Members

Sen. Phil Boots, Chairperson
Sen. Greg Walker
Sen. Carlin Yoder
Sen. Karen Tallian
Sen. James Arnold
Rep. Jerry Torr
Rep. Sue Ellspermann
Rep. Kreg Battles
Rep. David Niezgodski

INTERIM STUDY COMMITTEE ON EMPLOYMENT ISSUES

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Authority: P.L. 229-2011

MEETING MINUTES[1]

Meeting Date:	**July 26, 2011**
Meeting Time:	**9:00 A.M.**
Meeting Place:	**State House, 200 W. Washington St., Senate Chambers**
Meeting City:	**Indianapolis, Indiana**
Meeting Number:	**1**

Members Present: **Sen. Phil Boots, Chairperson; Sen. Greg Walker; Sen. Carlin Yoder; Sen. Karen Tallian; Sen. James Arnold; Rep. Jerry Torr; Rep. Sue Ellspermann; Rep. Kreg Battles; Rep. David Niezgodski.**

Members Absent: **None.**

Chairman Boots called the meeting to order at 9:00 a.m.

After a brief introduction of the committee members, Chairman Boots reviewed the focus and structure of the committee and the meeting. The meeting focused on the Right to Work (RTW) issue. Invited speakers offered presentations on issues related to RTW, and responded to committee members' questions. Public testimony was not accepted at this meeting due to the number of invited speakers, but will be allowed at a later committee meeting. The committee's second meeting will deal with project labor agreements, and the third meeting will cover both topics.

1. Mitch Roob, CEO, Indiana Economic Development Corporation – Mr. Roob spoke in favor of RTW and described disadvantages Indiana faces because it is not a RTW state. He argued that Indiana loses the opportunity to bring certain companies to Indiana because it is not a RTW state. He then shared data showing higher economic and population growth in RTW states compared to non-RTW states.

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[1] These minutes, exhibits, and other materials referenced in the minutes can be viewed electronically at http://www.in.gov/legislative Hard copies can be obtained in the Legislative Information Center in Room 230 of the State House in Indianapolis, Indiana. Requests for hard copies may be mailed to the Legislative Information Center, Legislative Services Agency, West Washington Street, Indianapolis, IN 46204-2789. A fee of $0.15 per page and mailing costs will be charged for hard copies.

2. Dr. Richard Vedder, professor of Economics at Ohio University, at the invitation of the Indiana Chamber of Commerce – Dr. Vedder spoke in favor of RTW and discussed findings from the study he authored for the Indiana Chamber of Commerce on the RTW issue (Exhibit A). He argued that Indiana has been in a slow, steady, long economic decline. More people are leaving the state than are moving here. RTW states tend to have higher quality of life, population growth, higher wages, and economic growth. Based on his research model, which attempts to control for other variables, he estimates that had Indiana passed RTW in 1977, economic growth would be 11% higher than it is today, and people would be making an additional $2,900 a year on average. RTW states seem to have a comparative advantage. In the long run, RTW lowers the cost of doing business and makes labor costs more affordable. RTW makes businesses more stable without concern for strikes or other labor difficulties. If Indiana is to become more competitive, it needs better and more secure labor.

3. Paul Kersey, Director of Labor Policy, Mackinac Center for Public Policy, at the invitation of the Indiana Chamber of Commerce – Mr. Kersey spoke in favor of RTW. He argued that RTW does not prevent workers from joining a union. It simply guarantees that an employee can't be forced to join a union and pay dues in order to find work. He argues that when you let individual workers decide if they want to be members of a union, the union movement becomes more accountable to workers. When unions are more accountable to individual workers, the state becomes more attractive to employers. Most RTW states were poor before they passed the law, and are catching up. RTW is not an obstacle to wage growth. It leads to employment growth. He does not think that unions represent the positions of union members in non-RTW states. In non-RTW states, they have to pay union fees. Unions know dues money is going to flow either way, whether or not people are well represented. In addition, there are no guarantees for fair, competitive elections for a union office. Due to a lack of accountability, unions have lost the confidence of officials throughout the country. This is why non-RTW laws have had a negative effect on employment. Unions are less connected with their workers. With RTW, Indiana will actually have stronger unions.

4. Katie Culp, Senior Vice President, Cassidy Turley, Real Estate Services, at the invitation of the Indiana Chamber of Commerce – Ms. Culp's job is to help firms decide where to locate their businesses. Based on her experience, RTW makes a difference to employers making location decisions. One-third to a half of industrial clients exclude non-RTW states from consideration. Companies also look closely at labor issues, unionization rates, and economic incentives. For industrial projects, labor and other issues trump quality of life issues.

5. Della Bell, Hyatt employee, invited by the Indiana Chamber of Commerce – Ms. Bell shared her experience working for the Hyatt for 25 years. She argued that actions taken by the union have been unwelcome and have hurt business.

6. Miriam Gonzalez, Hyatt employee, invited by the Indiana Chamber of Commerce – Ms. Gonzalez shared her experience working at the Hyatt for the past 29 years. She is concerned about the unions' actions, including union boycotts of clients who bring business to the Hyatt, and union members showing up at employees' homes to recruit for the union. She has repeatedly argued for a secret-ballot election to allow Hyatt employees to vote for or against the union, but the union has to call the election and does not allow secret-ballot elections. She argues that if Indiana were a RTW state, she and others at the Hyatt would not be harassed because they are not union members.

7. Tom McKenna, at the invitation of the AFL-CIO. Mr. McKenna has worked as a lawyer, for two steel companies, as the executive director of the Chamber of Commerce, as chief of staff for Lt. Gov. Kernan, and as Gov. Kernan's deputy chief of staff for policy. He is currently retired. Mr. McKenna spoke in opposition to RTW. He argued that economic development comes from growth to existing businesses, entrepreneurial job creation, and companies relocating. RTW would only impact relocation. Companies use a sophisticated process to decide where to locate. Ultimately, the decision is based on the bottom line. During his career, RTW has not been a big issue. In addition, he argued that there is nothing forced about unions in non-RTW states. Employees choose to seek work at a union shop. It's fair, because the union has been in place, and has done the work; it's only fair that the workers participate. Rather than focus on RTW, he believes that economic development needs to focus on economic capacity, human resources, and higher education.

8. Prof. Gordon Lafer, University of Oregon, at the invitation of the AFL-CIO – Professor Lafer's research focuses on labor relations. Dr. Lafer made a presentation to the committee (Exhibit B). Based on his research, workers in RTW states annually earn $1,500 less than in non-RTW states when adjusted for cost of living. RTW also decreases the odds of getting health insurance or a pension through an employer for both union and nonunion employees. RTW does not have any impact on job growth. He contrasted his study with the Chamber of Commerce study and expressed disagreement with its findings. He spoke about Oklahoma's experience as the most recent state to pass a RTW law (Exhibit C). After RTW passed, Oklahoma lost over 100 firms to places abroad. RTW did not have any impact on manufacturing. The number of new firms coming to Oklahoma has fallen by a third since the state passed RTW.

9. Mike Kerr, principle owner of Wilhelm Construction— Mr. Kerr is a union contractor. He argued that any benefit from RTW that would help the manufacturing industry would not help the construction industry. He would like the construction industry to be exempted from any law that passes. He spoke of the benefits of the union, especially providing education and training. The union workers know what they're doing, and the union system allows the contractors to have skilled workers to choose from. They set 99% of their work rules, so the argument that unions create a rigid work rule environment is not applicable in their case.

10. Greg Mourad, Director of Legislation, National Right to Work Committee – Mr. Mourad spoke in favor of the RTW issue. He explained that RTW legislation exempts union hiring halls. He argued that individuals should have the right to join a union, but should not be forced to join a union. He believes the economic benefits of passing a RTW law would be significant. He disagreed with Dr. Lafer's discussion about Oklahoma's experience with RTW. Unions have the power to force participation in the union if 51% of people want the union. Individuals can't make their own deals with employers. Unions fight to protect their exclusive right to bargain. Under current law, they don't have to bargain for everyone. They could negotiate a contract for only union members if they wanted to, but they choose not to. When you force people to participate, you weaken the organization.

11. Martha Bracken, Associated Builders and Contractors – Ms. Bracken spoke in favor of RTW and does not want the construction industry exempted from RTW. She spoke of the 8.3% of people in Indiana who are unemployed, and argued that lawmakers should take a policy position that would increase employment in Indiana.

12. Rob Beiswenger, President, Indiana Right to Work Committee – Mr. Beiswenger spoke in favor of RTW. He argued that studies show that states with RTW laws offer higher wages, more jobs, etc. He made several points about freedom of speech and association. Individuals should be able to choose whether or not to associate with unions. He has heard unions say they are forced to bargain for all employees, not only for union members, but there is nothing in law that forces them to do that. Unions want to keep their privileges. The assumption is made that it's fair for everyone to be forced to pay dues because everyone benefits from the union, but sometimes it is not the case that everyone benefits. Union contracts reduce the pay of the most productive members.

13. Ed Roberts, Manufacturers Association – Mr. Roberts spoke in favor of RTW. He explained that Indiana passed a RTW law in 1957 which was later overturned in 1964. It originally passed in Indiana as an effort to protect individuals, and penalize employers who went against the law. Certain businesses will not locate in non-RTW states, and we don't know how many businesses have not located in Indiana because of this policy. The RTW argument is about the freedom to contract.

14. Roland Zullo, University of Michigan, research scientist on labor issues, from the invitation of Indiana State Building and Construction Trades Council – Dr. Zullo argued that RTW would make it more difficult for unions to raise money and retain members. Data is insufficient to determine the economic effect of RTW. According to his research, fatality rates in the construction industry are higher in RTW states than in non-RTW states. He believes this difference is the result of greater union resources and training in non-RTW states.

15. Charlie Kahl, President of the Building and Highway Division, Indiana Construction Association – Mr. Kahl explained how the union hiring system works in the construction industry. He argued that the process allows the industry to find skilled workers at short notice, and believes that the system works well. He stated that he would like to see the construction industry exempted from RTW.

16. Peter Rimsans, Executive Director, Indiana State Building and Construction Trades Council –Mr. Rimsans spoke about employment contracts and their value. Most people are at-will employees. Only union members and some high-paid employees have the security of a contract. They can only be fired due to just cause. People make the choice to go to a union because it pays well and there are good benefits. Besides the cost of contracts, their union puts a lot of money towards training and education.

17. Ron Port, CEO of Health at Home, at the invitation of the AFL-CIO – His company has been unionized in Indiana since 2010. His business has a positive relationship with the union, and unionization has not affected their relationship with employees or wages. As a service provider, this model meets their needs.

18. Barry Macey, Attorney, Macey, Swanson, and Allman, at the invitation of the AFL-CIO – Mr. Macey spoke in opposition to RTW. As an attorney, he works with many unions. He explained that RTW affects a particular provision in a contract. The employer and a union make an agreement. One of the parties at the bargaining table proposes conditions. The employer can refuse to agree to it. If it is agreed to at the bargaining table, it then goes back to the ratification vote by the union members. It has to be approved by a majority of the members. Under federal labor laws, you cannot require someone to be a member of your organization. You can require people to pay the cost of representation to enter into the contract. The supreme court made it clear that nonunion members can only be used to pay for representation for the contract. They can't use those funds for political purposes or other uses. The union system is put into place by a majority of employees, and it's established by majority vote. Employees can also vote to get rid of a union if a majority of employees agree. Employees who have religious objections don't have to pay any fee. They can contribute a comparable amount to a charity.

19. Marty Wolfson, Director of Higgins Labor Studies Program, University of Notre Dame – Based on current research, Dr. Wolfson argued that RTW laws result in lower wages and benefits. RTW laws may be successful in bringing employers to the state, but those employers seeking lower wages will move abroad. Employers can only save on labor costs through productivity with an experienced, skilled workforce. Direct comparisons between growth rates in RTW and non-RTW states can be misleading because RTW states started from a lower base. He also argued that there this no evidence of wage increases over the long run due to RTW.

20. Brendan Clancy, owner of Clancy's Irish Pub in Portage, at the invitation of the AFL-CIO – Mr. Clancy is not a union member, nor are his employees, but many of his customers are union members. He believes that RTW would hurt unions, which in turn would hurt small businesses in the state.

21. Michelle Ison, union member working in an open shop in Batesville, at the invitation of the AFL-CIO – Ms. Ison spoke about her experience working in an open shop. She believes that the open shop environment creates an apathetic environment. When a nonunion member had a problem, he came to the union for help. This problem cost the union the charges of the grievance process and the union dues of members who left the union over this issue.

22. Rob Deppert, small business owner, insurance agent, at the invitation of the AFL-CIO – Mr. Dephart argued against RTW. He is opposed to offering benefits without funding them. Under RTW, by not paying union dues, individuals get the benefits, but don't pay for them. Employees currently have several different options if they do not want to pay union dues and have union representation. They can vote to get rid of the union, or object on religious grounds. He believes it is better to educate employees about their options rather than pass a RTW law.

23. Rosa Rodriguez, steel worker, representative of United Steel Workers, at the invitation of the AFL-CIO – Ms. Rodriguez spoke in opposition to RTW. She argued that RTW would deny the right of employees to negotiate in good faith, and would harm the middle class. She believes that RTW gives rights only to employers.

24. Nancy Guyott, President, Indiana State AFL-CIO – Ms. Guyott spoke in opposition to RTW. She argued that Indiana tried RTW for 8 years, and then rejected it. It didn't really increase growth over that time. The world has changed a lot since the initial RTW law was passed in the 1940s. To be successful, Indiana needs to be competitive in the global economy. Indiana needs strategic cooperation between labor and management.

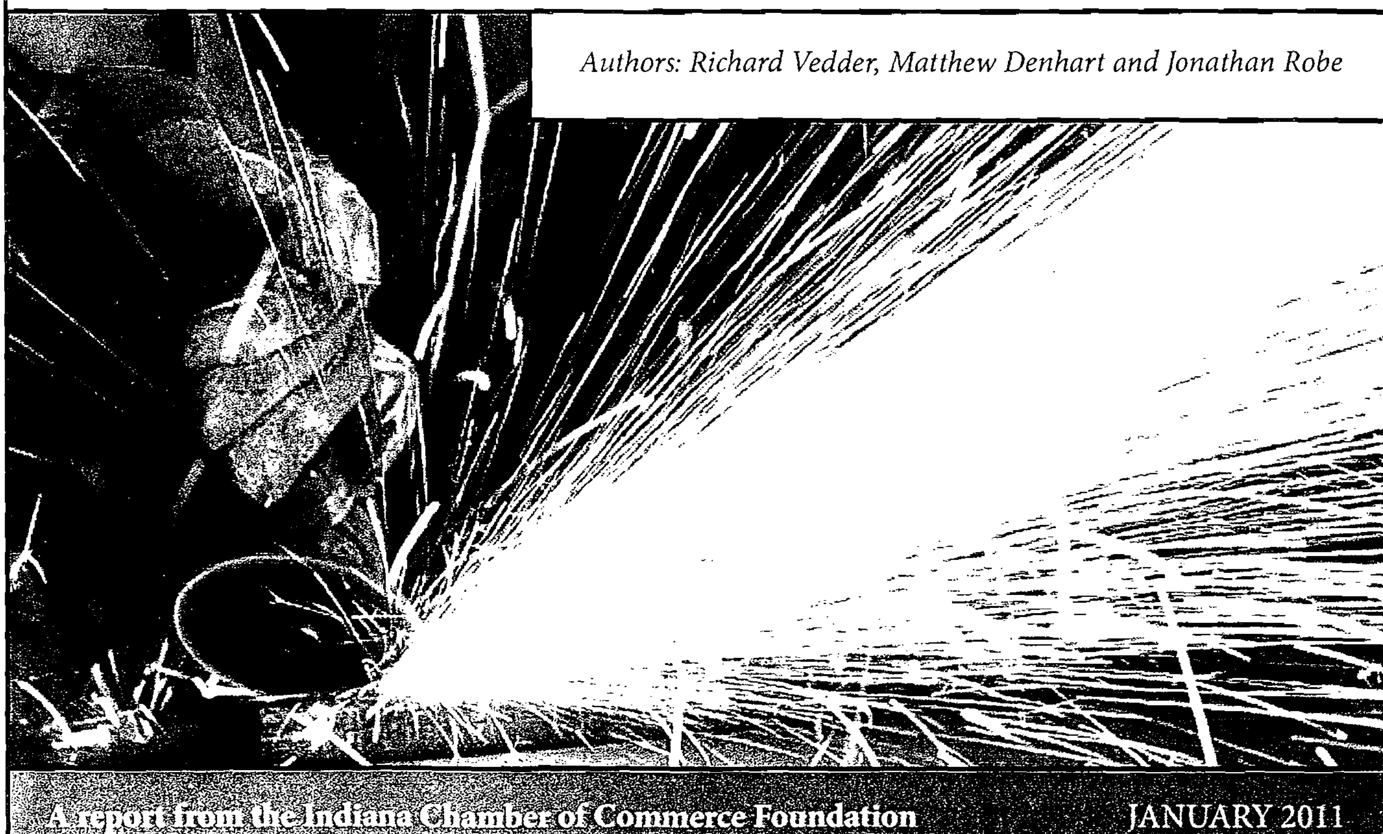
Chairman Boots asked the committee to consider the information presented at the hearing. The date for the next meeting was set for Wednesday, September 7, at 9 a.m.

Chairman Boots adjourned the meeting at 6:10 p.m.

Exhibit A
Interim Study Committee on
Employment Issues
July 26, 2011 Meeting #1

RIGHT-TO-WORK AND INDIANA'S ECONOMIC FUTURE

Authors: Richard Vedder, Matthew Denhart and Jonathan Robe



A report from the Indiana Chamber of Commerce Foundation JANUARY 2011

Right-to-Work in Indiana ~~Chamber~~

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B. Indiana Chamber of Commerce on Right to Work in Indiana performed by Professor Richard Vedder, Ph.D. and Article written by Dr. Vedder on Right to Work

C. Study conducted by William T. Wilson, Ph.D. for Mackinac Center along with follow-up study by Paul Kersey of Mackinac Center

D. Study by William T. Wilson, Ph.D. on Effect of Right to Work Laws on Economic Development

E. Study published by the Federal Reserve Bank of St. Louis on effect of Idaho adopting a Right to Work law

F. Two Reports from The Commonwealth Foundation

G. Study by Professor Barry W. Poulson, Ph.D. on Standard of Living in Right to Work states along with Fact Sheet from National Institute for Labor Relations Board

H. A Report from Stanley T. Greer of National Institute for Labor Relations Research on Organized Labor's Opposition Against an Indiana Right to Work Law

R-to-W

The Indiana Law Blog

Focus is on Indiana law, and on interesting developments in law, government, and more (not just in Indiana).

« Law - Florida defense attorneys demand source code of breath analyzers | Main | Law - Kentucky Court refuses to halt jurors: More indictments possible, judges say »

Saturday, December 17, 2005

IND. LAW - LAWS DETERRED RETAINING COLGATE PLANT, SAYS GOV. DANIELS

In a story today in the **Louisville Courier Journal**, Lesley Stedman Weidenbener and Alex Davis report:

> INDIANAPOLIS — Gov. Mitch Daniels said yesterday that the state failed in its bid to keep the Colgate-Palmolive Co. toothpaste factory in Indiana because it doesn't have right-to-work legislation.
>
> "We did absolutely everything we could do, and I think they'd tell you that," Daniels said of Colgate, which plans to close its 475-employee factory in Clarksville by January 2008. "I talked a couple of times myself to the CEO and to other leadership. We made an offer we believe was competitive in every other respect."
>
> But, he said at a news conference, "they (Colgate) want to be in a right-to-work state."
>
> Under right-to-work laws, employees can't be required to join a union — thus making union organizing more difficult. Kentucky and Indiana do not have such laws, and analysts have predicted that Colgate's new plant will almost surely be in a right-to-work state. * * *
>
> Greg Fitzloff, president of the Southern Indiana Chamber of Commerce, said that Colgate considered a total of 60 sites in 10 states, and that Southern Indiana was among four finalists. He said that information, provided to him by Colgate officials, demonstrates that the area remains competitive despite not having a right-to-work law.
>
> Union officials said earlier this week that they had been told that Indiana ranked last among the four finalists and that the state had been ruled out as a site. Colgate has not [illegible] remain.

The chamber of commerce has not taken a formal stance on right-to-work laws, but Fitzloff said he believes Indiana would be better off if it followed some of its Southern neighbors, such as Tennessee, by enacting such legislation.

Posted by Marcia Oddi on December 17, 2005 08:32 AM

Posted to Indiana Government | Indiana Law | Indiana economic development

Right-to-Work: It's Time to Move Indiana Forward

(July 2011)

Right-to-Work and Indiana's Economic Future (Indiana Chamber, January 2011)

- Growth in Real Per Capita Income (1977-2008)

Indiana, 37.2%; Non-RTW States, 52.8%; U.S., 54.7%; RTW States, 62.3%

If RTW law in place since 1977, result would have been nearly $2,925 more in per capita income. That's $11,700 more each year for a family of four. How would that increase have impacted the state? That's $19 billion more in total personal income in 2010; $1.2 billion in additional income and sales taxes.

If RTW law had been enacted in 2011, estimated (based on three decades of economic growth data) per capita income by 2021 would be $968 higher – or $3,872 higher for a family of four.

- Growth in Jobs (1977-2008)

Indiana, 42.8%; Non-RTW States, 56.5%; U.S., 71%; RTW States, 100%

From 2000 to 2009, nearly 5 million Americans moved from non-RTW states to RTW states

- Growth in Economic Activity (1977-2008)

Gross state product of $269 billion in 2008 would have been an estimated $291.6 billion – a $22.6 billion increase – if RTW had been in place since 1977. Gross state product per capita would have increased (based on conservative estimates) from 29th among the 50 states to 22nd.

U.S. Bureau of Economic Analysis (2011)

- Change in Real GDP (2000-2010)

RTW states: 22%
Non-RTW states: 14%
Indiana: 11%

Statewide Voter Poll (Market Research Insight, December 2010)

- 69% favor RTW, 23% oppose; 41% strongly favor, 13% strongly oppose
- Significant majorities of support across all demographics – age, income, gender, occupation and political affiliation: Republicans (80% support, 13% oppose),

Independents (74%-13%); Democrats (53%-37%). Even 44% of union member households are RTW supporters.

