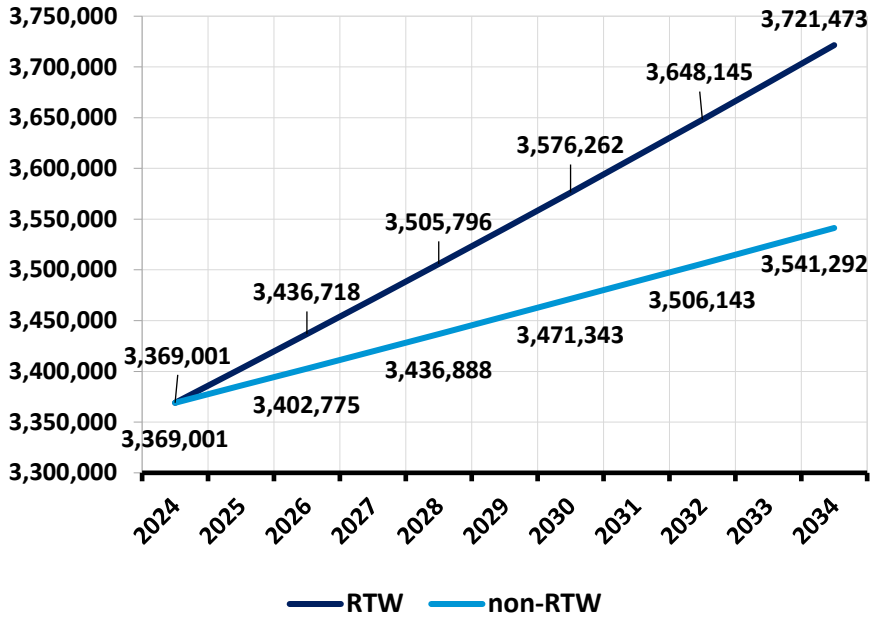


[52] Data Source: 2024 baseline data are from the U.S. Bureau of Labor Statistics.

Total Private Employment

In 2024, Total Private Employment in Virginia was 3,369,001. Figure 27 projects that number forward using the average 1.0 percent CAGR over the 2001 to 2024 period for RTW states compared to the average 0.5 percent CAGR for non-RTW states. As these data show, at the RTW growth rate Total Private Employment in Virginia would increase to 3,721,473 in 2034, while at the non-RTW growth rate that number would be 3,541,292 – a loss of 180,181 jobs.

Figure 27: Projected Virginia Total Private Employment[53]

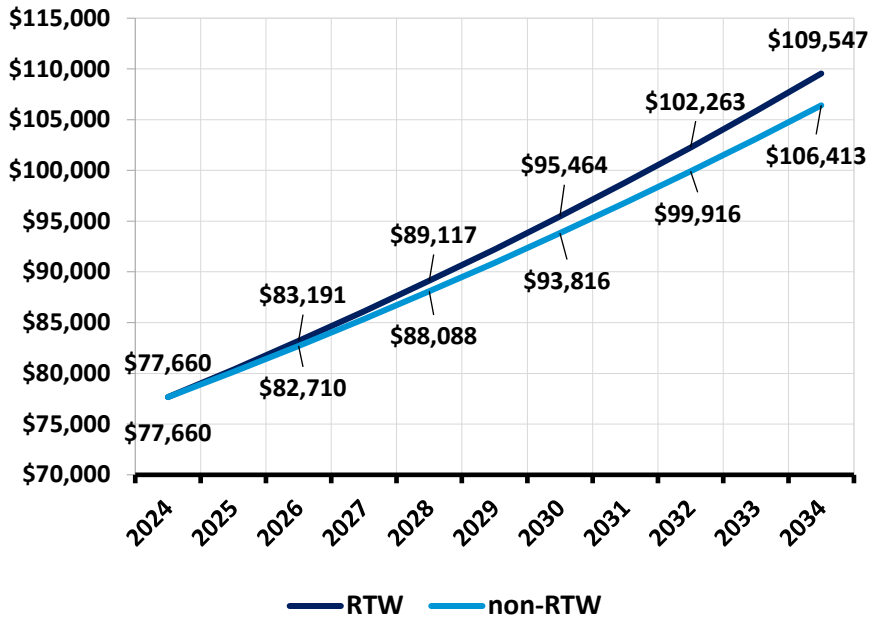


[53] Data Source: 2024 baseline data are from the U.S. Bureau of Labor Statistics.