Right-to-Work Law is Helping Turn Oklahoma Into an Economic Leader (National Institute for Labor Relations Research, May 2007)

- From 1991 until 2001, the last 10 years prior to the Right to Work law's approval, Oklahoma residents' real personal income grew by 4% less than the national average. Between 2003 and 2006, real personal income in Oklahoma grew by 13.6% -- more than 50% higher than the national average and more than twice as fast as the overall average in the 28 forced dues states.
- Non-Right to Work Oklahoma suffered a 9.6% decline in its 25-34 year-old population between 1991 and 2000. But over the 2003 to 2005 period, after its Right to Work status was secured, Oklahoma netted a 3.9% gain in 25-34 year-olds. That's more than five times as great as the nationwide increase of 0.7% over this period.

Did Right-to-Work Work for Idaho? (The Federal Reserve Bank of St. Louis, 2002)

Law adopted in 1986

- Growth in manufacturing employment (0.76% in 1975-1986; 3.71% in 1987-1996)
- Growth in manufacturing establishments (1.27% in 1975-1986; 3.99% in 1987-1996)
- Idaho's post-law growth rates similar to three RTW neighbors (Nevada, Utah and Wyoming); significantly higher than neighboring non-RTW states (Washington, Oregon and Montana)

The Economic Effects of Right-to-Work Laws (Mackinac Center for Public Policy, 2007)

- From 2001-2006, economies of RTW states grew 3.4% compared to 2.6% for non-RTW states. Jobs grew 1.2% annually in RTW states, 0.6% in non-RTW states

The Effect of Right-to-Work Laws on Economic Development (Mackinac Center for Public Policy, 2002)

- From 1970-2000, RTW states created 1.43 million manufacturing jobs. In the same time period, non-RTW states lost 2.18 million manufacturing jobs

The Impact of Compulsory Unionism on Economic Development (The Commonwealth Foundation, 2002)

- From 1970-2000, construction employment grew an average of 50% faster each year in RTW states than in non-RTW states

"More Jobs for Indiana – Support Right to Work"

A Guest Column by: E. Roy Budd – Executive Director / Energize-ECI, Inc.

Economically, Indiana is one of America's top-ranked states for businesses considering expansion or relocation. However, Indiana is automatically disqualified from getting a serious look from 33% to 50% of new business opportunities because Indiana is NOT a "Right to Work" state. According to PHH Fantus, the nation's leading business relocation firm, one-half of all companies seeking to relocate automatically rule out forced-union states, such as Indiana. Think of the new jobs and capital investment Indiana could gain if this barrier was eliminated? "Right to Work" laws are state statutes establishing the legal right of employees to decide themselves whether or not to join or financially support a union, banning the practice of requiring union membership or support as a condition of employment. The National Labor Relations Act of 1935 grants the right to join unions, but fails to protect the right to not join a union.

If you would like to see new business growth expand in East Central Indiana – bringing more jobs, please tell our state legislators to pass "Right to Work" legislation soon. "Right to Work" laws now exist in 22 states, with many others in the process of passing such legislation, including our neighboring states of Michigan, Ohio, Kentucky and Illinois. Guess what will happen in these states when they pass "Right to Work?" They will gain new businesses at Indiana's loss. In the past decade, non-agricultural employment in "Right to Work" states grew twice as fast compared to that in "non-Right to Work" states like Indiana. A recent study by Dr. Barry Poulson, professor of economics at the University of Colorado, showed that families in "Right to Work" states have nearly $4,300 more purchasing power than families in "non-Right to Work" states.

The following are key conclusions of research comparing "Right to Work" (RTW) states to "non-Right to Work" states (non-RTW):

- The Gross State Product increased faster in RTW states
- Employment grew faster each year in RTW states
- Manufacturing employment grew faster in RTW states
- Construction employment grew faster each year in RTW states
- Annual unemployment was lower in RTW states
- Per-capita disposable income was higher, on the average, in RTW states
- The cost of living is lower in RTW states
- After-tax purchasing power – real income – is greater in RTW states
- The poverty levels in RTW states are decreasing, while it's growing in non-RTW states
- The number of people covered by health insurance coverage expanded in RTW states

Currently, Indiana is losing ground in the above statistics to RTW states. Shouldn't we be asking our state legislators to level the playing field by passing "Right to Work" legislation? No American should be required to join a labor union just to keep a job, and no resident of East Central Indiana should be compelled to pay dues to an organization in which they do not believe. "Right to Work" is a matter of jobs and fairness. "Right to Work" is the freedom for any Hoosier to be hired only on the merits of his or her ability. "Right to Work" protects every worker's right to join or not join a union. This fundamental principle prohibits forced membership or dues in any organized body and instead provides choice.

If you want Indiana to be on a level playing field for more new jobs, millions of dollars of new capital investment, opportunities for higher paying jobs, a rebuilding of our tax base and jump-starting local economies, let our state legislators and Governor know that we support Indiana's growth through becoming a "Right to Work" state. Don't wait until our Midwestern neighbors begin to drain our economic advantages and jobs.

Sincerely,

E. Roy Budd
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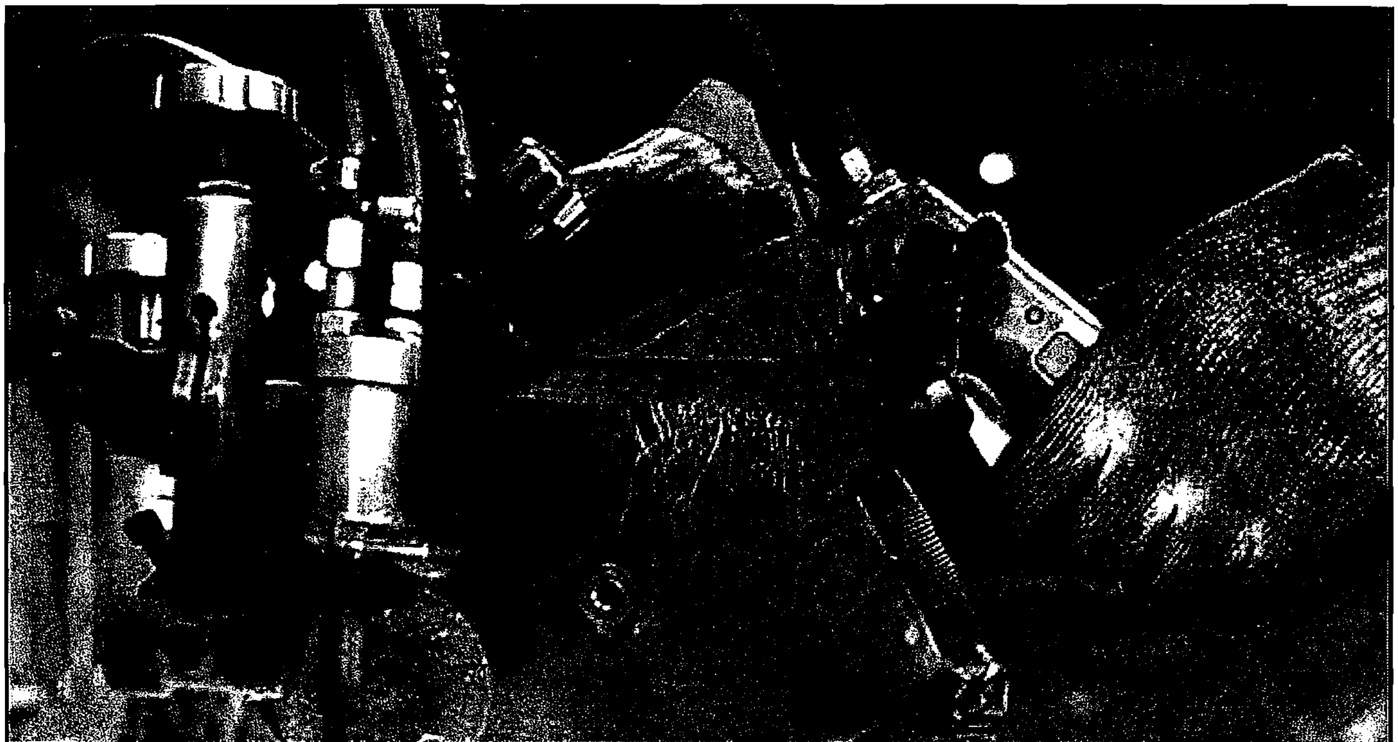
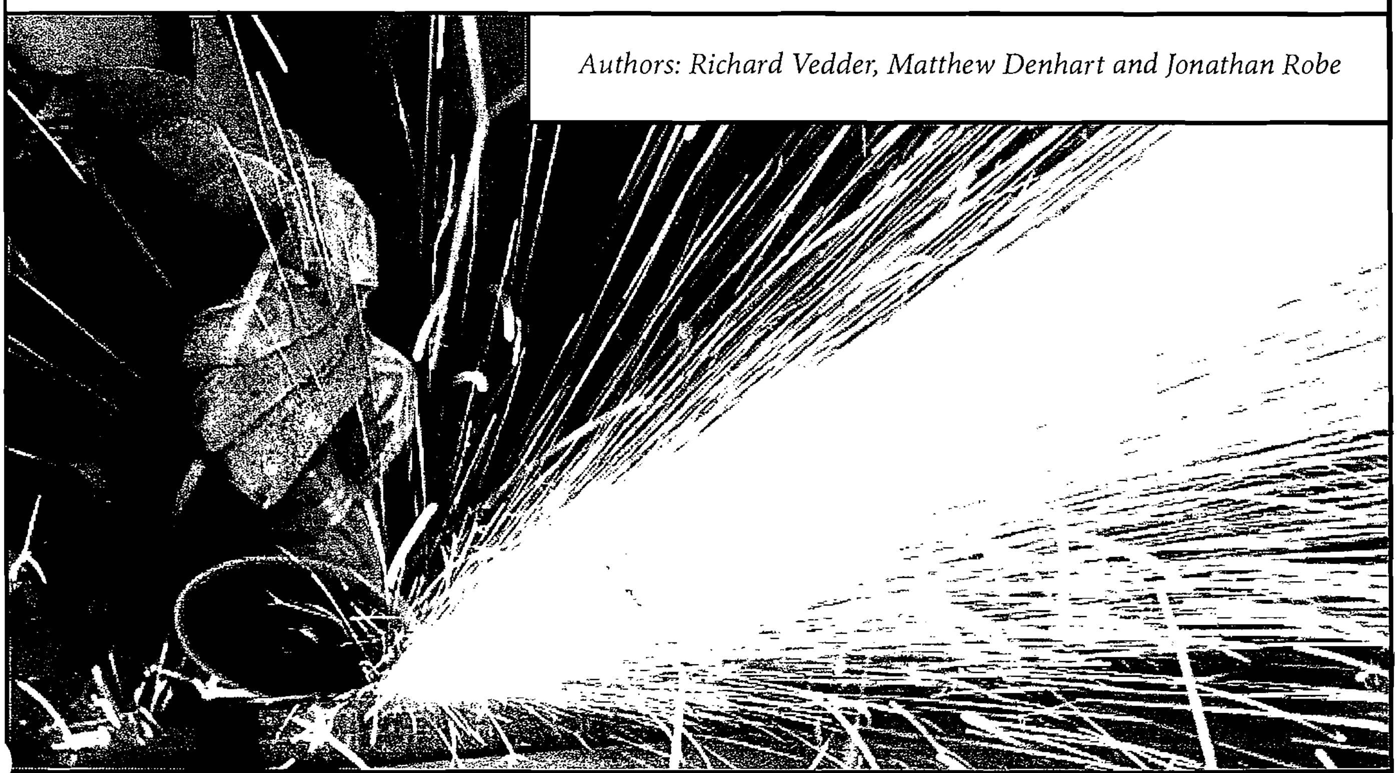
(guest column email by Tom Farris at the direction of Mr. Budd)



RIGHT-TO-WORK AND INDIANA'S ECONOMIC FUTURE

Authors: Richard Vedder, Matthew Denhart and Jonathan Robe



A report from the Indiana Chamber of Commerce Foundation JANUARY 2011

Right-to-Work and Indiana's Economic Future

By Richard Vedder, Matthew Denhart and Jonathan Robe[1]

Executive Summary

Finding ways to foster and sustain economic growth is a challenge facing us as we continue on into the 21st century, a challenge which all 50 states in our great nation must address, including the state of Indiana. One step that the Hoosier state could take to meet this challenge and positively and significantly impact economic growth (and that would be of minimal cost to taxpayers) would be for the state to adopt a right to work (RTW) law that protects workers from compulsory union membership as a requirement of employment. Altogether, 22 states across the nation currently have such laws. States with RTW laws have generally been more prosperous and have had higher rates of economic growth. Moreover, people have moved in large numbers to RTW states, signaling that many perceive that these states offer a higher quality of life. All of this is not surprising since economic theory suggests that any restriction on individuals' ability to engage in market transactions will likely result in below optimal economic outcomes. In this context, compulsory unionism is likely to raise labor costs and discourage capital resources from moving into a state, ultimately lowering productivity, economic growth and incomes. This, in turn, leads to out-migration: Nearly five million Americans (or over 1,450 people per day) left the non-RTW states like Indiana in the first decade of this century to move to the RTW states with higher growth rates and job opportunities.

How significant is the lack of a RTW law in Indiana? We estimate that if Indiana had adopted such a law in 1977, by 2008 per capita income would have been $2,925 higher—equating to $11,700 higher for a family of four. Another way to put it: Indiana's personal income in 2008 would have been $241.9 billion, 8.4 percent more than the actual $223.2 billion. Nearly $19 billion in annual income was lost because of Indiana's lack of a right to work law. Alternative statistical estimations yield slightly smaller but still highly robust results. Indiana grew far slower than the nation as a whole in the last three decades, and most (about two-thirds) of this "growth deficit" is explainable by Indiana's lack of a right to work environment. But it is not too late — falling labor union membership and even growing support for RTW among union members suggests the environment may be changing in favor of a RTW law, enabling implementation of such a law in the Hoosier state.

Using the broader concept of economic activity – gross state product (strictly speaking, Indiana's contribution to gross domestic product for the U.S.), the reported 2008 figure was $269.0 billion, but we would estimate that had a right to work law been in place since 1977, the 2008 figure would have been $291.6 billion, some $22.6 billion more.[2] Gross state product (GSP) per capita would have been, in our estimation, \$42,404, some \$3,286 more than actually achieved. In 2008, Indiana ranked 29th amongst the 50 states in GSP per capita. We estimate that, had a right to work law been in effect, it would have been 22nd (above the median of all states). In reality, Indiana had lower GSP per capita than Kansas, Louisiana, New Hampshire, North Carolina, Pennsylvania, Rhode Island and Wisconsin. Had a right to work law been in effect, we estimate that Indiana would have surpassed all of these states in GSP per capita in 2008.

The above estimates of the total growth in personal income or GSP are actually quite conservative, because it is assumed that population growth would have been unchanged in Indiana if a right to work law were adopted in 1977. In reality, as noted below, right to work laws are associated with in-migration of workers and even some modest increase in birth rates, so the \$19 billion to \$22 billion growth in total income or output noted above probably understates the true impact, perhaps materially.

The positive impact of a right to work law would have been apparent elsewhere. In 2008, for example, Indiana collected \$14.9 billion in state taxes. Under reasonable assumptions, with a right to work law and the higher incomes and output associated with it, Indiana that year would have collected over \$16.1 billion in taxes—over \$1.2 billion more—enough to cover, easily, the estimated budget problem currently facing the Hoosier state. And that number is very conservative for two reasons. First, it ignores non-tax sources of revenues such as fees and user charges, which likely also would have increased with higher economic activity. And it also ignores local governments, including local option income taxes. Higher economic growth likely would lead to higher property taxation, for example, which in turn would have meant higher revenues for school districts and other local governments.

How could enacting a RTW law in Indiana affect the state's future economic growth? Assuming a RTW law is adopted in 2011, we estimate, based on data on economic growth over the past three decades, that personal income per capita in 2021 would be \$968 higher, or \$3,872 higher for a family of four, than if a RTW law was not enacted. Over \$6 billion, therefore, could potentially be added in relatively short order to the income of the residents of the Hoosier state.

Introduction

Indiana is one of 28 states that allows labor unions to negotiate collective bargaining agreements that force employees to belong, or at least pay dues, to a union. This provision restricts the free operation of labor markets, restricts the ability of employers to increase or decrease their personnel as economic conditions change and robs individuals of the freedom to choose to reject having groups represent them in labor negotiations.

A movement is currently underway in Indiana that aims to forbid the compulsory payment requirement of union dues (or union membership itself) as a condition of employment. This right to work (RTW) effort clearly would protect the individual liberties of workers who do not wish to associate with labor unions. However, it is important to consider other benefits for the state as well. For example, would such a law improve the economic growth rate of Indiana? Do RTW states have better rates of growth in population, income and jobs than those that permit compulsory union membership?

This study presents evidence, including some based on econometric analysis, that leads us to conclude that Indiana would be well served to become the 23rd state to have a RTW law. Indeed, particularly since the budgetary cost to Indiana of adopting a RTW law is near zero, we can think of no other legislation that could have such a positive economic impact. On the basis of national evidence, we would predict that an Indiana RTW law would materially improve economic conditions, job opportunities and the quality of life for citizens of the Hoosier state.

The issue of economic growth should be at the top of Indiana's public policy agenda if historical experience is any guide. A third of a century ago, in 1977, per capita income in Indiana was only 3.17 percent below the national average; but by 2009 it was 14.42 percent below that average, one of the lowest growth rates in the nation. In 1977, Indiana's per capita income was over 15 percent higher than in such southern states as North Carolina and Georgia; now, it is below both of them. The state needs to find changes in the environment in which business operates that will help end that growth deficiency and lead to robust growth in the future.

Historical Background

Historically speaking, RTW laws are rather contemporary. Prior to the labor movement coinciding with the New Deal era, such laws were not necessary because labor unions did not have the strong legal authority to compel worker support like they do today.

Common Law Tradition

Prior to the federal legislation passed during the 1930s, labor unions were largely governed under the same common law principles that apply to ordinary citizens. Under this tradition, there was no need for special labor laws because the Constitution itself guarantees property and contract rights. Any disputes that may have arisen between labor and management were handled through private negotiations or, if necessary, in court. If employees thought they could be better represented by a union, they were free to join one, but unions were not permitted to make membership a requirement for employment. Similarly, employers were also free to decide whether they desired to enter into contractual agreements with unions.[3]

1920s Railroad Regulation

The first major movements undermining America's common law tradition with respect to labor relations began in the railroad industry in the 1920s. In 1920, Congress passed the Transportation Act establishing the Railroad Labor Board (RLB). The RLB soon granted railroad unions the power of exclusive representation in labor disputes. This departed abruptly from the common law tradition, with individual employees working for unionized railroad companies no longer permitted to negotiate on their own behalf.

Although the exclusive representation provisions were ruled unconstitutional by the Supreme Court in 1923, railroad unions saw another victory in 1926 with the passage of the Railway Labor Act (RLA). Although the RLA did not reinstate exclusive representation provisions, it specifically granted workers the right to organize. Furthermore, it replaced a "freedom of contract" for employers with a legal "duty to bargain." In 1951, Congress amended the RLA to permit compulsory unionization to be forced upon workers in the railroad and airline industries (the airline industry by that time had fallen under the legal statues of the RLA).[4] To this day, even in RTW states, the RLA allows compulsory unionization in the railroad and airline industries.

1932 Norris-LaGuardia Act

In 1932, Herbert Hoover signed the Norris-LaGuardia Act, further extending union power in America. Beyond legally nullifying worker agreements to not unionize, the act also exempted unions from potential violations of anti-trust laws and freed unions from private damage suits or injunctions arising from their strikes. As might be expected, incidents of union violence spiked in the year following the passage of Norris-LaGuardia.[5]

National Labor Relations Act of 1935

In 1935, Congress passed and President Franklin D. Roosevelt signed the nation's fundamental labor law, the National Labor Relations Act (hereafter called the Wagner Act). That legislation provided for elections that would determine whether a group of workers would be represented by a labor union. If a majority of workers voted to allow union representation, the Wagner Act permitted unions to establish one of three different arrangements. The first, referred to as the "closed shop," requires workers to be a member of the relevant union as a prerequisite for employment. Second, unions could establish "union shop" provisions that allow companies to hire non-union members, but force workers to join the union within a predetermined amount of time following their hiring. Finally, "agency shop" agreements could also be enacted, allowing unions to collect due payments from all workers, but not making union membership itself compulsory.

The Taft-Hartley Act of 1947

In 1947, in response to growing public disillusionment with labor union power and perceived abuses, Congress amended the Wagner Act by passing the Taft-Hartley Act. President Harry S. Truman vetoed the bill, but a Republican dominated Congress mustered the necessary two-thirds vote in both houses to make the bill law. Under Taft-Hartley, the closed shop was outlawed, but union and agency shop arrangements were still permitted.

However, section 14(b) of Taft-Hartley allows individual states to override these provisions as it declares that the act "shall not 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." This clause provides the legal foundation for states to enact RTW legislation, ensuring that workers can decide for themselves whether they wish to support a union, even when collective bargaining agreements are in place.

State Right-to-Work Laws

Florida and Arkansas both adopted RTW provisions in 1944, three years before the passage of the Taft-Hartley Act. Two years later, Arizona, Nebraska and South Dakota followed suit, as did Georgia, Iowa, North Carolina, Texas, Tennessee and Virginia in 1947. Union leaders quickly pushed back, challenging the RTW laws of Arizona, Nebraska and North Carolina in court. The cases ran quickly through the courts and in 1948 the U.S. Supreme Court ruled in favor of the constitutionality of the RTW laws in the case *Lincoln Federal Labor Union v. Northwestern Iron and Metal*.[6]

Today, there are 22 RTW states, geographically concentrated in the southern and western portions of the country.[7] None of the 14 states comprising the New England, Mid-Atlantic and East North Central census regions—the industrial Northeast and Midwest—are RTW states, but a majority of the remaining states (61 percent) have adopted such a provision. Indiana would stand alone in its region as a RTW state.