Total Private Annual Wages

In 2024, Total Private Annual Wages in Virginia were $77,660. Figure 28 projects that number forward using the average 3.5 percent CAGR over the 2001 to 2024 period for RTW states compared to the average 3.2 percent CAGR for non-RTW states. As these data show, at the RTW growth rate Total Private Annual Wages in Virginia would increase to $109,547 in 2034, while at the non-RTW growth rate that number would be $106,413 – a loss of $3,134 in average annual wages.

Figure 28: Projected Virginia Total Private Annual Wages[54]

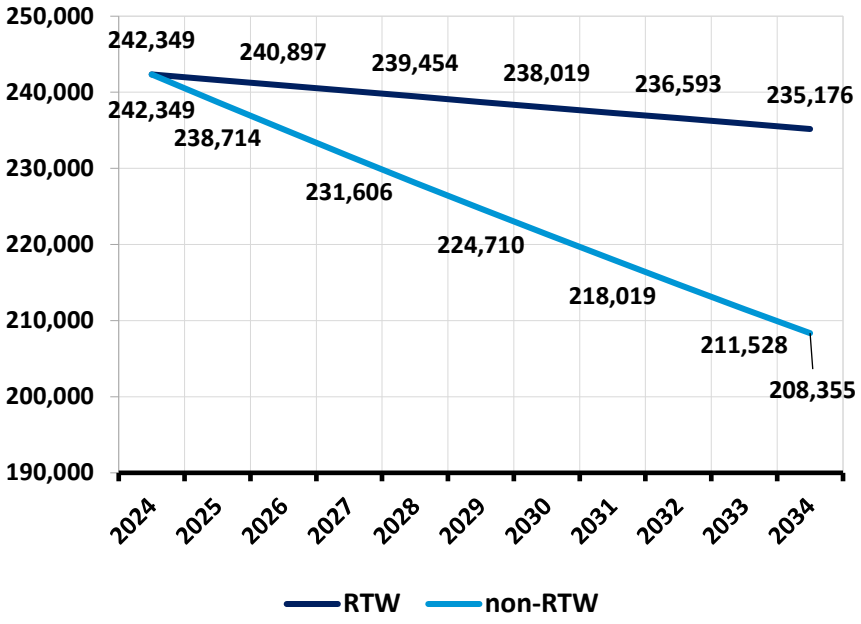


[54] Data Source: 2024 baseline data are from the U.S. Bureau of Labor Statistics.

Total Private Manufacturing Employment

In 2024, Total Private Manufacturing Employment in Virginia was 242,349. Figure 29 projects that number forward using the average minus 0.3 percent CAGR over the 2001 to 2024 period for RTW states compared to the average minus 1.5 percent CAGR for non-RTW states. As these data show, at the RTW growth rate Total Private Manufacturing Employment in Virginia would decline to 235,176 in 2034, while at the non-RTW growth rate that number would decline further to 208,355 – 26,821 fewer jobs.

Figure 29: Projected Virginia Total Private Manufacturing Employment[55]

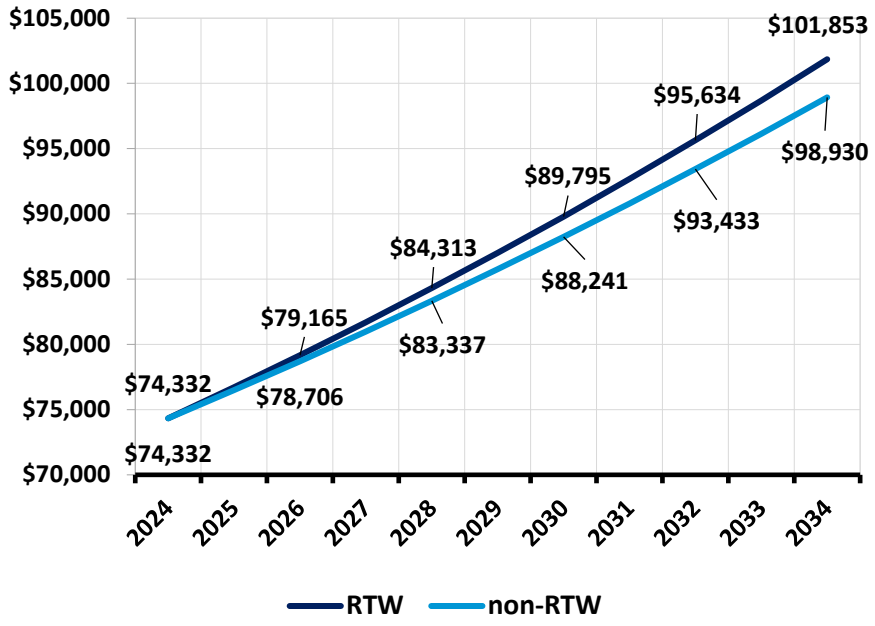


[55] Data Source: 2024 baseline data are from the U.S. Bureau of Labor Statistics.

Total Private Manufacturing Annual Wages

In 2024, Total Private Manufacturing Annual Wages in Virginia were $74,332. Figure 30 projects that number forward using the average 3.2 percent CAGR over the 2001 to 2024 period for RTW states compared to the average 2.9 percent CAGR for non-RTW states. As these data show, at the RTW growth rate Total Private Manufacturing Annual Wages in Virginia would increase to $101,853 in 2034, while at the non-RTW growth rate that number would be $98,930 – a loss of $2,922 in average annual wages.

Figure 30: Projected Virginia Total Private Manufacturing Annual Wages[56]

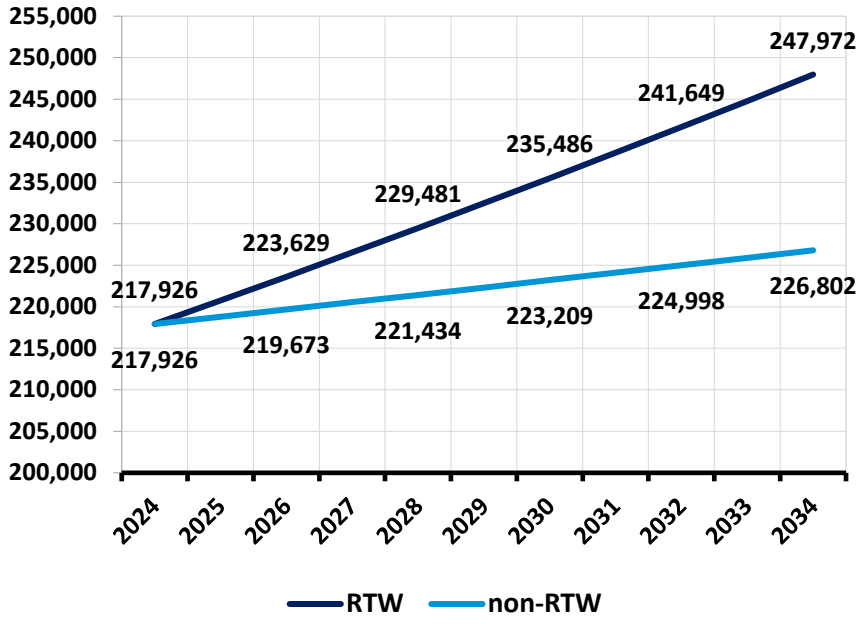


[56] Data Source: 2024 baseline data are from the U.S. Bureau of Labor Statistics.

Total Private Construction Employment

In 2024, Total Private Construction Employment in Virginia was 217,926. Figure 31 projects that number forward using the average 1.3 percent CAGR over the 2001 to 2024 period for RTW states compared to the average 0.4 percent CAGR for non-RTW states. As these data show, at the RTW growth rate Total Private Construction Employment in Virginia would increase to 247,972 in 2034, while at the non-RTW growth rate that number would be 226,802 – a loss of 21,170 jobs.