While the number of RTW states has grown only slightly in recent decades, the proportion of the American population living in a RTW environment has steadily grown, jumping from about 29 percent in 1970 to 40 percent by 2008.[8] While part of that growth reflects a modest growth in the geographic area covered by RTW laws and even slightly higher birth rates in those states, most of it is the result of a very considerable migration over time of Americans out of non-RTW states like Indiana and into RTW states such as Texas, Georgia and Nevada (We should note, in passing, that the cause of this migration is more fundamental than simply favorable climate conditions; after all, California – a state known for areas with very desirable climate – had one of the highest rates of net out-migration during the past decade).[9]

On March 1, 1957 Indiana became the 18th state to enact a RTW law. However, the law did not go into effect until June 25, 1957. During this nearly four-month period, many union leaders negotiated two- to three-year contract extensions that would not be null under RTW until they expired.[10] Union leaders then pursued a strategy of tying the law up in the courts, arguing that agency shop agreements that charged workers dues – but did not force them to be an actual union member – were constitutional. In the 1959 case, *Meade Electric Co. v. Hagberg*, the Indiana Court of Appeals sided with the unions, ruling that while compulsory membership was outlawed, the agency shop was permissible. This ruling left the RTW law essentially meaningless, and it failed to have much impact before being easily repealed in 1965 under Governor Roger Branigin.[11] RTW advocates have not given up in Indiana however. In 1995, Indiana's General Assembly overcame Governor Evan Bayh's veto to pass a law that forbids local school districts to compel non-union teachers into paying union dues.[12]

Right-to-Work Laws and Economic Growth: Basic Economic Principles

The effect of RTW laws on other economic indicators has been a subject of intense study since the laws were first introduced in the 1940s. A wealth of research suggests that RTW laws are a significant factor in explaining state variations in areas such as industry location, human migration and economic growth. Below, we analyze how an Indiana RTW law may benefit the state.

Theory Behind Right-to-Work's Contribution to Economic Growth

It is the stated goal of labor unions to increase wages and benefits for their members. A union that does not raise wages for workers above what exists in a non-union environment is usually perceived as unsuccessful by its membership—particularly since workers have to pay dues to maintain the paid union leadership and negotiate and administer labor contracts. Historically, there is some evidence that the short run effect of unionization is to raise wages, perhaps 10 percent or more from what would otherwise exist.[13]

To the extent that unionization increases labor costs, it makes a given location a less attractive place to invest new capital resources. Suppose a firm is contemplating locating its operation in southern Indiana, where there is no RTW law, or a couple hundred miles away in Tennessee, a state possessing such legislation. Suppose general labor market conditions are similar in both areas, with wages for most unskilled workers being about $10 an hour. Suppose, however, the firm considers the possibility of unionization to be high in Indiana, but low in Tennessee, and that unionization will add at least 10 percent to labor costs. Since labor costs are perhaps 50 percent – or even more – of total costs, this means the firm considers it a real possibility that total per unit costs of producing output could be at least five percent higher in Indiana, encouraging the firm to locate in Tennessee rather than Indiana.

Thus, other things equal, capital will tend to migrate away from, rather than into, non-RTW states where the perceived costs of unionization are relatively high. Over time, this works to lower the ratio of capital to labor in non-RTW states relative to ones with RTW laws. Since labor productivity is closely tied to the capital resources (machines and tools) that workers have available, labor productivity will tend to grow more in the RTW states, stimulating economic growth, including growth in wages and employment.

Plant Location and Employment Growth

Much evidence supports the notion that RTW laws attract industry to a state. In a 1983 econometric analysis of the movement of industry to Southern states throughout the 1960s and 1970s, economist Robert Newman concluded that "RTW laws have not only affected movement *to* the South, but have also influenced movement *within* the South as well."[14] Newman further found that, "...the RTW variable in both a South and non-South regression 'carries its own weight' and hence, the widely held notion that RTW laws are a uniquely Southern phenomenon cannot be supported by these data."[15] These conclusions suggest that RTW laws themselves were a significant factor in attracting businesses to the South.

A more recent study examined this issue of business location again. The paper actually tested the broader issue of the effect of business climate on industry plant location, but used the existence (non-existence) of a RTW law as a proxy for a favorable (unfavorable) business climate. In the analysis, economist Thomas Holmes examined how manufacturing activity differs in counties that border each other but are located in states that have opposing business climates. The assumption is that any two bordering counties will be highly similar in most respects except for the policy environment that faces businesses. Holmes found that, "On average, the manufacturing share of total employment in a county increases by about one-third when one crosses the border into the probusiness side."[16] While this is attributed to the overall state policy effects, and not specifically the existence of a RTW law, the finding is still strong that business friendly states attract new industry.[17]

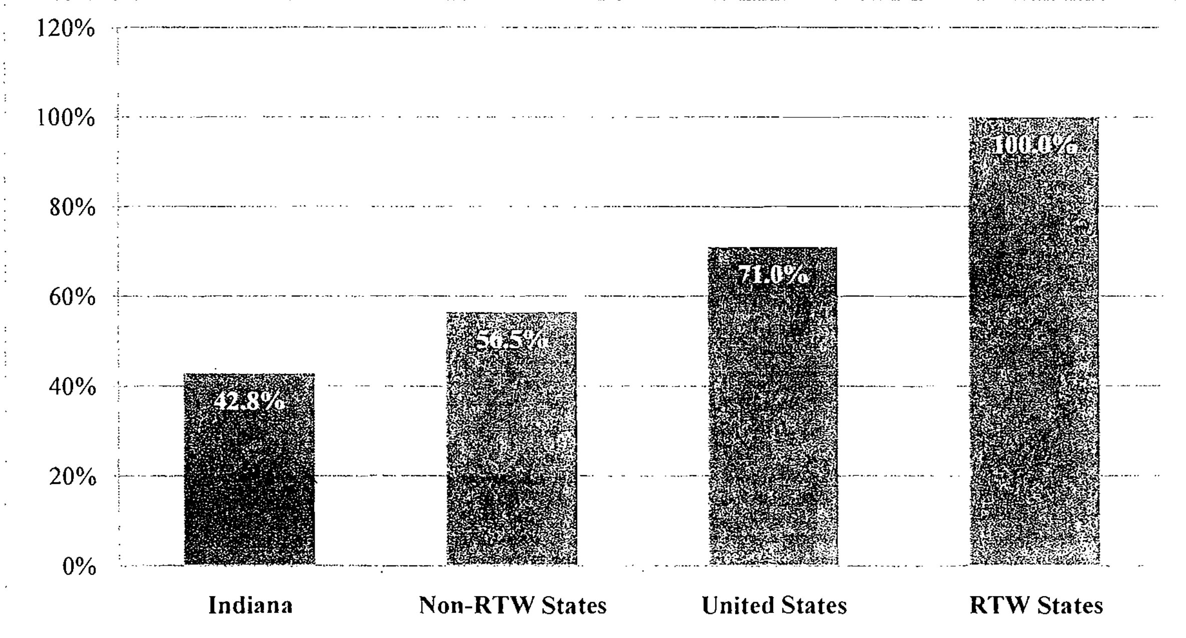
Another useful analysis is to compare total employment growth in RTW states versus that growth in non-RTW states. Using data from the Bureau of Economic Analysis for the years 1977 and 2008, Chart 1 displays this comparison. Over the 31-year period, nationwide total employment grew 71 percent. RTW states significantly outpaced this average, with employment growing 100 percent. Non-RTW states lagged behind both, with an employment growth of only 56.5 percent. During this same period, Indiana lagged behind all three, with total employment growing only 42.8 percent. While this statistic alone cannot prove that RTW laws cause employment growth, it is another indicator that a significantly positive relationship likely exists between the two, even after controlling for other factors.

Migration into Right-to-Work States

To be sure, the rise in the capital-labor ratio associated with the lower perceived labor cost that arises from RTW laws is partially offset by the fact that workers, seeing the greater productivity growth and economic opportunities in the RTW states, tend to migrate to them. Census data show, for example, that from 2000 to 2009 more than 4.9 million native born Americans moved from non-RTW to RTW states, equating to over 1,450 persons per day.[18]

The migration data are interesting in another respect. The movement of a person from one geographic location to another is reasonably considered to be evidence that the new location to which her or she moves is preferred over the old one – that the act of migration indicates an attempt to improve the quality of his or her life by moving to a preferred area. The massive migration towards RTW states suggests the increased freedom for workers and employers, where governmental constraints on individual employment bargaining are removed, is considered to be an important human right, or at least that the economic vitality associated with RTW states appeals to many.

Chart 1: Total Employment Growth, 1977-2008



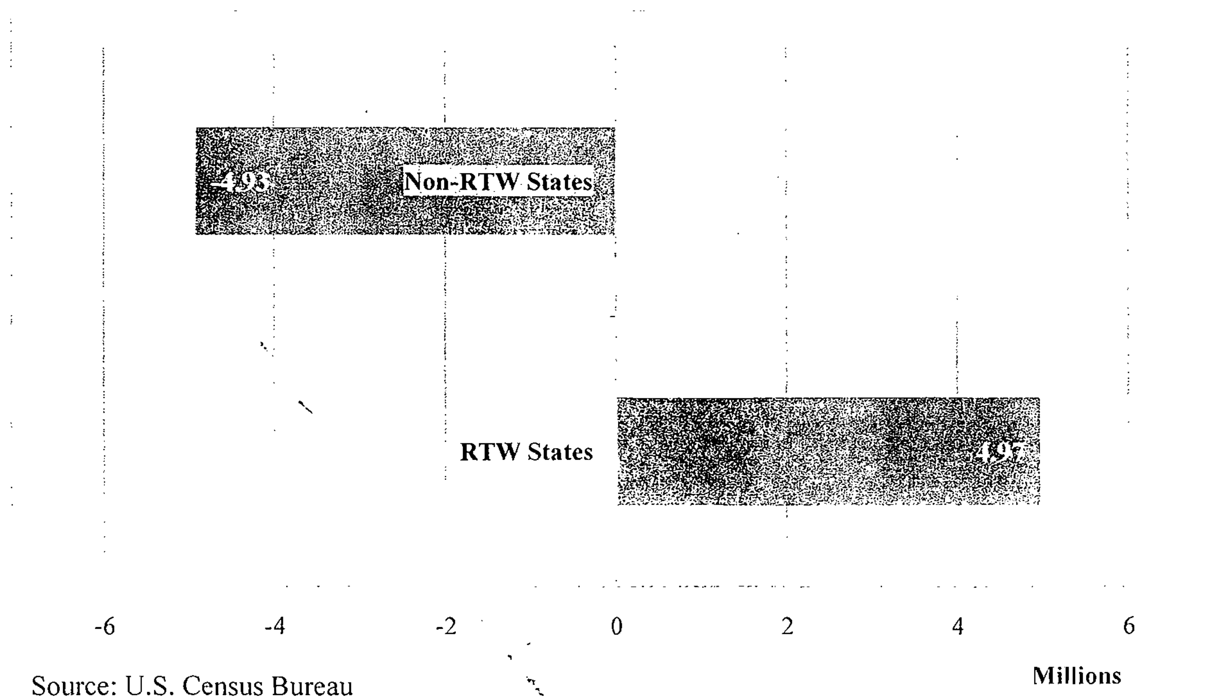
Source: Bureau of Economic Analysis, Authors' calculations

Chart 2 displays net domestic migration for the period of 2000 to 2009, comparing RTW and non-RTW states. Over this period, approximately 4.9 million people made the decision to migrate from non-RTW states to states that had a RTW law. Of those 4.9 million leaving non-

RTW states, Hoosiers accounted for 21,734 of them. It appears that, throughout the first decade of the 21st century, Americans were voting with their feet and moving away from non-RTW states.

It is important to note that while Chart 2 gives the domestic migration rate for all migrants (regardless of age), a significant proportion are people of working age, including young, college educated workers. In fact, a detailed Census Bureau analysis of the 2000 Census revealed that more than a third of all domestic migrants within the United States were between the ages of 25 and 39 (no other segment of the population is more mobile than 25 to 39 year-olds).[19] Furthermore, the Census analysis found that roughly 75 percent of young, college educated adults moved between 1995 and 2000, including a significant number from Indiana. For every 1,000 young, college educated persons living in the Hoosier state in 1995, 142 had left the state by 2000, giving Indiana the eighth highest net out-migration of young, highly educated workers in the nation. In absolute terms, only three other states (Pennsylvania, Ohio and Michigan) lost more young, college educated workers than Indiana during this six-year period.[20] It appears, then, that the absence of a RTW law in the Hoosier state has contributed to a massive brain drain from the state in recent time.

Chart 2: Net Domestic Migration within the United States, 2000-2009*



Source: U.S. Census Bureau
*Note: Data excludes the District of Columbia and all U.S. Territories

Wage Effect

The effect of RTW laws on actual wages for employees has been another topic of significant academic research. However, economists have not come to a consensus on the topic, as some studies conclude there is a negative relationship while others argue the relationship is positive.[21] A recent study by Robert Reed helps clear some of the ambiguity by demonstrating that when one controls for the economic conditions of a state prior to its adoption of a RTW law, the relationship between RTW and wages is positive and statistically significant. Reed estimates that when "holding constant economic conditions in 1945 – average wages in 2000 [were] 6.68 percent higher in RTW states than non-RTW states."[22]

One can imagine that controlling for economic conditions in a state prior to the enactment of a RTW law is important. Indeed, a majority of RTW states were poorer historically than those states in the industrial Northeast and Midwestern parts of the country. Thus, without controlling for this, one would expect that wages in RTW states would be lower than wages in other states. Reed's study is an important addition to the literature on this topic and indicates that the passage of RTW laws may boost workers' wages.

This may seem to contradict an earlier observation, namely that initially after joining a union, worker wages typically rise a bit. But there is a short run and long run effect. In the short run, unionization may force wages up for those involved, but in the long run the debilitating impact on capital formation and the movement of human capital (workers) leads to lower growth in per capita income, so the overall long-term effect of unionization is negative, implying a positive effect of RTW laws that reduce union labor market power.

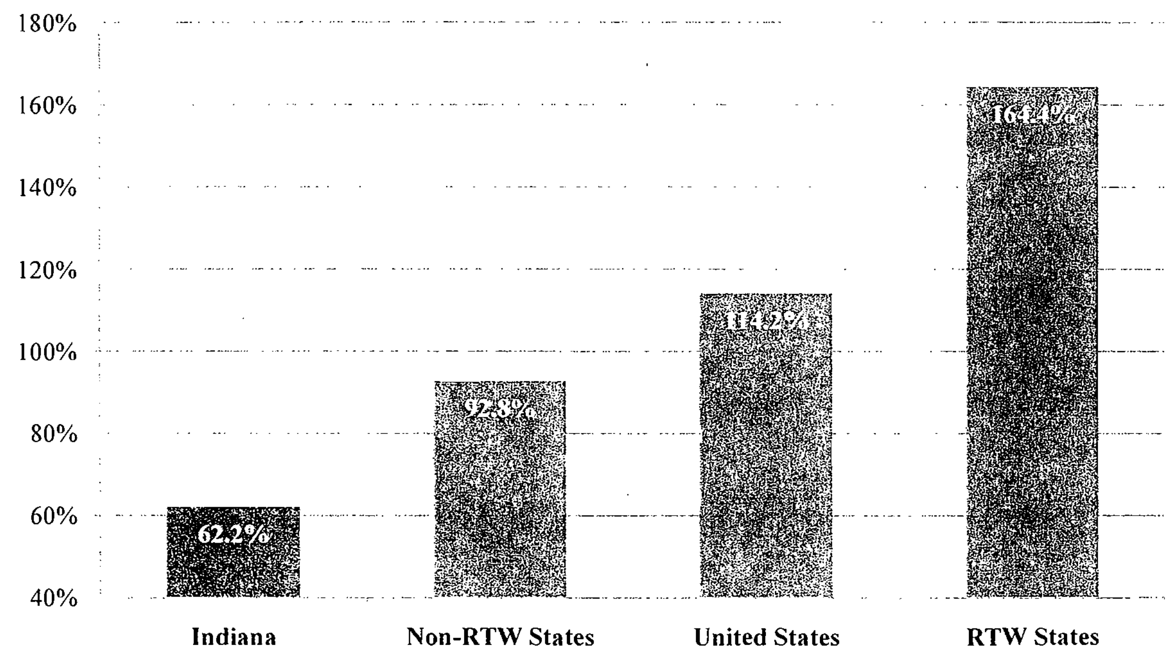
Regression Analysis of Right-to-Work Laws and Economic Growth

The key question that is likely of most interest to citizens of the Hoosier state is: What will a RTW law do for the economic growth of the state? Using multiple regression modeling techniques, we seek to answer that question.

However, before presenting our complicated regression equations, it is helpful to examine simple correlations between RTW laws and the growth in citizens' incomes. Chart 3 shows the long-term rates of economic growth (defined as the growth in inflation-adjusted total personal income) between RTW and non-RTW states over the period 1977 to 2008. The data show that nationally, real total personal income grew by 114%, meaning that, after adjusting for inflation, total personal income in the United States more than doubled in this 31-year time span. Compared to the national average, RTW states experienced substantially higher growth (the rate of growth was 164%), indicating that inflation-adjusted total personal income in these states was more than 2.6 times higher in 2008 than it was in 1977. On the other hand, non-RTW states saw below-average growth of only 93%, meaning that real total personal income did not quite double in these states during this same period. The growth in real total personal income in Indiana was only 62%, far below even the average for non-RTW states. In fact, Indiana had the sixth lowest rate of economic growth from 1977 to 2008, as measured by real personal incomes.

Part of the driving force behind total real personal income growth is population growth. Because RTW states have experienced above-average population growth during this period, this would explain part of the above-average growth in real personal incomes shown in Chart 3. Perhaps a better way to measure economic growth is to look at the growth in *per capita income*. Using per capita income allows us to examine how the average individual's personal income level changes over time. Chart 4 reports our results after adjusting for changes in population size.

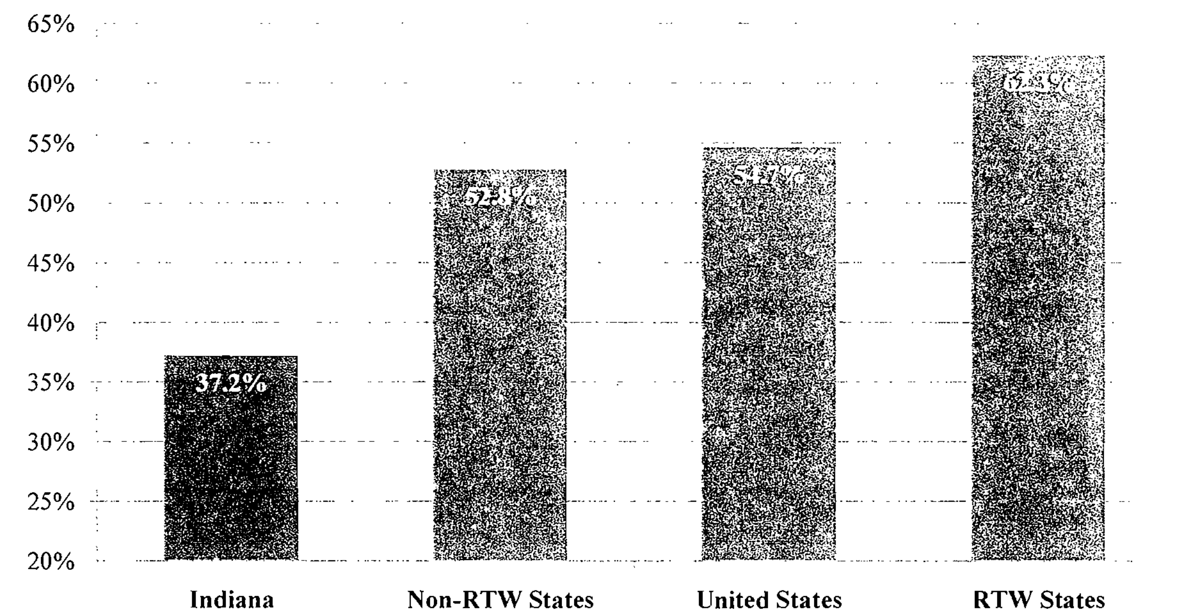
Chart 3: Growth in Real Personal Income, 1977-2008



Source: Bureau of Economic Analysis, Authors' Calculations

Even after controlling for growth in the population, growth in real per capita incomes in RTW states is substantially higher than both the national average and non-RTW states. The real income for the average person in a RTW state was 62 percent higher in 2008 than it was in 1977. However, for non-RTW states, it was only 53 percent higher. Indiana again fares worse than all three of these groups of states, with real per capita incomes growing only 37.2 percent during this period, placing the state in the bottom decile of states in terms of economic growth since the late 1970s.

Chart 4: Growth in Real Per Capita Income, 1977-2008



Source: Bureau of Economic Analysis, Authors' Calculations

Regression Analysis

Although Chart 4 suggests that there is an important and positive relationship between RTW laws and economic growth (i.e., states with RTW laws have experienced above average economic growth while states without such laws have seen below average growth), it does not control for other factors which may have affected economic growth in the various states during this period. For instance, we would expect states which have more highly educated populations to have higher levels of economic growth or that states which have had relatively higher growth in average educational achievement to also have higher rates of growth. We included this, and other factors, in our regression analysis to control for the effects on growth they might have. Following accepted practice in building state-level growth models, we restricted our analysis to the 48 contiguous U.S. states. The results of our regressions are reported in Table 1.

Besides using a variable specifying whether or not the state has a RTW law, we controlled for the change in the proportion of the state population that was employed (the employment-to-population ratio), and the change in the rate of college attainment (the proportion of adults completing college).[23] We also included the number of years that have elapsed since each state attained statehood (State Age), the average proportion of nonagricultural employees in the manufacturing sector (Average Manufacturing) and the rate of population growth. We used a number of other independent variables in alternative growth models which are not reported here.

Table 1: Regression Results for Right to Work Laws and Economic Growth 1977-2008

Dependent Variable: Growth in Real Per Capita Income
Ordinary Least Squares Estimation
N = 48[a]

Variable	*Coefficient*	*t-ratio*	
Constant	0.0663751	0.5127	
Right to Work	0.114886	3.5736	***
Change in Employment-to-Population Ratio	1.47039	2.7535	***
Change in College Attainment	1.48377	2.9825	***
Age of State	0.00146862	3.0223	***
Average Manufacturing	-0.892472	-2.2535	**
Population Growth	-0.0589838	-1.3811	
Statistic	*Value*		
R-squared	0.610115		
Adjusted R-squared	0.553058		
F(6, 41)	10.69318		
P-value(F)	3.93e-07		

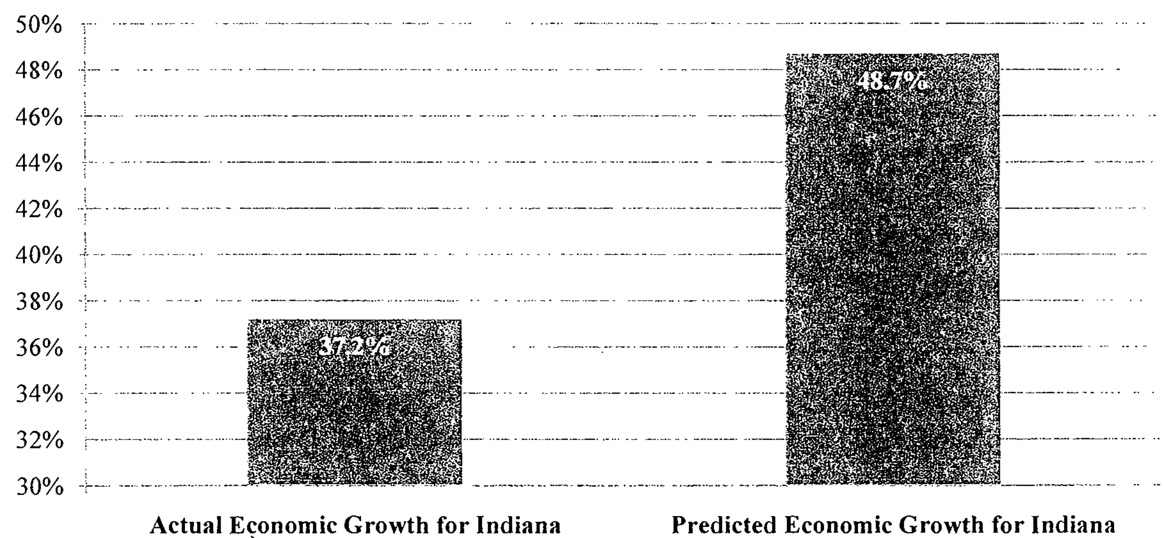
[a]This model includes only the 48 contiguous states. It excludes Alaska and Hawaii, as well as the District of Columbia
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$

As shown in Table 1, our regression results indicate that states with RTW laws saw, on average, higher growth rates than states without such a law. Our results suggest that the impact of a RTW law is to increase economic growth rates by 11.5 percent between 1977 and 2008; this result is significant at the 99 percent confidence level. Not surprisingly, we also see a positive relationship between economic growth and increases in both the employment-to-population ratio and the proportion of adults that have college degrees. We see a negative relationship between manufacturing and growth, indicating that states which are more manufacturing intensive have, over the past 30 years, seen lower levels of growth. Similarly, states which have higher levels of population growth have seen, on average, lower levels of real per capita income growth, though this relationship is not significant at the 95 percent confidence level. (What our results show is that even once we take into account the fact that RTW states have had high rates of population growth – which by definition would lower per capita income – the existence of a RTW law has a highly significant positive relationship with per capita income growth. The relatively high levels of population growth in RTW states somewhat mask the above-average growth in incomes in those states.)

The findings above are significant not only in the formal statistical sense, but also convey that the impact of RTW is in fact rather powerful, as Chart 5 indicates. Suppose, for example, that Indiana had adopted a RTW law in 1977 and maintained it throughout the subsequent years. What would have been Indiana's economic growth, compared to what actually happened? The estimates from the equation above suggest *that income per capita in 2008 would have risen by $2,925 over actual levels – an amount equal to $11,700 for a family of four.*

Per capita income in Indiana fell from slightly over 3 percent below the national average to more than 14 percent below the average. The empirical work above suggests that *over two-thirds of the difference between the Indiana and national rates of economic growth in modern times is explainable by Indiana's lack of a RTW law.* If Indiana had a RTW law, it would not be languishing below historically poor southern states in terms of its overall levels of income.

Chart 5: Actual vs. Predicted Real Per Capita Income Growth for Indiana, 1977-2008



Source: Authors' Calculations

Two caveats about the conclusion above are in order. The results in statistical models do vary with the control variables introduced, and this is no exception. We estimated alternative models, most of which yielded similar results. In one model, for example, we added a variable that controls for income levels in each state at the beginning of the period examined (1977). Again, the RTW variable performs strongly and positively, but the estimated impact is about 23 percent smaller than indicated above. Using that estimate, "only" about one-half, instead of two-thirds, of Indiana's growth deficit relative to the U.S. is explainable by RTW, and the per capita income growth associated with RTW would have been $2,248 (still almost $9,000 for a family of four) instead of $2,925. We would argue, however, that even this lower number is very sizable, particularly for a change in the legal environment that is essentially costless in terms of direct financial outlays, an important consideration in these times of budget stringency.

The second caveat relates to the future. There is little doubt in our mind that the economic damage that a non-RTW environment imposes is meaningful and will continue to be so in the future. But the future is always different, at least in some dimensions, from the past, and the precise magnitude of the positive effects of a RTW law is impossible to state with certainty. The estimates above suggest that the impact will be material, however, and we see nothing in the future that would change the reality that RTW laws would enhance the attractiveness of the Hoosier state to productive resources that create income and wealth. The one factor that might reduce the magnitude of the positive effects of RTW somewhat is the decline in unionism, discussed both above and below. As the unionized sector of the economy shrinks, the relevance of RTW declines somewhat, but as of now it is still very material in Indiana.

The $2,925 per capita income estimate translates into an impact on total personal income of nearly $19 billion. We estimate that had a right to work law existed from 1977 to 2008 and, assuming our initial statistical estimation of its effects are accurate, personal income in Indiana would have risen from $223.2 billion to $241.9 billion, an increase of over 8 percent. Using the broader concept of gross state product (GSP), we estimate it would have risen from $269 billion to $291.6 billion, an increase of over $22 billion. Furthermore, Indiana's per capita GSP would have increased over 8 percent from $39,118 to $42,404. Put differently, Indiana would have ranked 22nd in the nation in per capita output, instead of 29th , and moved ahead of Kansas, Louisiana, New Hampshire, North Carolina, Pennsylvania, Rhode Island and Wisconsin by this measure.

The estimates regarding total personal income and total GSP are extremely conservative, as they ignore the impact that right to work laws have on population. Those effects are material. Based on the national evidence regarding migration and right to work laws, it is very conceivable, even likely, that Indiana's population in 2008 would have been conservatively five percent higher than it actually was, implying around 320,000 more residents in the Hoosier state. Assuming a five percent incremental population was associated with an equal percentage increase in incomes and outputs (a reasonable assumption), personal income would have risen from about $223 billion without right to work laws to about $254 billion with them, an increase of $31 billion.

There are other economic effects as well. Higher economic growth implies higher productivity growth. While state-specific productivity estimates are not provided by the federal government, the slow growth of income and output in the state strongly implies labor productivity grew far less than national averages in recent decades. Most of this gap between the national and probable state productivity growth rates would have been eliminated with a right to work law under almost any set of reasonable assumptions. Similarly, national data show somewhat higher rates of labor force involvement in right to work states. If Indiana's employment-population ratio had risen as a consequence of a right to work law by a typical amount, we would estimate that there would have been about 76,000 more persons working in Indiana in 2009 than actually did.[24] So right to work laws create employment opportunities, in part no doubt relating to the influx of capital associated with the better business environment associated with these laws.

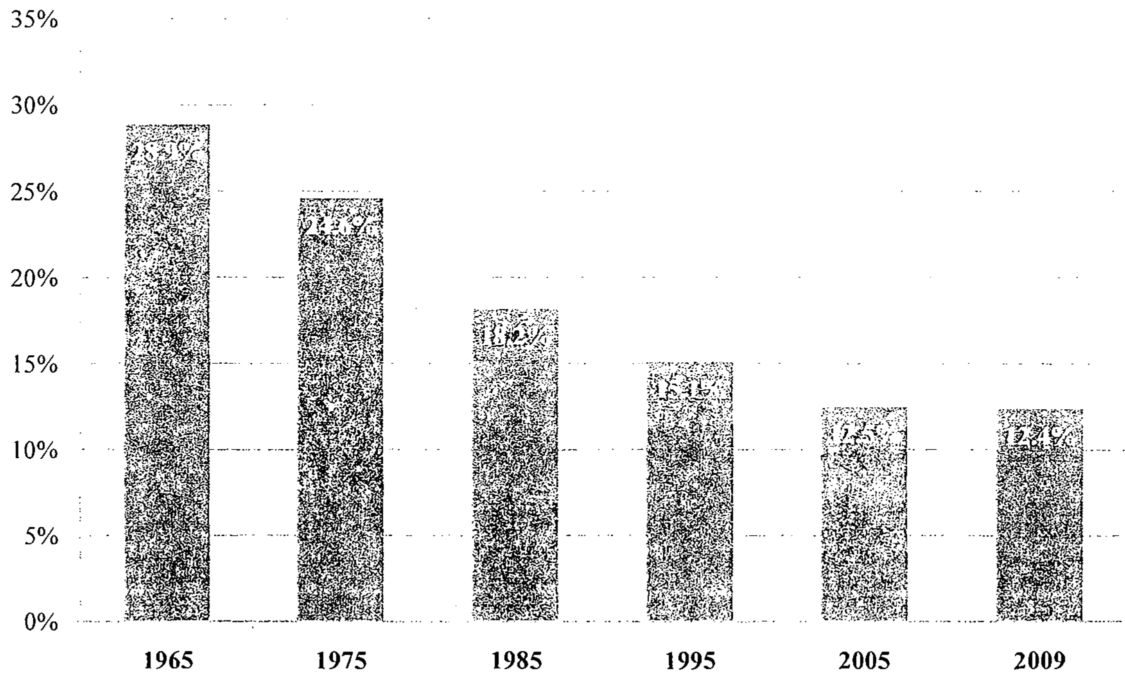
The added income and output from a more vibrant economy associated with a right to work law would have increased tax collections in Indiana by around $1.2 billion annually, more than the anticipated budget shortfall the Hoosier state faces, and that estimate is extremely conservative, as it does not take into account any non-tax forms of revenue that might have increased if income levels were higher.

Union Membership Trends in the U.S. and Indiana

The percentage of Americans belonging to unions has declined sharply over time, as shown by Chart 6, which shows the proportion of all nonagricultural wage and salary employees that are union members for all states in the nation. Chart 7 shows that in 2009, public union membership in the United State accounted for over half of all union membership, the first time in history where public sector union membership in the U.S. exceeded private sector union membership (in 1983, two-thirds of all union members in the U.S. were in the private sector). Moreover, any notion that this trend does not hold in Indiana is dispelled by the data on Indiana union membership, shown in Chart 8.

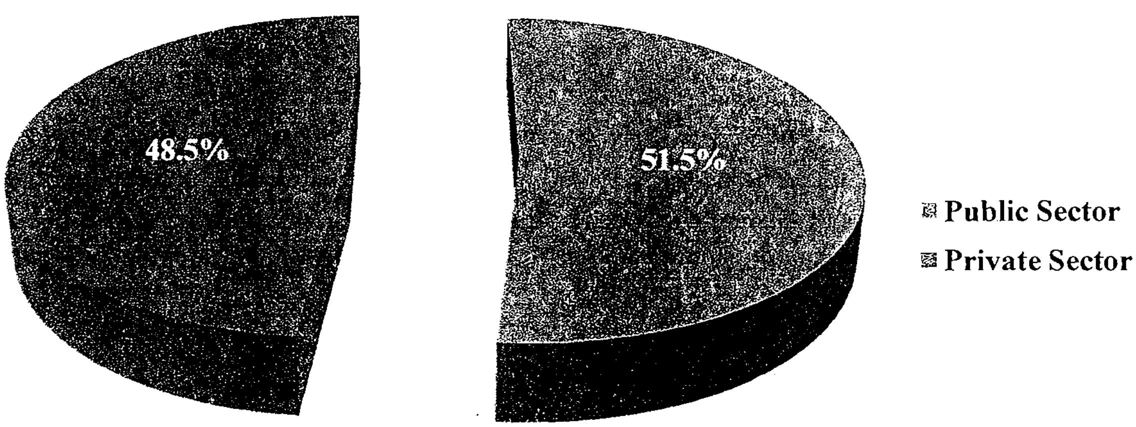
Interestingly enough, the rate at which union membership has declined has been faster in Indiana than in the United States as a whole. Nationally, union membership has fallen by over 16 percentage points between 1965 and 2009; in Indiana, union membership has fallen by almost 25 percentage points. While union membership in Indiana was much higher than the nation in 1965 (41% versus 29%), in 2009 union membership was lower in Indiana than in the United States (11% versus 12%). Indeed, 2006 marked the first year during this period when union membership in Indiana dipped below the national average. While nationally, union membership has only declined by about 1 percentage point over the past decade, union membership in Indiana has fallen by around 5 percentage points, suggesting that Indiana will continue to have relatively low rates of unionization for the foreseeable future.

Chart 6: Union Membership in the United States, 1965-2009[25]



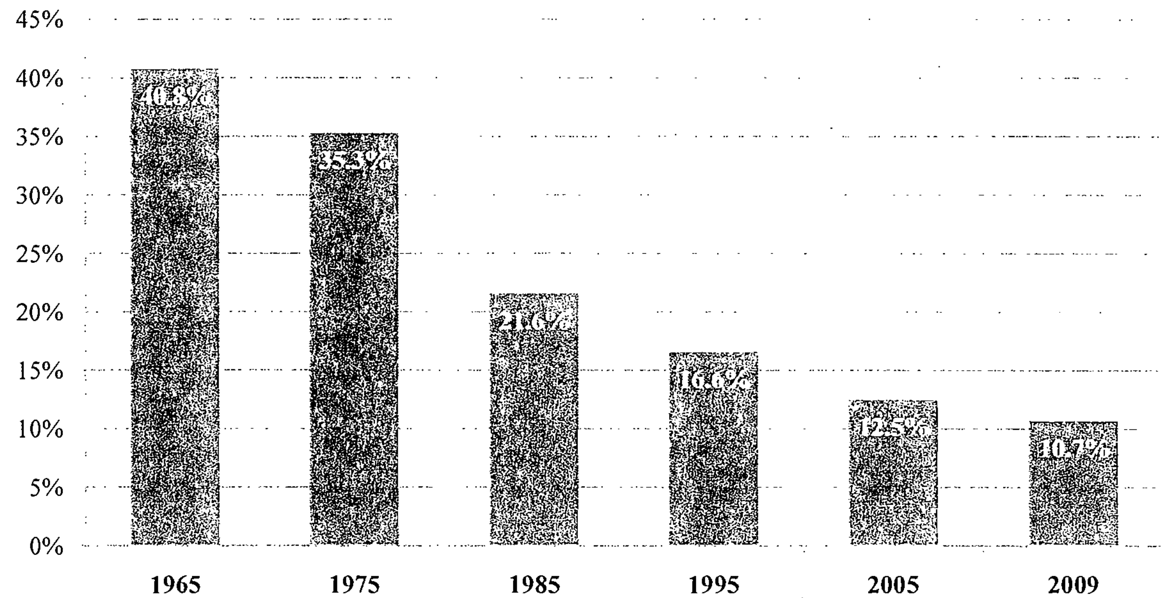
Sources: http://unionstats.com/; see also Hirsch, Macpherson, Vroman (2001).

Chart 7: Union Membership in the United States, by Sector (2009)



Source: U.S. Census Bureau, Authors' Calculations

Chart 8: Union Membership in Indiana, 1965-2009[26]



Sources: http://unionstats.com/; see also Hirsch, Macpherson, Vroman (2001).

This rather continuous and sharp decline over time in union membership suggests that despite all the protections of employee rights to bargaining collectively, provided under the Wagner Act, Americans and Hoosiers alike are "just saying no" to unionization.

Conclusion

America operates with Depression era labor laws that are increasingly out of touch with the realities of a global labor market. The Taft-Hartley Act of 1947 provided states an opportunity to sharply reduce some of the adverse effects of these laws by passing right to work legislation that gives workers the right to decide whether they wish to join a union and/or pay its dues. If the state of Indiana were to avail itself of the opportunity to adopt such a law, it could benefit greatly in terms of future economic growth, as RTW laws attract productive resources (both capital and labor) to a state, while the absence of such laws repels them. Using econometric procedures, we estimate that in the year 2008, the typical Indiana family of four would have had over $11,000 more income had RTW laws been adopted 31 years earlier. State total output would have, conservatively, been $22 billion higher—an increase of over eight percent.

As we indicated earlier, predicting the future is necessarily somewhat speculative. However, suppose Indiana's per capita personal income, adjusting for inflation, grew the same in the next decade (2011 to 2021) without a right to work law as it did in the decade 1997 to 2007 (before the current financial crisis and recession). Alternatively, assume a right to work law was adopted in 2011 and that it added 0.26 percentage points to the growth of personal income, which is what we estimated, based on regression analysis, it would have done for Indiana in the 1977 to 2008 period. We estimate the passage of a right to work law would raise personal income per capita by $968, or $3,872 for a family of four, by 2021. Over $6 billion would be added in relatively short order to the income of the state. And this ignores even more growth arising from likely in-migration of people following a near certain in-migration of capital. In short, the adoption of a right to work law can have powerful, near-immediate effects on the Hoosier state.

In a time of budget stringency, governments cannot afford to use financial resources to impact growth, but they can change the legal environment in which labor, the most important factor of production, operates.

Endnotes

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[2] We are assuming the growth of gross state product would have been the same percentage as the growth in state personal income, a reasonable assumption.

[3] George C. Leef, "Free Choice for Workers: A History of the Right to Work Movement," (Ottawa: Jameson Books, 2005).

[4] *Ibid*, p. 37.

[5] *Ibid*, p. 7.

[6] *Ibid*, p. 29.

[7] The right-to-work states include Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Iowa, Kansas, Louisiana, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, and Wyoming.

[8] Richard Vedder, "Right-to-Work Laws: Liberty, Prosperity and Quality of Life," *Cato Journal* 30 (Winter 2010), 171-180.

[9] Indeed, two Harvard researchers recently found the climate effect is not the underlying cause of growth in areas with favorable climate in the United States. They found that, in terms of population and income growth, "the growth of the Sunbelt has little to do with the sun." See Glaeser, Edward L. and Kristina Tobio, "The Rise of the Sunbelt," Harvard Institute of Economic Research, Discussion Paper 2135, 2007. Available at: http://www.economics.harvard.edu/pub/hier/2007/HIER2135.pdf.

[10] Fred Witney, "The Indiana Right-to-Work Law," *Industrial and Labor Relations Review*, Vol. 11, No. 4 (1958), 506-517.

[11] Leef, "Free Choice for Workers," p. 209.

[12] *Ibid*, p. 210.

[13] For the pioneering work, see H. Gregg Lewis, *Unionism and Relative Wages in the United States* (Chicago, IL: University of Chicago Press, 1963); a review of literature that for the most part confirms Lewis's observation, see

C.J. Parsley, "Labor Union Effects on Wage Gains: A Survey of Recent Literature, *Journal of Economic Literature* 18 (March 1980), 1-31. There is a big distinction, that Lewis himself emphasizes, from the micro effects that unions have on newly organized workers and the broader economic or "macro" effects. See, for example, Lewis's "Union Relative Wage Effects: A Survey of Macro Estimates," *Journal of Labor Economics* 1 (January 1983), 1-27.

[14] Robert J. Newman, "Industry Migration and Growth in the South," *The Review of Economics and Statistics*, Vol. 65, No. 1 (Feb. 1983), p. 76-86.

[15] *Ibid*, p. 85.

[16] Thomas J. Holmes, "The Effect of State Policies on the Location of Manufacturing: Evidence from State Borders," *The Journal of Political Economy,* Vol. 106, No. 4 (August 1998), pp. 667-705.

[17] *Ibid,* p. 702-04.

[18] Vedder, "Right to Work Laws," p. 173.

[19] U.S. Census Bureau, "Migration of the Young, Single, and College Educated: 1995 to 2000," Washington, DC: U.S. Department of Commerce, November 2003.

[20] *Ibid.*

[21] For a listing of previous empirical research on the relationship between RTW and wages, see Table 1 of: W. Robert Reed, "How Right-to-Work Laws Affect Wages," *Journal of Labor Research*, Vol. 24, (2003), p. 713-730.

[22] W. Robert Reed, "How Right-to-Work Laws Affect Wages," *Journal of Labor Research*, Vol. 24, (2003), p. 713-730.

[23] Prior to 1992, official college attainment data were for the proportion of adults who had completed four or more years of college. After 1992, the data refer to the proportion of adults who have received at least a bachelor's degree.

[24] This is based on the observation in Vedder, "Right to Work Laws..." that the average right to work state had an employment-population ratio that was 1.4 percentage points higher than the average non-right-to-work state.

[25]Data for United States are data for "All States" published at http://unionstats.com/ and are for the proportion of all nonagricultural wage and salary employees who are union members. See Barry T. Hirsch, David A. Macpherson, and Wayne G. Vroman, "Estimates of Union Density by State," *Monthly Labor Review*, Vol. 124, No. 7, July 2001. See also Barry T. Hirsch and David A. Macpherson, "Union Membership and Coverage Database from the Current Population Survey: Note," *Industrial and Labor Relations Review*, Vol. 56, No. 2, January 2003, pp. 349-54 and Gerald Mayer, "Union Membership Trends in the United States" (2004), *Federal Publications*, Paper 174, available at: http://digitalcommons.ilr.cornell.edu/key_workplace/174.

[26] Hirsch, Macpherson, and Vroman, "Estimates of Union Density by State."

Right-to-Work Laws: Liberty, Prosperity, and Quality of Life

Richard Vedder

The most essential ingredient embodied in the liberty championed by the classical liberal writers of the Enlightenment and beyond is individual choice and right of expression—the right of persons to say what they think, decide for themselves what groups that want to join, what religion that want to profess, what person they want to marry, what goods they want to buy or sell, and what persons they want to represent them where necessity requires collective decisionmaking.