Figure 31: Projected Virginia Total Private Construction Employment[57]

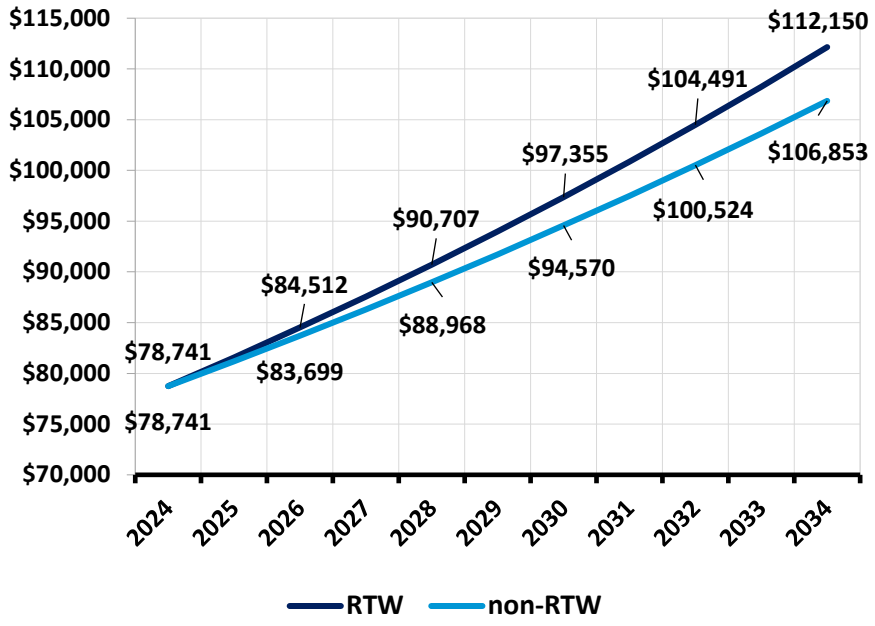


[57] Data Source: 2024 baseline data are from the U.S. Bureau of Labor Statistics.

Total Private Construction Annual Wages

In 2024, Total Private Construction Annual Wages in Virginia were $78,741. Figure 32 projects that number forward using the average 3.6 percent CAGR over the 2001 to 2024 period for RTW states compared to the average 3.1 percent CAGR for non-RTW states. As these data show, at the RTW growth rate Total Private Construction Annual Wages in Virginia would increase to $112,150 in 2034, while at the non-RTW growth rate that number would be $106,853 – a loss of $5,297 in average annual wages.

Figure 32 Projected Virginia Total Private Construction Annual Wages[58]



[58] Data Source: 2024 baseline data are from the U.S. Bureau of Labor Statistics.

Conclusion

Researchers frequently use the presence of RTW laws as a proxy for a "pro-business" state, as do businesses looking to relocate or build new facilities. In this report, we have demonstrated that over the period from 2001 to 2024, states with RTW laws outperformed states without RTW laws across a wide range of economic metrics. Importantly, those metrics included, not only measures of economic output and employment, but also factors that directly affect the well-being of workers, such as wages and personal income.

In addition, we have shown that the economic dynamism demonstrated by RTW states is remarkably successful at attracting residents of non-RTW states who are looking for greater economic opportunity. Over the 14-year period from 2010 through 2023, RTW states experienced a cumulative net in-migration of 7.2 million people, while non-RTW states experienced a cumulative net out-migration of 7.1 million people. Moreover, focusing just on the first three years of the post-pandemic recovery, RTW states experienced a cumulative net in-migration of 2.5 million people, while non-RTW states experienced a cumulative net out-migration of 2.5 million people.

Finally, we have demonstrated that the cost to Virginia of repealing its long-standing RTW law could be quite substantial. Based on reasonable assumptions, over a decade, repeal of the state's RTW law could depress growth in Virginia's overall economic output by as much as $38.8 billion, total personal income by as much as $25.8 billion, the formation of new businesses by as much as 28,986 establishments, total private employment by as much as 180,181 jobs, and average wages by as much as $3,134 per year.

In short, the repeal of Virginia's RTW law, or even the amendment of the law to allow unions to collect agency fees from non-union members, would likely have substantial and long-term negative consequences for Virginia's economy.