One important economic dimension of individual liberty is the right to sell one's labor services without attenuation—that is, without limits on the terms of the agreement (e.g., wage rates and hours of work), or who will represent the worker in reaching those terms.

The eroding of employment liberty in the United States had begun before the 1930s, with various sorts of state laws restricting hours and setting minimum wages, but in 1930 America was still largely governed by an employment-at-will standard where employers and employees could freely "truck and barter," to use Adam Smith's phrase, without major outside interference.

Labor legislation in the early 1930s such as the Davis-Bacon Act and, to a lesser degree, the Norris-LaGuardia Act began to chip away at bargaining freedom, but it was the National Labor Relations Act of

Cato Journal, Vol. 30, No. 1 (Winter 2010).

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1935 (Wagner Act) that dramatically revolutionized employment contracts, severely restricting the freedom of workers and employers to reach individual bargaining arrangements. Required union representation elections allowed for a small majority of workers to force other workers to join a union or lose their job. Under the closed shop arrangement permissible under the Wagner Act, unions controlled who was hired, since union membership was mandatory for employment.

With the return to high employment and prosperity with World War II and the postwar boom, concern about excessive union power grew, probably most symbolized by strikes of coal miners during 1946 that threatened significant hardships on seemingly uninvolved Americans. In 1947, the Republican majority in the 80th Congress enacted the Taft-Hartley Act, and Congress overrode a veto of the legislation by pro-union President Harry Truman. Fortunately, there was one important provision (section 14b) in Taft-Hartley that works to significantly lower the infringements on liberty and adverse economic effects of the law—namely, state governments can pass-rightto-work laws that outlaw union shop collective bargaining agreements, permitting individual workers to decide whether they want to join a labor union or not. At present 22 states have adopted right-to-work laws.[1] None of the 14 states in the Northeast or East Central parts of the country (industrial Midwest) have these laws, as unions have been successful in thwarting their passage. Outside of that area, however, a solid majority of Americans (60 percent) now live in right-to-work states.

The Impact of Right-to-Work Laws on Migration

Indeed, an important untold story is the rapid growth of population living in right-to-work states relative to states refusing to grant workers the right to reject unionization. In 1970, 28.5 percent of Americans lived in right-to-work states; by 2008, the proportion had risen to nearly 40 percent (to over 121 million).[2] The population liv-

[1] The states are Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Iowa, Kansas, Louisiana, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, and Wyoming. Indiana has a very limited right-to-work law, limited to school employees, but is not considered a right-to-work state in this article.

[2] Throughout this article, unless otherwise noted, calculations are based on Census data (U.S. Bureau of the Census 2009a).

ing in right-to-work states more than doubled, compared with a modest 25.7 percent increase in non right-to-work states. Moreover, only a small proportion (about 15 percent) of the increase in the proportion of Americans in right-to-work states is due to states newly enacting right-to-work laws. Indeed, in the last 20 years, only one state (Oklahoma) has adopted a new right-to-work law. Most of the population gains arose from greater population increases in right-towork states.

Undoubtedly, the most important reason for the increase in the percentage of U.S. population living in right-to-work states has been because there has been a huge migration of persons from the nonright-to-work states to those allowing greater personal liberty with respect to employment. Unions cannot erect Berlin-type walls to prevent people fleeing states where employment contracts are constrained by law. Consequently, internal in-migration into the rightto-work states has been astonishing. For example, U.S. Census Bureau population estimate data show that more than 4.7 million Americans moved from the non-right-to-work states to right-to-work states from April 1, 2000, to July 1, 2008—on average more than one person every single minute of that eight years (U.S. Bureau of the Census 2009b). Presumably people move to improve the quality of their lives; they perceive that they likely will be happier in their new home than in their old one. Thus, this immense human movement strongly suggests that job conscious Americans prefer areas that allow more individual employment liberty than ones that do not.

The absence of right-to-work laws makes employment a less pleasant experience for those forced to join a union against their will, so at the margin, some persons might choose to simply not work (to be sure, not an option for many persons given the dominant importance of labor income). The descriptive statistics provide some confirmation of that view. All four states that had over 70 percent of the population over the age of 16 that was working in 2007 (Nebraska, North Dakota, South Dakota, and Utah) were right-to-work states; the U.S. average was 63 percent. The unweighted arithmetic mean for the right-to-work state was 1.4 percentage points higher than for the non-right-to-work states (U.S. Bureau of the Census 2009b: Table 573). About 60 percent of the gap is explained by higher labor force participation rates in the right-to-work states, and about 40 percent of it by lower unemployment rates in those states (in 2007, the mean unemployment rate for the right-to-work states was 4.04

percent, while for the other states it was 4.58 percent). The simple descriptive statistics suggesting right-to-work laws increase labor force participation are reinforced using far more sophisticated statistical analysis. Lowell Gallaway, Robert Lawson, and I have demonstrated using a two-stage regression model that, other things constant, right-to-work laws enhance labor force participation (Gallaway, Vedder, and Lawson 1991).

To be sure, the evidence expressed above is not a rigorous analysis of the relationship between right-to-work laws and human behavior. For example, six right-to-work states (Texas, Florida, Tennessee, Nevada, South Dakota, and Wyoming) also have no personal income taxes, and migration could well be more related to fleeing the oppression of high taxation than to work in an environment where individual employment choices are given favorable legal treatment. Some might note also that many of the right-to-work states are in the Sun Belt, and, other things equal, many Americans prefer sunny, warm climates to cold, damp ones (and the nonpecuniary benefits bestowed by good weather are not taxable by governments). Accordingly, additional statistical modeling is needed to control for these other potential determinants of migration behavior.

Consequently, I did some multiple regression analysis to explain variations in the interstate migration of native-born Americans from 2000 to 2008. I tried several different models, incorporating different sets of explanatory variables (tax, climate, occupational composition of the labor force, unemployment, population density, and economic growth variables). Without exception, in all the estimations, a statistically significant positive relationship (usually at the 1 percent level) was observed between the presence of right-to-work laws and net migration. To be sure, the results indicate that right-towork was only one of several factors explaining migration—for example, there was strong out-migration from manufacturing-intensive states, and Americans as well moved into low tax states, while the climatic variables were relatively weak and not statistically significant. Nonetheless, the findings reinforce the view that people vote with their feet to move to freer labor market environments. Consider a state with a population of five million in 2000. Other things equal, the model with the best predictive power that we used suggests that about 150,000 more people would move into the state between 2000 and 2008 because of right-to-work laws. If, as almost certainly is the case, in-migration is associated with perceived enhancements in the quality of life and happiness, then, the empirical evidence supports the proposition that right-to-work laws promote human betterment.

Economic Effects of Right-to-Work Laws

The descriptive evidence above suggests that right-to-work laws enhance the amount of labor resources within a geographic area, in part from in-migration, in part from higher birth and labor force participation rates, and in part because of lower unemployment rates. Labor inputs are easily the single most important ingredient in production, and owners of labor resources are compensated more than twice as much as the owner of capital resources for precisely this reason.

Using a Cobb-Douglas production function (Cobb and Douglas 1928), economists have found that the elasticity of output with respect to labor is about 0.7, which means that a 1 percent increase in labor is associated with a 0.7 percent increase in output. Given that labor input usage associated with right-to-work laws may increase labor input usage by around 2–3 percent (based on differential employment-population ratios), one would expect that right-to-work laws may positively impact output by around 2 percent. Since only 40 percent of the U.S. population is impacted currently by these laws, the aggregate national output effect would be about 0.8 percent—about $110 billion a year, which is more than $1,000 annually for a household of three. Although this is a "back of the envelope" type calculation, it shows that the potential impact of passing right-towork legislation is far from trivial.

The forgoing calculation ignores important secondary and tertiary effects of right-to-work laws. It is clear that such laws are associated with significantly lower levels of union membership, which is why unions so strongly oppose them. The unweighted mean union membership as a percentage of workers for the 50 states was 6.7 percent for right-to-work states in 2007, less than one-half the 14.2 percent rate for states without such laws. Only two relatively small right-to-work states had more than 10 percent union membership (Iowa and Nevada), while only four of the 28 non-right-to-work states had *less* than that percentage (Colorado, Kentucky, New Hampshire, and New Mexico). In non-right-to-work states, where union collective bargaining agreements exist, fewer than 8 percent of workers are not union members, compared with over 17 percent in right-to-work states.

Where unions exist, they have in some cases used their labor monopoly power to extract agreements where the current marginal labor cost to employers exceeds the marginal revenue associated with that labor—at the margin, employers are losing money. Average pay levels in non-right-to-work states are over 20 percent higher (using unweighted means of state data) than in their right-to-work counterparts. Huge legacy costs (e.g., generous pension benefits and high health care costs for retirees) that have been brought about by collective bargaining agreements on such industrial icons as General Motors and Chrysler forced them into bankruptcy. In short, returns to capital investment are often impaired by unionization, so new start-ups and business expansions are likely to be much lower in nonright-to-work states with high unionization. Thus, capital formation and entrepreneurial initiative may be stifled by laws restricting unfettered labor market behavior, which adds to the negative effects of these laws on output growth.

To summarize, where right-to-work laws do not exist, unions tend to be much stronger. Some have argued that this is a consequence of such laws (Carroll 1983), while others differ (Lumsden and Petersen 1975, Farber 1984). In any case, no one disputes that non-right-towork states are more unionized. This, in turn, leads to a reduction in the provision of labor, and, indirectly capital resources, lowering output levels from what would otherwise be the case. The long-term effects, particularly of reduced attractiveness of capital resources, would be lower rates of economic growth. This, of course, leads to a testable hypothesis: right-to-work laws promote economic growth.

Accordingly, regression analysis was used to relate the rate of growth in real per capita personal income from 1977 to 2007 for the 48 contiguous U.S. states to the existence of right-to-work laws, incorporating several other variables into the analysis for control purposes. For example, two tax variables (TAXBURDEN77 and CHTAXBURDEN) were included to take account of the amount of state and local tax revenue in 1977 as a percentage of personal income, and the change in that percentage from 1977 to 2007. An educational attainment variable (COLLEGE), specifying the proportion of the adult population with four-year college degrees or more, was also included along with two geographic/demographic variables: the amount of land area (LANDAREA) in a state, and the rate of growth in population (POPGROWTH). A number of other potential independent variables were tried in alternative models not

reported here, but their inclusion did not dramatically change the nature of the results—namely, a very strong and highly statistically significant (at the 1 percent level) positive relationship between right-to-work laws and economic growth (see Table 1).

Suppose two states were otherwise identical, but one had a rightto-work law while the second did not. Also, suppose the non-right-towork states had real personal income growth of 50 percent (slightly below the average of all states) over the 1977 to 2007 period. The model predicts that economic growth in the right-to-work state would have been about 61.5 percent—that is, a 23 percent higher growth rate than in the non-right-to-work state. This is a powerful finding: a seemingly modest change in the legal environment in which labor markets operate has a significant impact on the rate of economic growth.

Suppose the two states in the forgoing example had per capita income of $24,000 in 2007 dollars in 1977. Per capita income in the state without right-to-work protection would have risen to $36,000 in 2007, compared with $38,760 in the right-to-work state. The rightto-work protection would have increased per capita income by an extra S2,760—or over S11,000 annually for a family of four. Right-towork laws potentially have powerful positive economic effects. Based on an examination of experiences following the passage of the

table 1

Right-to-Work Laws and Economic Growth, 1977–2007: Regression Results

Variable or Statistic	Coefficient or Value	T-Ratio
Constant	0.5157	2.704
RIGHT TO WORK	0.1147	3.259
TAXBURDEN77	_4.1209	2.102
CHTAXBURDEN	_2.8285	1.352
POPGROWTH	_0.1298	3.461
LANDAREA	_0.0000	3.246
COLLEGE	2.4046	5.608
R^2	0.5455	
F-Ratio	8.2207	

Louisiana and Idaho laws, it appears some of these effects become capitalized in greater wealth in the form of higher stock market prices (Abraham and Voos 2000).

The statistical modeling above is not necessarily the last word. Modifying the model by looking at different time periods, samples (e.g., including Alaska, Hawaii, and the District of Columbia in the sample), and variables would alter results somewhat. There are alternative econometric techniques, including general equilibrium modeling, that might offer somewhat different conclusions. Nonetheless, based on existing evidence, a strong case can be made that right-towork laws have a positive impact on U.S. living standards.

Prospects for Future Changes in the Law

Economists are mediocre predictors of the future with respect to economic change, and arguably even worse at assessing political change. With that caveat, I nonetheless think it is possible to make some reasonable if somewhat speculative observations about the future of right-to-work laws. This is being written at a time when a strongly pro-union administration, that of Barack Obama, is supportive of changes that would roll back or eliminate right-to-work laws. I suspect that effort will be unsuccessful, despite Democratic control of both the executive and judicial branches of the federal government. Moreover, if the current trends in labor markets continue, I would suspect the longer-term prognosis is for right-to-work to expand, not contract, although the magnitude and timing of this move is very difficult to predict.

The U.S. has been in rough political equilibrium over right-towork laws for at least 20 years. Excepting Oklahoma, there have been no states added or subtracted from the right-to-work list. I would expect national polling of citizens on the question would find more Americans in favor of right-to-work than opposed, perhaps by a fairly comfortable margin. That perceived reality, however, has not led to much real policy change in modern times because of the operation of an important principle of public choice economics: the asymmetry in the concentration of costs and benefits often leads to outcomes that are politically achievable but relatively unpopular with the general public and also suboptimal from the standpoint of maximizing human welfare. In this case, the costs of eliminating right-to-work laws exceed the benefits, but those costs are disbursed among liter-

ally hundreds of millions of Americans. The benefits of eliminating right-to-work are much smaller, but are concentrated among a vastly smaller group of labor union leaders. On a per person basis, those who are harmed by eliminating right-to-work laws perceive those costs as worth perhaps a few dollars a year (although the empirical work above suggests this is probably an understatement of those costs), so the issue does not loom large in the political consciousness of the bulk of the population—it is simply not worth getting agitated about. By contrast, on a per person basis, the beneficiaries of eliminating right-to-work see gains worth perhaps thousands of dollars per beneficiary (few in number that they may be), so these potential beneficiaries of right-to-work elimination are willing to spend large sums of money on lobbying and electing friendly politicians.

Thus, the anti-right-to-work lobby is stronger than the pro-rightto-work one, but politicians probably also suspect that public opinion is generally supportive of right-to-work laws. These factors are roughly offsetting, so the politically optimal thing to do is nothing: don't rock the boat. If the modern trend to reduced unionization in the labor force were to continue however, the lobbying prowess of unions should ultimately decline, and employer organizations might become more emboldened to try to establish right-to-work laws. My sense is that we are near a threshold in some states where that might occur. Historically, there has been a bit of a domino effect—if one state enacts such laws, the momentum may lead to further enactments. On the other hand, if my own sense is wrong and the Obamalabor goal of reversing the decline in unionization is successful (e.g., through some form of card check legislation), the political benefits of repealing right-to-work laws, or of even modifying the Taft-Hartley provisions, may start to exceed the costs sufficiently to lead to a change in the opposite direction.

Conclusion

Americans generally prefer freedom to coercion, high incomes to low ones, and individual decisionmaking to collective resolution of issues. For these reasons, they generally do not like laws that constrain their labor market behavior and force them to join collectives of other workers to negotiate their wages and working conditions. The right-towork provisions of the Taft-Hartley Act of 1947 have created sort of a natural experiment, providing an opportunity to observe behavior in

two types of environments: one where workers are not compelled to join labor unions and a second where they can be compelled to join as a condition of employment. The evidence is absolutely clear:

Americans prefer the right-to-work environment to the alternative. The proportion of Americans living in right-to-work states has risen noticeably over the years, and only a small part of that is driven by new states adopting such laws. People move in extraordinary numbers to right-to-work states from states where union pressure has prevented the adoption of such laws. Moreover, the greater flexibility for workers and employers offered where right-to-work exists has contributed to higher rates of economic growth rates in the right-to-work environment. Although the United States seems to have been in roughly a stable political equilibrium regarding these laws in recent decades, if the past trends toward the right-to-work population growing in a relative sense persists while union membership continues to fall as a proportion of the labor force, a threshold point should be passed where the political equilibrium should tip toward making right-to-work laws universal for the entire American population.

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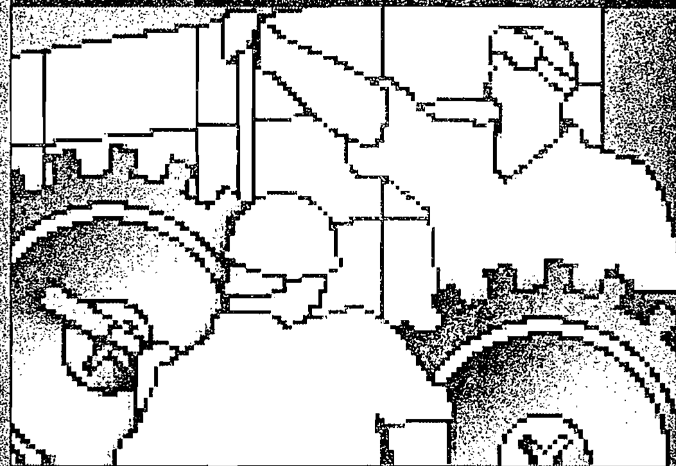

A Mackinac Center Report

The Effect of Right-to-Work Laws on Economic Development

William T. Wilson, Ph.D.

A Comparative Analysis of Economic Performance in All 50 States and the Implications for Michigan

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ISBN: 1-890624-28-4

S2002-02

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The Effect of Right-to-Work Laws on Economic Development

by William T. Wilson, Ph.D.

Executive Summary

"Right-to-work" (RTW) laws are state statutes or constitutional provisions that ban the practice of requiring union membership or financial support as a condition of employment. These laws establish the legal right of employees to decide for themselves whether or not to join or financially support a union. The right to enact a RTW law is assured by Section 14(b) of the Federal Labor-Management Relations Act (also called the Taft-Hartley Act) of 1947.

These laws establish the legal right of employees to decide for themselves whether or not to join or financially support a union.

Since the 1940s, 22 states have adopted RTW laws, the most recent being Oklahoma, which added a provision to its constitution in 2001. Michigan, a non-RTW state, is home to 972,000 unionized employees, which represents 21.8 percent of all private and public sector workers employed in Michigan in 2001.

Advocates of RTW laws cite a growing body of evidence showing that RTW states enjoy faster economic and employment growth than non-RTW states. This growth advantage—experienced predominantly by the southern and western states, which comprise the bulk of RTW states—has been in evidence ever since Taft-Hartley was passed.

Opponents of right-to-work laws argue, conversely, that compulsory unionism is necessary to offset the power of big business in a market economy. In this view, big business and free markets are responsible for a slowdown in real earnings for workers and for greater income inequality during the past quarter century.

To evaluate the merits of these arguments, this study compares economic development between RTW and non-RTW states. It examines a broad cross-section of state economic statistics from the past three decades. Michigan's economic performance receives particular attention. The results of this analysis contradict many of organized labor's long-standing contentions.

The following are the key conclusions of the research. Except where otherwise noted, these data are averages of annual figures taken from 1970 through 2000:

- From 1977 through 1999, Gross State Product (GSP), the market value of all goods and services produced in a state, increased 0.5 percent faster in RTW states than in non-RTW states. Michigan's GSP grew at roughly half the rate of RTW states.

- Employment grew almost 1 percent faster each year, on average, in RTW states. Employment in Michigan grew only half as fast as employment in RTW states.

Employment grew almost 1 percent faster each year, on average, in right-to-work states. Employment in Michigan grew only half as fast as employment in RTW states.

- Manufacturing employment grew 1.7 percent faster in RTW states. Right-to-work states *created* 1.43 million manufacturing jobs, while non-RTW states *lost* 2.18 million manufacturing jobs. Michigan lost more than 100,000 manufacturing jobs during this period, performing even worse than many other non-RTW states.

- Construction employment grew 1 percent faster each year, on average, in RTW states. Michigan ranked 32nd in the nation in this category.

- From 1978 through 2000, average annual unemployment was 0.5 percent lower in RTW states. Unemployment in Michigan was 2.3 percent higher than in RTW states.

- Per-capita disposable income was 0.2 percent higher, on average, in RTW states. Michigan's rate of increase in this category matched the average for other non-RTW states. Although nominal per-capita disposable income was 10 percent higher in non-RTW states in 2000, research shows that the cost of living is also higher in these states; so high, in fact, that after-tax purchasing power—real income—is greater in RTW states.

- Unit labor costs—the measure of labor compensation relative to labor productivity—were 93.2 in RTW states and 98.1 in non-RTW states in 2000. Michigan, at 109.2, had the second highest unit labor costs in the nation that same year, exceeding all but New Jersey.

- The percentage of families living in poverty in RTW states dropped from 18.3 percent to 11.6 percent between 1969 and 2000. During this same period, seven states saw increases in poverty, all non-RTW states. Michigan was among them, with a poverty increase of 0.6 percent, ranking it 45th among the states in poverty-rate improvement.

- Income inequality rose in both RTW and non-RTW states between 1977 and 2000. But while this inequality was greater in RTW states in 1977, by 2000 the situation had reversed.

This study attributes the better economic performance of RTW states to greater labor productivity. The post-World War II period has brought rapid economic globalization, which has dramatically increased the importance of labor productivity and of policies, such as right-to-work, that affect it.

Advances in information technology, greater capital mobility, and lower barriers to entry for business startups are making it increasingly difficult for businesses to pass higher costs on to suppliers and customers. The net effect is increasing pressure for firms to seek geographical regions with lower cost structures and higher rates of labor productivity.

This study attributes the better economic performance of right-to-work states to greater labor productivity.

Right-to-work laws increase labor productivity by requiring labor unions to earn the support of each worker, since workers are able to decide for themselves whether or not to pay dues. This greater accountability results in unions that are more responsive to their members and more reasonable in their wage and work rule demands.

The study predicts that Michigan will continue to fall behind economically relative to RTW states until it adopts a right-to-work policy.

The Effect of Right-to-Work Laws on Economic Development

by William T. Wilson, Ph.D.

The Oklahoma story is only the latest evidence of a growing interest in reassessing the costs and benefits of the compulsory union regime spawned during the Great Depression, and which remains today one of the primary determinants of labor productivity.

I. INTRODUCTION

In September of 2001, the citizens of Oklahoma overcame powerful union opposition to approve a "right-to-work" provision for their state constitution. "Right-to-work" laws are state statutes or constitutional provisions that ban the practice of requiring union membership or financial support as a condition of employment. This successful campaign made Oklahoma the 22nd state to achieve right-to-work (RTW) status since this option was assured under the Taft-Hartley amendments to the National Labor Relations Act in 1947.

The Oklahoma story is only the latest evidence of a growing interest in reassessing the costs and benefits of the compulsory union regime spawned during the Great Depression, and which remains today one of the primary determinants of labo. productivity. With increasing global competitiveness taking a toll on U.S. manufacturing jobs, and state governments and municipalities struggling to achieve greater operating efficiencies in the face of declining revenues and increasing costs, the consequences of compulsory unionism are universally important.

Today labor union membership is at its lowest point since the 1950s. Eighty-four percent of Michigan's private sector workers (and 91 percent nationwide) pay no dues to any union; they either work for themselves or negotiate individually with employers, and manage for the most part to do rather well. In Michigan's manufacturing sector, however, which is a critical component of our economic vitality, 29.2 percent or 305,900 manufacturing employees are represented by unions. In addition, Michigan is home to 350,000 unionized state and local government employees, constituting 56.2 percent of the public sector workforce. Total union membership stands today at 972,000, or 21.8 percent of all workers employed in Michigan during 2001.

Advocates of right-to-work laws point toward a growing body of evidence showing faster economic and employment growth in right-to-work states. This growth advantage—experienced predominantly by the southern and western states, which comprise the bulk of right-to-work states—has been in evidence since the passage of the Taft-Hartley Act in 1947.

Opponents of right-to-work laws, conversely, maintain that compulsory union support is vital to organized labor, which protects workers from the negative aspects of big business and market economies. In this view, firms seeking to maximize profits at the expense of rank-and-file workers are responsible for the slowdown in real earnings and the growing income inequality over the past quarter century.

To evaluate the merits of these arguments, this study compares economic development between RTW states and non-RTW states by examining a broad cross section of economic statistics from the past three decades. The results of this analysis challenge many of organized labor's long-standing contentions. Particular attention is paid to Michigan's economic performance.

Section II provides an overview of compulsory unionism and RTW statutes as background for the economic analysis that follows. Section III provides a brief review of the literature on the impact of RTW laws. Section IV gives a geographical breakdown between RTW and non-RTW states. Section V discusses how globalization is impacting union activity. Section VI compares RTW and non-RTW states using nine economic measurements. The final section summarizes the results.

Some highlights from the economic analysis are summarized below:

From 1970 through 2000:

- RTW states' economies grew one-half percent faster annually.
- RTW states created 1.43 million manufacturing jobs; non-RTW states lost 2.18 million manufacturing jobs.
- RTW states have greater disposable income growth.
- RTW states have lower unit labor costs.
- RTW states' poverty rates are falling faster.

Michigan's performance:

- Annual economic growth averaged one-half the rate experienced by RTW states.
- The state lost over 100,000 manufacturing jobs since 1970.
- Annual construction employment growth was a full percent below that of RTW states.
- The state had the second highest unit labor costs in the nation.
- The poverty rate rose.

... this study compares economic development between right-to-work states and non-right-to-work states by examining a broad cross section of economic statistics from the past three decades. The results of this analysis challenge many of organized labor's long-standing contentions.

II. The Nature of the Right-to-Work Debate

Right-to-work is a labor law term used to describe state laws or state constitutional provisions that ban any requirement of union membership or financial dues obligations as a condition of employment. Currently RTW laws exist in 22 states: Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Iowa, Kansas,

Exclusive representation therefore provides unions with total legal control in employee representation matters.

Louisiana, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, and Wyoming. A right-to-work law secures the right of employees to decide for themselves whether or not to join or financially support a union.

The opportunity to enact a right-to-work law is assured by Section 14(b) of the Federal Labor-Management Relations Act of 1947 (also called the Taft-Hartley Act). That section reads:

> Nothing in this Act 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.

These 44 words are fighting words to labor union officials who charge that their union security and solidarity is jeopardized by allowing individual workers to opt out of any union membership or financial requirements. Right-to-work proponents, however, argue that these laws uphold the civil right of Americans to work without being forced to pay union membership dues or agency fees in order to continue working.

In order to understand the role of economic analysis in the RTW debate, it is important to understand the main arguments marshaled by both supporters and opponents of RTW laws. The primary argument of opponents is that workers benefit from union representation, and that therefore they should be required to pay the cost of this representation. Unions argue that RTW laws create "free riders," employees who receive the benefits of a bargaining contract while escaping any financial obligation to reimburse the union for the costs of collective bargaining.

To assess the merits of this claim, however, one must understand the nature of compulsory unionism as it relates to the rights and duties of workers covered by a collective bargaining contract. Most important is the fact that federal law grants unions "exclusive representation" privileges. This means that once a union is "recognized" (i.e., voted in by a majority of employees) it has the sole right to speak for the entire group of employees and negotiate on its behalf. Individual employee negotiations are prohibited. This is true even when individuals have neither voted for a union nor desire union representation. A right-to-work law does not affect this union privilege.

Exclusive representation therefore provides unions with total legal control in employee representation matters. Exclusivity not only makes it illegal for workers to bargain on their own, but also prevents them from hiring another union or agent to deal on their behalf with their employers. Exclusivity normally prevents any redress of a worker's problem without the union being present during an employer-worker meeting.

Supporters of RTW laws claim that because employees are prevented from selecting a competing representative during the union's period of exclusivity—that the union has in essence a monopoly on worker representation—the union is likely to be less accountable to its members. This means that the union may, with relative impunity, provide fewer services to employees or engage in political or social activities having nothing to do with workplace issues. Right-to-work advocates therefore argue that requiring unions to earn the voluntary support of workers is one way to assure that union policies reflect the interests of the represented workers.

... requiring unions to earn the voluntary support of workers is one way to assure that union policies reflect the interests of the represented workers.

One solution to the alleged "free-rider" problem would be to eliminate exclusive representation and permit a union to represent only those employees desiring its representation. If a worker did not join and pay dues, the union would not be required to represent him, and the worker could negotiate his own employment relationship with the employer. Labor union officials, however, consistently refuse to support this alternative. They fought hard for their federal exclusive representation privileges and jealously protect them. They claim that exclusivity permits the union to wield the bargaining power necessary to balance the interests of workers with the interests of management. Unions rely on their status as the sole representative for all bargaining unit workers to justify the payment of forced union dues.

Supporters of RTW laws also take issue with the assumption, implicit in organized labor's "free rider" argument, that union representation benefits all employees in the negotiating unit. Supporters state that workers are often "captive passengers" rather than "free riders." They claim there is always a group of highly skilled or ambitious workers whose ability to get ahead is impeded by union contract restrictions such as rigid seniority clauses, which prevent them from competing for advancement. Employees may also oppose union obligations because of union discrimination, which can result from employees objecting to forced financing of union political activities.

The other major argument used by opponents of RTW laws is that working in a right-to-work state is "the right-to-work for less" or "the right-to-starve." This is shorthand for the idea that enactment of a right-to-work law will weaken the union's ability to protect workers from management exploitation, and therefore reduce the economic gains of workers.

The remainder of this study examines this latter claim, and suggests what economic impact a right-to-work law might have in Michigan. The analysis concludes that RTW laws do not lead to a reduction in economic benefits for workers in RTW states and would not do so in Michigan. In fact, there are signs that RTW laws have produced significant benefits for workers in those states. The debate surrounding RTW principles often centers on emotional rhetoric. This analysis, however, provides empirical evidence that will help both supporters and opponents of right-to-work to assess more accurately the impact of a Michigan RTW law on Michigan workers and their families.

III. Literature Review

More than five decades of experience with RTW laws has yielded a large body of economic analysis of their impact on a variety of economic factors.

Right-to-work laws were enacted, in large part, to promote economic growth. Anecdotal evidence suggests that they have. The economies of RTW states have been growing faster than those of non-RTW states since the late 1940s. Much research attributes this phenomenon to employers seeking to avoid unions. (Cobb, 1982; Newman, 1983; 1984; Cappelli and Chalykoff, 1985; Kochan et al., 1986; Reder, 1988). For a review of the pre-1980s literature see Moore (1985).

The economies of RTW states have been growing faster than those of non-RTW states since the late 1940s.

Survey research also indicates that RTW laws are important in industry location decisions (for a review of the literature see Cobb, 1982 and Calzonetti and Walker, 1991). Businesses often cite RTW laws or "favorable business climate" as major factors in location decisions. For example, Schmenner (1982) reports that in his survey of Fortune 500 firms a "favorable labor climate" was the most important factor in industry location followed by proximity to markets.

Holmes (1996) finds a precipitous drop in manufacturing activity when crossing the border from a RTW into a non-RTW state. Relative manufacturing employment declines by one-third as one moves from within 25 miles of the border ir the RTW state to within 25 miles of the border in the non-RTW state. Holmes finds that this pattern did not become statistically significant until the early 1960s or many years after the passage of the Taft-Hartley Act (which permits RTW laws), suggesting that it may take years for these laws to yield significant returns in industrial development.

Examining 311 U.S. metropolitan areas, James Bennett (1994) finds that while families living in non-RTW states have higher average nominal incomes, the average urban family in a RTW state has $2,852 more in after-tax purchasing power per year than the same family would have in a non-RTW state. This is because on average, residents in states without RTW laws pay 24.5 percent more for food, housing, health care, utilities, property taxes, and college tuition than those in RTW states). Moreover, Bennett finds evidence that the gap in living standards between RTW and non-RTW states appears to be growing over time.

Employing similar methodology for nine Midwestern states, David Kendrick (2001) finds inflation-adjusted, after-tax income to be $1,145 higher in RTW states (IA, KS, NE, ND) than in non-RTW states (IL, IN, MN, MO, WI).

IV. RTW vs. Non-RTW: The Regional Breakdown

Most RTW states adopted RTW laws during late 1940s and 1950s. Today such laws are in effect in twenty-two states, most of them in the West and Southeast. The Northeast is the only region without a RTW state while the South (at 12) has the greatest concentration. Table 1 gives the geographic breakdown of RTW states.

The rosters of RTW and non-RTW states have changed little in a half century. After 19 states passed RTW legislation shortly after Taft-Hartley in 1947, only three non-RTW states enacted a RTW law from 1964 until 2001. Oklahoma's passage of a new law in 2001, however, shows that RTW legislation isn't entirely dormant. Only one RTW state, Indiana, has repealed its law, in 1965.

After 19 states passed right-to-work legislation shortly after Taft-Hartley in 1947, only three non-right-to-work states enacted a right-to-work law from 1964 until 2001.

Table 1 – Breakdown of States by Region and Right-to-Work Status, 2002

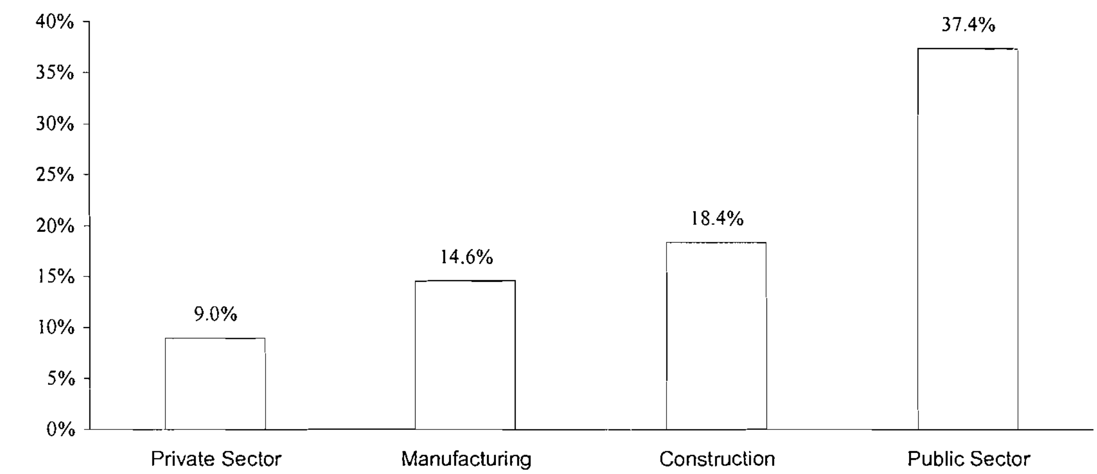
	Northeast	South	Midwest	West	Total
Non-right-to-work	11	2	7	8	28
Right-to-work	0	12	5	5	22
Total	11	14	12	13	50

Northeast	*South*	*Midwest*	*West*
Connecticut	**Alabama**	Illinois	Alaska
Delaware	**Arkansas**	Indiana	**Arizona**
Maine	**Florida**	**Iowa**	California
Maryland	**Georgia**	**Kansas**	Colorado
Massachusetts	Kentucky	Michigan	Hawaii
New Hampshire	**Louisiana**	Minnesota	**Idaho**
New Jersey	**Mississippi**	Missouri	Montana
New York	**North Carolina**	**Nebraska**	**Nevada**
Pennsylvania	**Oklahoma**	**North Dakota**	New Mexico
Rhode Island	**South Carolina**	Ohio	Oregon
Vermont	**Tennessee**	**South Dakota**	**Utah**
	Texas	Wisconsin	Washington
	Virginia		**Wyoming**
	West Virginia		

*NOTES: Right-to-work states denoted in **bold**. Indiana repealed its RTW law in 1965. Louisiana, Idaho, and Oklahoma passed RTW legislation in 1976, 1985, and 2001, respectively.*

State union membership rates are strongly correlated with RTW status. According to the U.S. Bureau of Labor Statistics, all states in the Great Lakes, Mid-Atlantic and Pacific regions (i.e., non-RTW regions) had union membership rates above the national average of 13.5 percent in 2001, while all states in the East South Central and West South Central divisions had below-average rates. Overall, 29 states had union membership rates below the U.S. average, while 21 states and the District of Columbia had higher rates.

Chart 1 – Percent of U.S. Workforce Belonging to a Union, 2001



Source: U.S. Bureau of Labor Statistics

Four states had union membership rates over 20 percent in 2001—New York, Hawaii, Alaska, and Michigan (in order of decreasing share). Two states, North and South Carolina, had membership rates below 5 percent. As of 2001, half of the nation's 16.3 million union members lived in six states—California, New York, Illinois, Michigan, Ohio, and Pennsylvania. These six states accounted for 35 percent of wage and salary employment nationally.

Workers in the public sector continued to have unionization rates that were about four-times higher than their counterparts in private industry. In 2001, the unionization rate of government workers was 37.4 percent, compared with 9 percent among private sector employees (see Chart 1). Local government, which includes many workers in the heavily unionized fields of public education (the NEA is the largest union in the country), firefighting and law enforcement, had the highest unionization rate, at 43.1 percent. The construction and manufacturing industries also had higher-than-average unionization rates, at 18.4 percent and 14.6 percent, respectively. The nonagricultural industry with the lowest unionization rate in 2001 was finance, insurance, and real estate at 2.1 percent.[1]

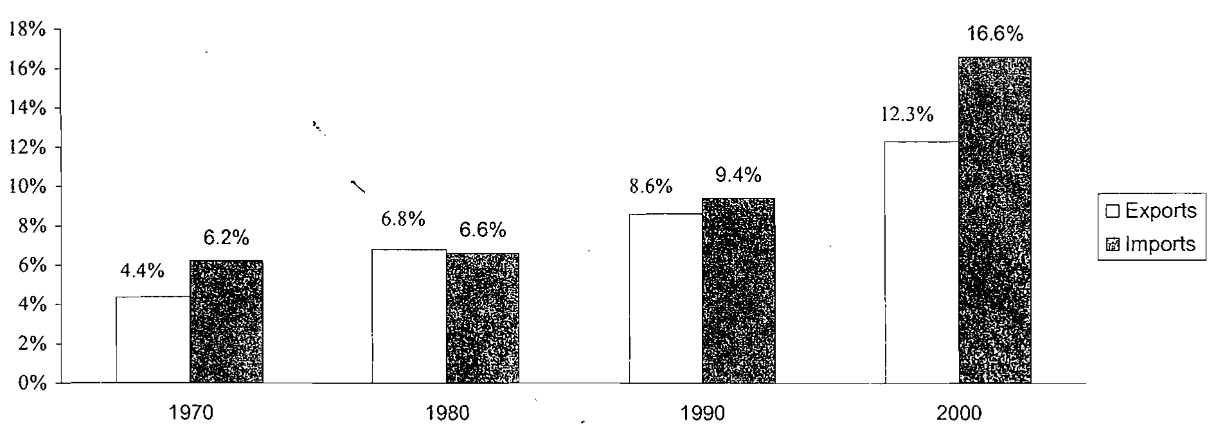
V. The Influence of Globalization

The post-World War II period has brought rapid economic globalization, which has dramatically increased the importance of labor productivity and of policies, such as right-to-work, that affect it. Advances in information technology, greater capital mobility, and lower barriers to entry for business startups are making it increasingly difficult for businesses to pass higher costs on to suppliers and customers. The net effect is increasing pressure for firms to seek geographical regions with lower cost structures and higher rates of labor productivity.

Between 1948 and 1994, seven tariff reduction rounds significantly liberalized world trade among the developed nations. The United States currently has zero tariffs on one-third of all imports, while the Most-Favored-Nation (MFN) tariff rate has declined to approximately 4.6 percent.

This trade liberalization has produced increasing import and export penetration as a share of the U.S. Gross Domestic Product (GDP). Between 1970 and 2000, the U.S. export share of GDP almost tripled (4.4 percent to 12.3 percent) while the U.S. import share of the economy more than doubled (6.2 percent to 16.6 percent) (see Chart 2). Interestingly, the 1990s witnessed the greatest percentage increase in trade penetration, with both export and import shares rising markedly. This fact will prove interesting throughout the analysis presented in section VI.

Chart 2 – Export and Import Share of U.S. GDP



Source: U.S. Bureau of Economic Analysis

Union membership now hovers around 9 percent of the private sector workforce. Despite organized labor's persistent influence in the national and local political arena, the forces of globalization continue to shrink its ranks.

Before the forces of globalization opened the relatively insular U.S. economy to increased trade, U.S. manufacturers were enjoying near monopolistic market conditions in the United States. The U.S. auto industry, for example, enjoyed a 90 percent domestic market share in 1960.

These benign market conditions for U.S. manufacturers in the early post-World War II period allowed them to pass on higher costs to consumers without a significant loss in market share. These conditions also permitted organized labor to thrive, swelling its ranks to one-third of the American workforce by 1955.

Union membership now hovers around 9 percent of the private sector workforce. Despite organized labor's persistent influence in the national and local political arena, the forces of globalization continue to shrink its ranks. There is every reason to believe that these forces will only intensify in the future as barriers to international trade continue to fall and as relative business costs play a greater role in regional economic performance. Advances in information technology, greater capital mobility and lower barriers to entry for business startups are making it increasingly difficult for businesses to pass on higher costs to suppliers and customers. The net effect is increasing pressure for firms to seek geographic regions with lower cost structures and higher rates of labor productivity.

VI. Comparative Analysis of Economic Performance

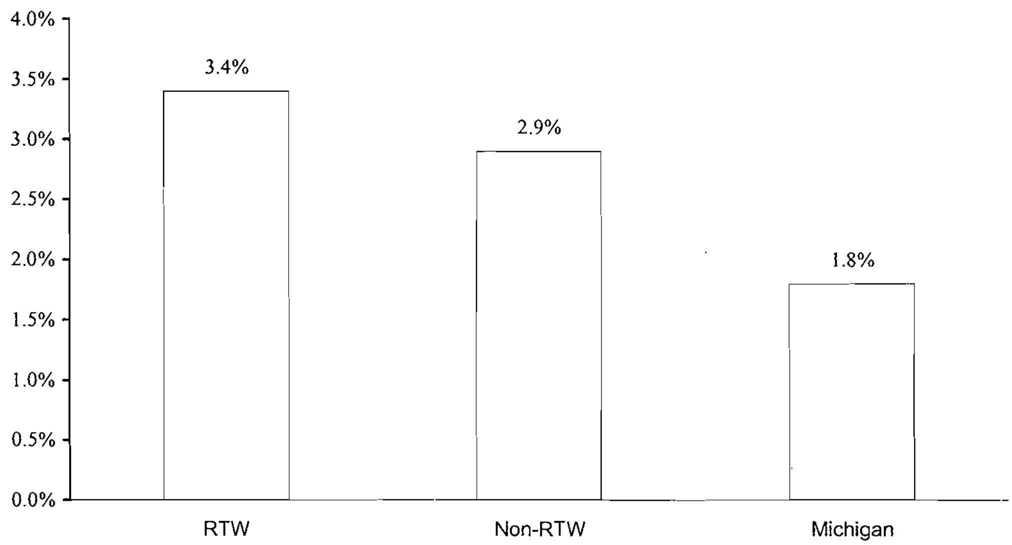
Nine economic statistics (Gross State Product, employment growth, manufacturing and construction employment, the unemployment rate, per-capita disposable income, unit labor costs, poverty rate, and income inequality) provide the yardstick for comparing economic development between RTW and non-RTW states. These statistics represent a diverse cross-section of economic data, providing a multifaceted comparison of economic development between the states. Contingent upon data availability, results are presented over three decades, 1970 through 2000.[2]

To show key inflection points for each of the nine statistics, the results are presented for each decade in Appendix I. In addition to comparing key differences between RTW and non-RTW states, Michigan's results are presented separately.

The time series methodology will account for the status change of Louisiana and Idaho, which became RTW states in 1977 and 1985, respectively. Oklahoma is classified as a non-RTW state for purposes of this study, since its change to RTW status is too recent (2001) for the effects to be reflected in the statistics.

A. Gross State Product (GSP)

Chart 3 – Average Annual Growth in Real GSP, 1977-1999



Source: U.S. Bureau of Economic Analysis

Note: 1977 is the first year GSP is available.[3]

Gross State Product (GSP), the market value of all goods and services produced in a state, is the broadest measure of a state's economic activity. Chart 3 summarizes average annual real GSP growth rates between RTW states, non-RTW states and Michigan from 1977-1999.

Right-to-work states enjoyed a 0.5 percent annual growth advantage over non-RTW states. This is a considerable growth advantage, particularly when compounded over 23 years.

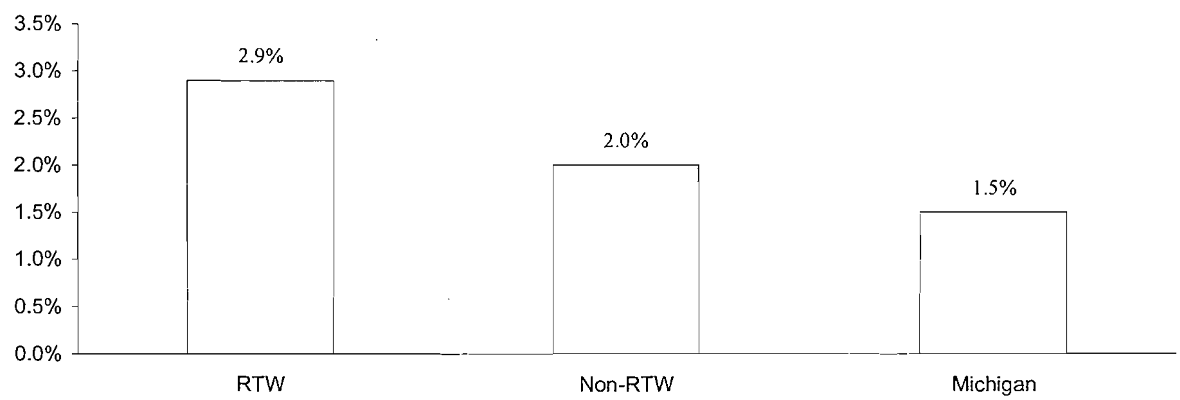
Dividing the results into two equal time periods (1977-88 and 1988-99, both of which include a recession) to discover any changes in relative growth rates yielded even more distinctions (see Table I, Appendix I). While the average annual growth advantage held by RTW states was just 0.1 percent from 1977-88, it accelerated to 1 percent from 1988-99.

Michigan averaged 1.8 percent growth from 1977-99, growing a little more than half as fast as the average RTW state. Michigan's growth even lagged that of its sister non-RTW states by more than 1 percent annually. Over this period, only three states have grown more slowly than Michigan (Montana at 1.6 percent, West Virginia at 1.3 percent, and Louisiana at 1.4 percent).

While Michigan's annual GSP growth more than doubled during the 1988-99 period, it still lagged behind the GSP growth of the average RTW and non-RTW states by significant margins (Michigan's state ranking increased to 36th). While Michigan's growth did accelerate during this period, that growth was slower than the average growth in RTW and non-RTW states. Only two RTW states (Wyoming and Louisiana) failed to grow as fast.

B. Payroll Employment Growth

Chart 4 – Average Annual Employment Growth, 1970-2000



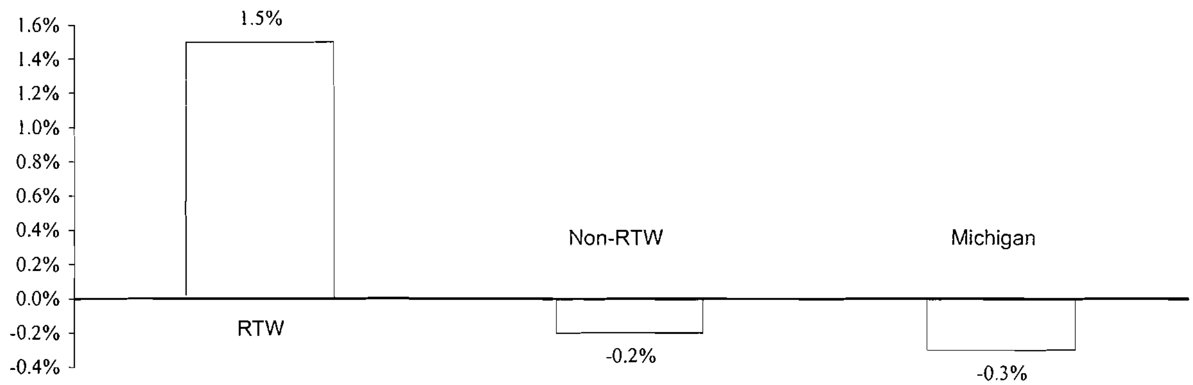
Source: U.S. Bureau of Labor Statistics

Chart 4 presents average *non-farm payroll employment growth* from 1970-2000. Right-to-work states averaged almost 1 percent faster annual growth. Although this difference dissipated temporarily during the 1980s, it widened significantly during the 1990s (see Table II, Appendix I).

At 1.5 percent, Michigan's employment growth averaged only half that of RTW states, placing it 41st in employment growth over this period (surpassed by every RTW state). Michigan's relative ranking barely improved during the 1990s, placing it in 35th place, again trailing all 21 RTW states.

C. Manufacturing Employment Growth

Chart 5 – Average Annual Manufacturing Employment Growth, 1970-2000

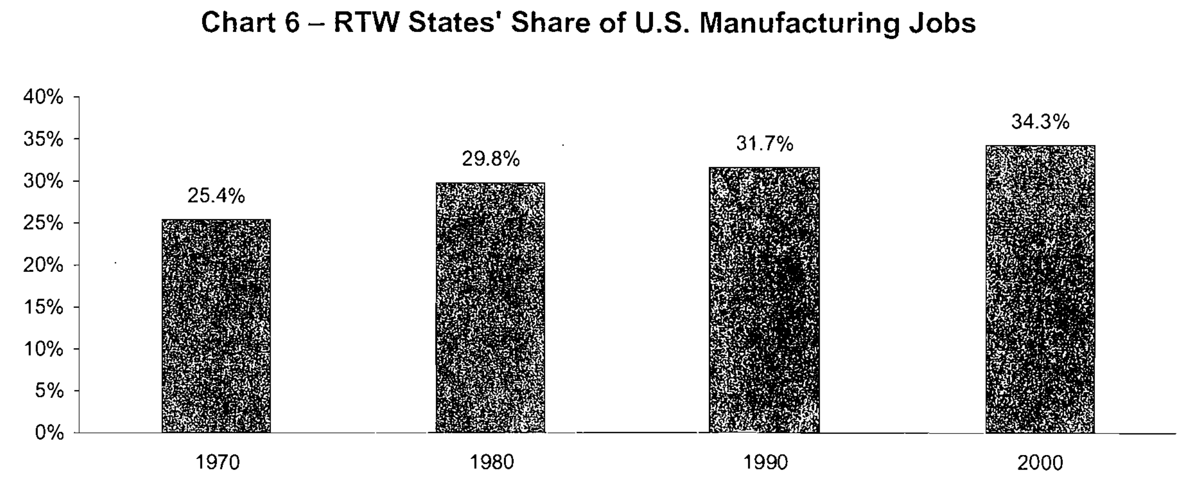


Source: U.S. Bureau of Labor Statistics

Because the manufacturing workforce has much higher rates of unionization than the overall labor force, the RTW advantage should be even more amplified in this sector. If compulsory unionism drives up labor compensation levels without a commensurate rise in productivity, manufacturers will seek more attractive regions for expansion, leaving non-RTW states with shrinking manufacturing payrolls.

Chart 5 illustrates that this clearly has been the case. In a period (1970-2000) where total manufacturing employment dropped by 5 percent nationwide, RTW states augmented their employment base by 1.5 percent annually. Over the 1970-2000 period, RTW states enjoyed a 1.7 percent growth advantage over non-RTW states, a significantly larger margin than they posted for total payroll employment.

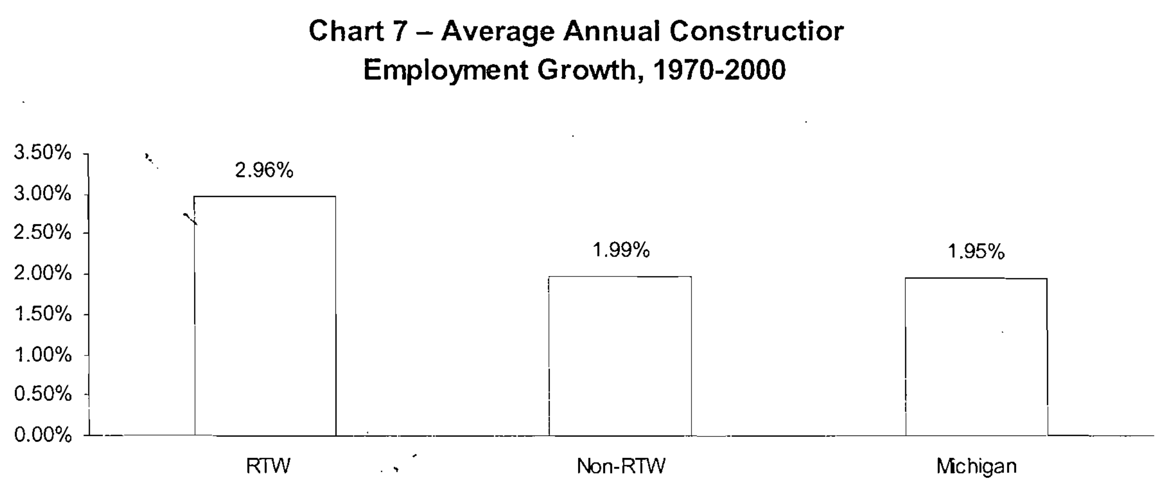
While non-RTW states were cutting manufacturing payrolls by 2.3 million from 1970-2000, RTW states were increasing their blue-collar payrolls by 1.4 million. The RTW states' share of total manufacturing jobs (see Chart 6) rose from 25.4 percent in 1970 to 34.3 percent by 2000. Despite the loss of 875,000 U.S. manufacturing jobs over this period, all of the 21 RTW states registered a net gain in manufacturing payrolls.



Source: U.S. Bureau of Labor Statistics

Once a manufacturing powerhouse, Michigan fared poorly even in relation to other non-RTW states, losing over 100,000 manufacturing jobs from 1970 to 2000. Unlike most non-RTW states, however, Michigan's manufacturing payrolls did managed to grow during the 1990s (see Table III, Appendix I), ranking it 23rd in growth among all states.

D. Construction Employment Growth

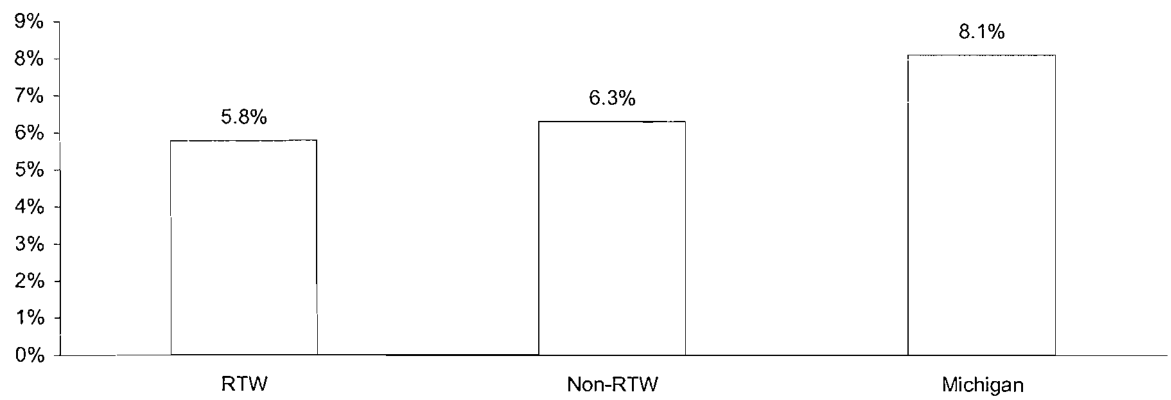


Source: U.S. Bureau of Labor Statistics

Not surprisingly, RTW states also had almost 1 percent faster construction employment growth over this period. While non-RTW states had higher growth in this category during the 1980s (without Wyoming's 7.5 percent decline, RTW states would have had positive construction job growth), the RTW advantage quickly reasserted itself during the 1990s. Michigan ranked 32nd in the nation (from 1970-2000), averaging 1.9 percent annual growth in construction employment.

E. Unemployment Rate

Chart 8 – Average Annual Unemployment Rate, 1978-2000



Source: U.S. Bureau of Labor Statistics

From 1978 through 2000, RTW states had lower average annual unemployment rates for all but 5 of 23 years. Right-to-work states also weathered the 1990-91 recession better, with unemployment rising only 0.43 percent (from 1990-91) compared to a 1.13 percent rise for non-RTW states.

The unemployment gap between RTW and non-RTW states dissipated during the 1990s, reflecting a national trend toward tighter labor markets (and full employment) in most states. This phenomenon produced labor shortages which were more acute in RTW states.

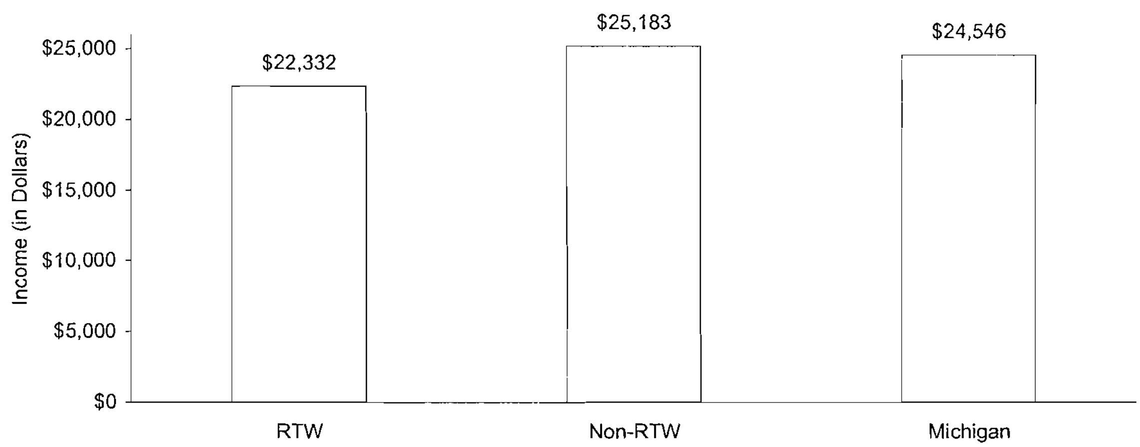
Michigan's unemployment rate averaged 8.1 percent from 1970-2000, significantly higher than the 5.8 and 6.3 percent average for RTW and non-RTW states, respectively. While Michigan's average rate did fall below the national average during much of the 1990s, this was more a consequence of slower growth in Michigan's workforce (i.e., fewer eligible workers), not faster employment growth.

F. Per-Capita Disposable Income Growth

Critics of RTW legislation have often acknowledged the faster employment growth in RTW states, but counter that it comes at the expense of much lower wages and incomes. Organized labor's mantra, the "right-to-work for *less*" or the "right-to-starve," has resonated strongly both inside and outside union circles.

Most economic studies have shown higher nominal or money income in non-RTW states. Chart 9 confirms that this is still the case. *Per-capita disposable income,* the per-person income available for spending and saving after paying taxes, was approximately 10 percent higher in non-RTW states in 2000.

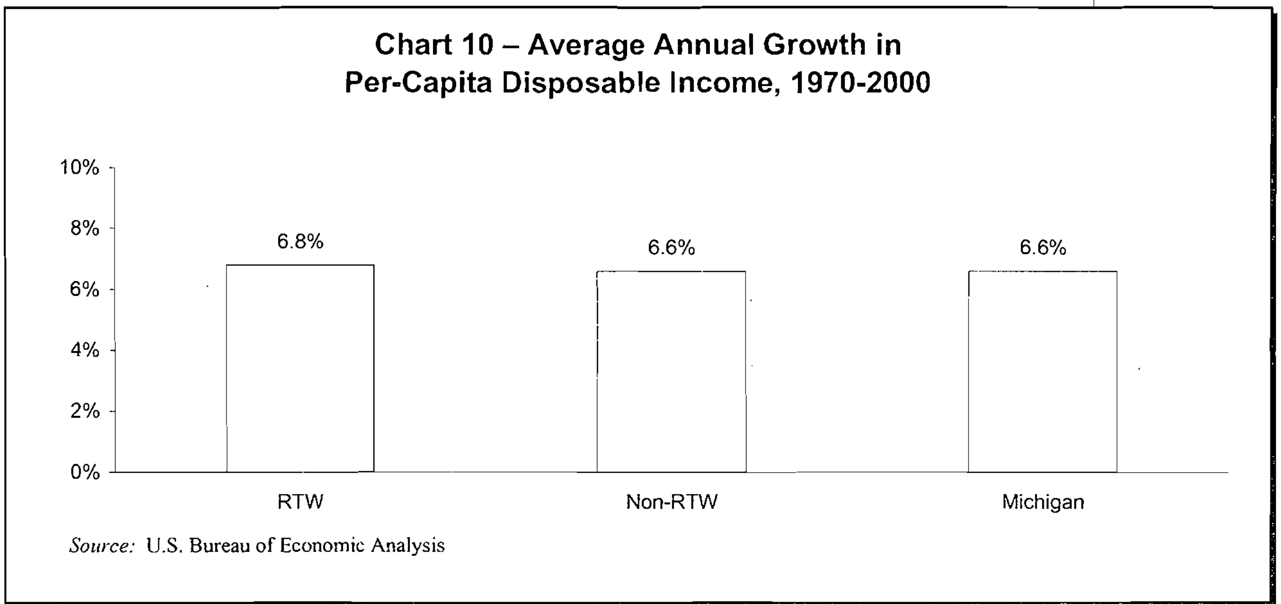
Chart 9 – Per-Capita Disposable Income, 2000



Source: U.S. Bureau of Economic Analysis

But this gap in favor of the non-RTW states does not necessarily mean that purchasing power, or the standard of living, is higher in these states. Higher nominal incomes may simply reflect a higher cost-of-living. This is, in fact, precisely what recent research is finding (see Bennett 1994 and Kendrick 2001). James Bennett, for example, found that a typical family in a RTW state had $2,852 *more* in after-tax purchasing power than the same family had in a non-RTW state (even thought the non-RTW families had higher nominal incomes).[4]

Besides evidence of greater purchasing power or higher living standards in the RTW states, there is also hard evidence that the nominal income gap between RTW and non-RTW states is narrowing. As shown in Chart 10, per-capita disposable income grew 0.2 percent *faster* annually for RTW states over the 1970-2000 period. So while non-RTW states have traditionally held a lead in nominal income, this gap continues to narrow.



Disposable income is growing faster in RTW states because they have a flexible work environment in which employers and employees can more easily respond to market incentives. This produces lower costs, higher productivity, and greater income and job growth. Businesses increasingly reject "top-down" management, relying instead upon employee participation in every aspect of a firm's decision-making process. This inevitably favors a work environment that is more responsive to the changing needs of both workers and employers.

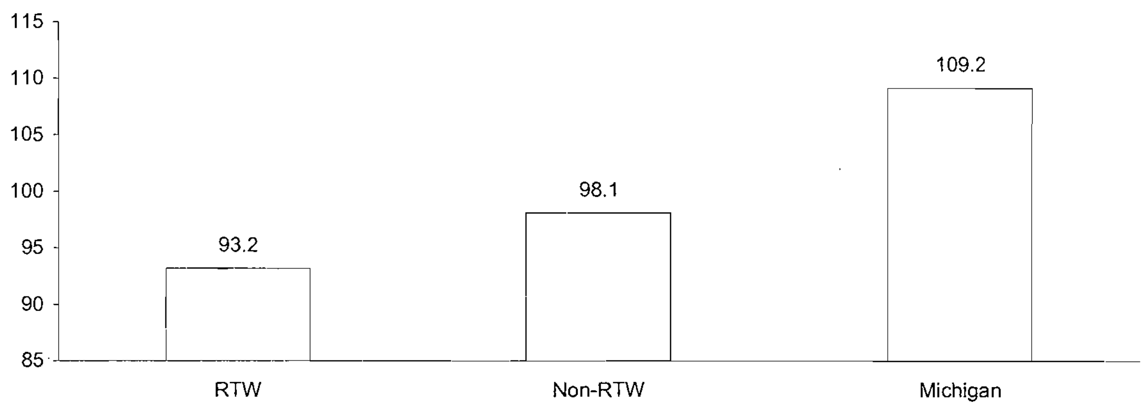
Employees protected by RTW legislation can quit supporting a union without quitting their job. Reid and Faith (1987) find that unions in RTW states reward members more equally and are less concerned with day-to-day administration of complex bargaining agreements. This makes collective job actions more difficult and prompts local union leaders to strive more for consensus among their members. Right-to-work legislation forces a union to bargain more in the immediate interest of all members because members can withdraw from a union at any time without cost to themselves.

Rigid union-negotiated employee contracts typically have the perverse effect of reducing the pay of the most productive workers while increasing compensation for less productive workers. Any system that grants union officials the legal power to impose unwanted union representation on its most productive workers, and then forces them to pay for it, ultimately lessens the income and standard of living of all its citizens.

Michigan, ranking fourth in the nation in private-sector union membership (as a percent of the private workforce in 2001), matched the non-RTW state average in disposable income growth.

G. Unit Labor Costs

Chart 11– Unit Labor Costs, 2000



Source: Economy.com

Unit labor costs measure labor compensation relative to labor productivity. Defined as compensation per unit of real output (see Appendix II for a detailed description of this index), unit labor costs are a better indication of business profitability than labor compensation alone, and are the most crucial component of the cost of doing business within a geographical region.

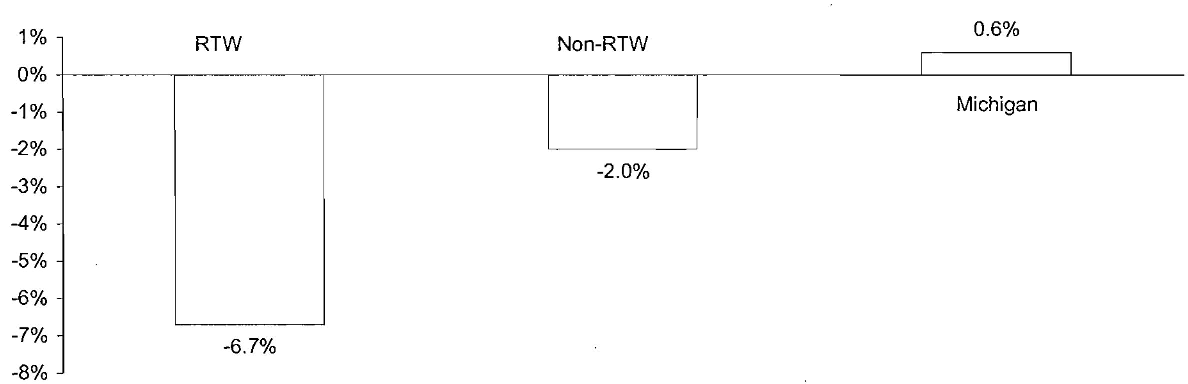
Labor compensation growth, over time, is directly linked to growth in labor productivity. A workforce that is producing more output per person (i.e., higher productivity) will experience higher growth in real earnings. This growth in real earnings will not jeopardize a region's business competitiveness when matched by commensurate productivity gains. Growth in labor compensation that is not matched by productivity gains, conversely, will result in higher unit labor costs and deteriorating business competitiveness.

Relative business costs have been a major factor affecting regional economic performance. As U.S. businesses find it increasingly difficult to raise prices due to greater competition from both home and abroad, relative business costs will likely play an increasingly important role in business location decisions. States or regions that maintain uncompetitive unit labor costs will see an exit of capital and business formation to more competitive regions.

Table VII in Appendix I shows the time series of unit labor costs for each state and the District of Columbia from 1990 through 2000. Not surprisingly, the results show a clear pattern of higher unit labor costs in non-RTW states during the past decade. According to Economy.com, only three RTW states in 2000—Florida, Utah and Virginia—had unit labor costs above the national average (U.S.=100) while 11 non-RTW states exceeded the average. In 2000, RTW and non-RTW states' unit labor costs averaged 93.2 and 98.1, respectively. Uncompetitive at the start of the decade, Michigan's unit labor costs rose to 109.2 by 2000, ranking it second in the nation behind New Jersey.

H. Poverty Rate

Chart 12 – Change in Poverty Rates, 1969-2000



Source: U.S. Bureau of Labor Statistics

The U.S. Bureau of Labor Statistics defines the poverty rate as the percentage of people who live in households with cash incomes below the "poverty line." This line is not a fixed dollar amount but varies by family size and type. For example, the poverty line for a single person in 2001 was $9,044 and $18,104 for a typical family of four.

The U.S. poverty rate fell between 1949 and 1969, from 39.7 percent to 14.4 percent. The official poverty rate reached a historic low in 1973, then stopped falling. Between that year and 2000, the poverty rate rose from 11.1 percent to 11.3 percent.

While the poverty rate failed to drop nationwide over the past three decades, it showed a distinctly different pattern in the RTW states. Starting with much higher poverty rates (averaging 18.3 percent in 1969), by 2000 RTW states had dropped sharply their average rate to 11.6 percent, placing the poverty rate only 0.3 percent higher than the U.S. poverty rate. All 21 RTW states' (including Louisiana and

Idaho) poverty rates have declined over the past 30 years. Based on the U.S. Bureau of Labor Statistics' decennial survey from the past four decades, the poverty rate declined 6.7 and 2.0 percent for RTW and non-RTW states, respectively, from 1969 to 2000 (see Table VIII, Appendix I for actual poverty rates).

Michigan's poverty rate showed a disturbing 0.6 percent rise over this same period, ranking it 45th overall in poverty rate improvement. Michigan is one of seven states, all non-RTW, whose poverty rate actually increased over the past 30 years.

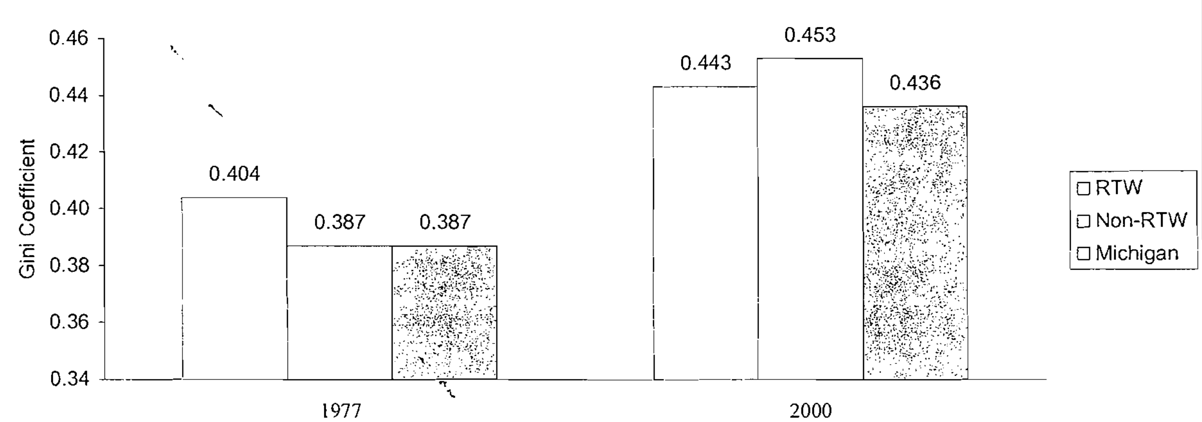
I. Income Inequality

In section F we found faster growth in disposable income in RTW states. In this section we examine *income inequality* to more accurately determine changes in the *distribution* of income.

Neither economic theory nor history suggests that a market economy should lead to an even distribution of earnings. In free markets, prices adjust to equate supply and demand. When demand for skilled workers outstrips supply, the wages of those at the top of the distribution grow faster than the wages of those at the bottom.

In other words, rising income inequality is not necessarily an unhealthy sign in a growing economy. Such a rise occurred in the second half of the 1800s, a period of strong economic growth and rising real incomes for most Americans. Falling incom inequality, conversely, is not necessarily positive. Inequality remained relatively high going into the 20th century but declined rapidly during the Great Depression. Nevertheless, income inequality, examined in context with the other statistics, may yield some additional insight into the differences between RTW and non-RTW states.

Chart 13 – Income Inequality



Source: Current Population Survey – March Supplement

Income inequality, as measured by the *Gini Coefficient* (see Appendix III), ranges from zero to one, with zero indicating perfect income equality (all income distributed equally to all households) and one indicating perfect income inequality (all income accruing to one household). The Gini Coefficients for RTW states, non-RTW states and Michigan are shown in Chart 13 for 1977 (first year available) and 2000. See Table IX in Appendix I for the Gini Coefficient for the years 1977, 1985, 1993 and 2000.[5]

Like poverty rates, income inequality started significantly higher in RTW states.[6] While inequality rose for both over the past quarter century (as a trend, it has risen in the United States), it has risen significantly faster for non-RTW states. By 1992, the positions had reversed: RTW states had, on average, *lower* income inequality than non-RTW states.

A quarter century of superior economic growth in the right-to-work states adds to the increasing evidence that economic growth is the best way to raise the incomes of all Americans.

Lower income inequality in the RTW states would have seemed unthinkable a generation ago. A quarter century of superior economic growth in the RTW states adds to the increasing evidence that economic growth is the best way to raise the incomes of all Americans.

Michigan's Gini coefficient rose from .387 to .436 over the same period. In 1977, the state ranked 17th in income inequality (i.e., 16 states had lower income inequality). Michigan's income inequality widened rapidly during late 1970s and early 1980s, and by 1985, its state ranking had dropped to 33rd. Since then, however, Michigan's income inequality has risen less rapidly than most states. By the turn of the millennium, its state ranking had risen to 18th.[7]

These results contradict the widely held belief that the presence of unions and the power of collective bargaining mitigate income inequality by distributing earnings more evenly. Although this may be true within individual unionized companies, it is not true for any state's economy as a whole. The favorable economic climate produced by RTW laws appears to be responsible for general income growth that benefits all workers and reduces income disparity.

VII. Conclusion

Table 2. Michigan: A Final Look

Economic Variable	*Year(s)*	*State Rank*
Gross State Product	1977-1999	**47**
	1988-1999	**36**
Employment Growth	1970-2000	**41**
	1990-2000	**35**
Manufacturing Employment Growth	1970-2000	**37**
	1990-2000	**23**
Construction Employment Growth	1970-2000	**32**
	1990-2000	**18**
Unemployment Rate	1978-2000	**47**
	1990-2000	**14**
Per-Capita P.I. Growth	1970-2000	**34**
	1990-2000	**22**
Unit Labor Costs	2000	**49**
	1990	**48**
Poverty Rate Improvement	1969-2000	**45**
Income Inequality	1977	**17**
	2000	**18**

Right-to-work laws were enacted by states primarily to attract and to promote economic growth. This study, employing a large cross-section of economic indices, finds a broad-based trend of superior economic development in RTW states over the past three decades.

The comparative statistics on income growth, unit labor costs and poverty rates are the most novel and interesting. Until now, organized labor has stressed the necessity of compulsory union support as a countervailing force against corporate power and rising income inequality. Although they have often derided RTW laws as "right-to-work for less," advocates of compulsory unionism have no economic basis upon which to support that claim.

The RTW economic growth advantage clearly accelerated during the 1990s. Poverty fell further; disposable income grew faster and manufacturing employment expanded in RTW states. There is a strong possibility that this widening in economic development will only continue in the future. Heightened competition, both at home and from abroad, has increased the importance for firms of finding regions with a flexible labor environment and lower cost structures. The advent of the Internet advances in information technology, lower barriers to entry for most industries, and the increased mobility of financial capital all favor states with RTW legislation.

Table 2 above summarizes Michigan's ranking, vis-à-vis all 50 states, over the 1970-2000 period with a separate listing for the 1990s. The state rank is enumerated so that the higher the ranking, the better the economic performance. The 1990s were singled out because the decade is widely regarded as a period of "superior" performance for the state's economy.

Michigan's relative economic performance over the past three decades was dismal, finishing in the bottom quintile in economic and employment growth, unit labor costs and poverty rate improvement. Interestingly, with the exception of per-capita personal income growth (for which it was tied) and income inequality, Michigan performed worse in every category vis-à-vis the average non-RTW state.

Corroborated by a growing body of research conducted by many independent scholars, the compelling conclusion is that right-to-work laws increase state economic development and overall prosperity.

More worrisome, however, are the startling statistics on Michigan's unit labor costs. As the forces of globalization and competition intensify, Michigan's high unit labor costs will increasingly discourage fresh capital from planting new seeds.

While the 1990s brought some very modest improvement in Michigan's relative standing, it was hardly a decade of economic superiority. The state continued its three-decade tradition of below-average growth in output, employment and income. The recipient of key economic headwinds, Michigan's relative economic performance should have excelled during the 1990s. Relatively low energy prices and interest rates were a boon to the state's heavy industry. The exchange value of the dollar, significantly weaker since the 1980s, was a boost to state exporters (Michigan is a major exporter). Equally important, the Big Three automakers, riding the wave of light-truck mania, registered record sales and profits.

Interestingly, the 1990-91 recession also favorably impacted Michigan's relative growth statistics. With economic growth contracting more here than in most states during the late 1980s and the 1990-91 recession, Michigan's economic recovery came off a relatively low base, biasing its growth figures upward. Michigan's ensuing cyclical recovery (1991-1999) should have produced much more robust economic growth. Instead, Michigan still lagged behind RTW states.

Communism as a political philosophy eventually died because it couldn't "deliver the goods." Like communism, compulsory union support hasn't delivered the goods but has managed to survive in the majority of states. This paper shows a clear correlation between economic growth and RTW status. Corroborated by a growing body of research conducted by many independent scholars, the compelling conclusion is that RTW laws increase state economic development and overall prosperity.

NOTES

[1]Paragraph provided by the Bureau of Labor Statistics' *"Union Members Summary 2001."*

[2]RTW and non-RTW summary statistics are weighted by the number of states in each category (typically 29 and 21 for non-RTW and RTW, respectively).

[3]1999 was the last year available as of this writing.

[4]Lacking cost-of-living data by state, Bennett used Consumer Price Index data from a large number of metropolitan areas to compare RTW versus non-RTW states.

[5]The Census Bureau's decennial survey data on *family* income starts in 1969 but the most recent survey (i.e. – 1999) is currently unavailable. The series from the *household* survey (used in the study), conversely, has data for 2000 but dates back only to 1977. The annual series from the Current Population Survey is not interchangeable because the series uses a different scale than the decennial survey.

[6]The poverty gap between RTW and non-RTW states was even greater in earlier periods. The U.S. Census Bureau's 1969 decennial survey shows Gini coefficients of .372 and .348 for RTW states and non-RTW, respectively.

[7]But in the decennial survey on *family* income, Michigan has the distinction of having the greatest increase in income inequality among all 50 states from 1969 through 1989, with the Gini coefficient rising from .329 to .395.

APPENDIX I

SUMMARY TABLES

Table I. Real Gross State Product Growth (1977-1999)

	RTW	Non-RTW	Overall Difference	Michigan
1977-1988	3.1%	3.0%	**0.1%**	1.1%
1988-1999	3.8%	2.8%	**1.0%**	2.5%
1977-1999	3.4%	2.9%	**0.5%**	1.8%

Table II. Employment Growth (1970-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1970-79	4.4%	2.9%	**1.5%**	2.2%
1980-89	2.0%	1.9%	**0.1%**	1.5%
1990-2000	2.6%	1.6%	**1.0%**	1.7%
1970-2000	2.9%	2.0%	**0.9%**	1.5%

Table III. Manufacturing Employment Growth (1970-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1970-79	3.4%	1.2%	**2.2%**	0.8%
1980-89	0.7%	-0.6%	**1.3%**	-0.3%
1990-2000	1.0%	-0.6%	**1.6%**	0.4%
1970-2000	1.5%	-0.2%	**1.7%**	-0.3%

Table IV. Construction Employment Growth (1970-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1970-79	5.7%	2.8%	**2.9%**	1.8%
1980-89	-0.3%	2.4%	**-2.7%**	2.0%
1990-2000	4.4%	2.5%	**1.9%**	4.0%
1970-2000	3.0%	2.0%	**1.0%**	1.9%

Table V. Unemployment Rate (1980-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1980	6.20%	7.30%	**1.10%**	12.40%
1990	5.20%	5.60%	**0.40%**	7.60%
2000	3.80%	4.00%	**0.20%**	3.60%

Table VI. Per-capita Disposable Income Growth (1970-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1970-79	10.0%	9.4%	**0.6%**	9.6%
1980-89	6.7%	6.9%	**-0.2%**	6.5%
1990-2000	4.0%	3.8%	**0.2%**	4.0%
1970-2000	6.8%	6.6%	**0.2%**	6.6%

Table VII. Unit Labor Cost Index (1990-2000)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alaska	90.5	91.2	91.0	91.1	91.5	92.1	92.9	92.8	91.8	91.0	90.9
Alabama	93.9	94.9	94.7	94.7	95.5	96.2	96.6	96.7	97.0	96.8	96.7
Arkansas	88.7	88.4	88.5	87.8	87.5	87.8	87.8	88.2	88.8	89.8	90.5
Arizona	104.6	106.0	103.8	101.2	97.9	96.3	96.2	96.8	98.0	98.5	98.7
California	103.0	102.5	102.4	102.8	102.9	102.4	102.7	102.7	102.7	102.1	101.9
Colorado	104.1	104.3	104.5	103.9	103.3	103.3	104.2	103.8	103.3	103.0	103.7
Connecticut	107.1	105.9	105.6	105.6	105.4	105.0	105.6	106.5	106.6	106.5	106.1
District of Columbia	111.8	112.1	112.6	111.4	109.8	109.1	109.7	110.8	110.5	112.1	113.8
Delaware	89.7	88.3	87.3	86.5	87.2	88.0	89.3	90.7	92.9	94.7	95.7
Florida	101.0	101.4	101.7	101.5	101.5	101.0	100.8	100.4	100.9	101.1	101.3
Georgia	98.9	98.6	97.9	96.6	95.9	95.4	94.9	94.9	95.4	96.0	96.3
Hawaii	95.4	95.1	95.4	97.5	98.9	99.1	98.6	98.6	98.8	98.7	98.4
Iowa	81.0	80.8	81.0	82.0	82.7	83.7	83.1	82.2	82.6	85.1	88.1
Idaho	88.3	89.9	91.3	90.5	89.6	89.2	89.8	90.6	91.4	92.4	92.5
Illinois	100.7	100.6	100.8	101.5	101.3	102.0	101.3	101.6	101.7	102.6	103.5
Indiana	95.8	96.2	96.3	96.5	96.7	97.8	98.3	98.1	97.6	98.5	99.3
Kansas	87.4	87.2	87.6	89.7	91.2	93.1	93.6	94.1	93.8	94.2	94.5
Kentucky	86.3	87.1	88.3	88.9	89.2	89.5	90.1	90.9	91.5	92.0	92.3
Louisiana	85.2	85.6	87.3	90.0	91.6	90.6	89.9	89.7	91.3	91.9	92.4
Massachusetts	108.5	108.3	109.2	108.9	108.8	108.4	108.7	109.7	109.8	109.4	108.7
Maryland	98.7	99.2	100.2	101.3	102.3	103.1	103.6	104.0	103.7	103.4	103.1
Maine	99.4	99.8	99.8	98.8	99.0	98.4	98.6	98.1	98.6	99.0	99.5
Michigan	**105.2**	**105.0**	**105.8**	**106.4**	**106.9**	**107.6**	**108.4**	**108.7**	**109.2**	**109.1**	**109.2**
Minnesota	98.0	98.3	99.4	101.0	101.6	102.6	102.2	101.2	99.8	98.6	98.4

Missouri	96.2	96.3	96.4	97.0	97.7	98.1	97.3	96.8	96.5	97.1	97.6
Mississippi	84.0	84.7	84.6	84.7	85.4	86.6	87.5	88.6	90.5	92.0	92.8
Montana	86.2	85.2	85.5	85.9	87.1	88.2	89.7	89.8	89.7	89.5	89.6
North Carolina	94.2	94.1	95.0	95.6	96.1	96.2	96.8	96.8	97.2	96.1	95.5
North Dakota	87.3	85.7	84.9	87.3	88.1	90.4	89.5	90.6	90.1	92.0	92.5
Nebraska	85.9	84.5	84.0	84.9	85.0	84.6	81.0	80.2	80.1	82.2	82.5
New Hampshire	100.3	99.3	97.6	96.5	97.8	97.6	96.9	96.2	96.1	95.7	94.5
New Jersey	108.5	108.6	108.1	106.7	106.4	106.3	107.5	108.5	109.7	110.1	110.4
New Mexico	100.9	94.1	88.2	79.9	76.4	75.5	77.2	78.7	78.2	77.0	76.1
Nevada	93.8	94.1	94.5	94.0	93.7	92.9	93.5	94.0	94.8	96.0	96.6
New York	103.4	104.2	103.8	104.0	103.8	103.8	103.5	103.7	103.3	102.8	101.7
Ohio	98.1	97.1	96.7	97.8	98.4	99.0	98.4	97.9	97.5	97.3	97.4
Oklahoma	82.9	82.2	81.4	81.5	81.8	82.1	82.1	81.8	82.3	82.8	83.1
Oregon	99.8	100.4	100.0	99.8	99.9	99.5	98.1	97.1	96.0	96.5	95.5
Pennsylvania	102.9	102.1	101.1	100.1	100.2	99.6	99.7	99.3	100.1	100.6	100.8
Rhode Island	99.5	97.4	95.9	93.8	94.2	94.5	94.4	91.3	91.1	90.2	90.7
South Carolina	95.6	96.0	96.9	96.9	97.1	96.0	96.0	96.3	97.2	97.9	98.6
South Dakota	68.4	67.6	66.8	65.8	65.8	66.1	66.7	67.6	68.4	70.4	71.9
Tennessee	96.5	96.9	95.8	94.2	94.1	95.4	96.9	98.3	98.6	98.5	98.4
Texas	93.6	94.0	94.7	94.7	94.0	93.5	94.2	94.5	95.5	95.8	96.7
Utah	101.9	101.6	101.5	103.0	105.1	105.4	102.7	100.5	99.3	100.4	100.2
Virginia	99.8	99.6	99.6	99.4	99.6	99.4	99.6	99.9	100.1	101.1	101.7
Vermont	91.9	92.2	92.3	92.5	93.0	94.4	95.7	96.1	96.3	96.6	97.2
Washington	94.5	94.9	96.1	96.6	97.6	98.3	100.6	102.6	103.8	104.2	103.6
Wisconsin	94.9	95.8	96.9	97.4	98.2	99.0	99.7	99.6	99.0	99.1	99.0
West Virginia	92.5	92.7	93.2	93.1	92.7	92.6	92.6	93.0	93.3	93.9	94.5
Wyoming	78.2	77.6	78.6	80.0	82.1	81.5	79.9	77.9	77.1	77.8	78.5

U.S. = 100
Source: Economy.com

Table VIII. Poverty Rate (1969-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1969	18.3%	12.2%	**-6.1%**	9.4%
1979	14.2%	11.3%	**-2.9%**	10.4%
1989	14.9%	11.7%	**-3.2%**	13.1%
2000	11.6%	10.2%	**-1.4%**	10.0%

Table IX. Income Inequality (1977-2000)

	RTW	Non-RTW	Michigan
1977	0.405	0.388	0.387
1985	0.416	0.406	0.417
1993	0.432	0.437	0.433
2000	0.443	0.453	0.436

APPENDIX II

Unit Labor Cost Calculation – Provided by Economy.com

The wage and output data for both the states and metropolitan areas come from the U.S. Bureau of Economic Analysis (BEA) and the U.S. Bureau of the Census, with missing data estimated by Economy.com. The labor compensation measure used is total wages and salaries by place of work, divided by total employment in each industry. Productivity per worker for metropolitan areas is estimated by applying the 1992 ratio of metropolitan to state level productivity to the gross state product release of the BEA. This ratio is calculated using data on revenues and costs obtained from the 1992 Economic Census.

Since relative regional economic growth is most influenced by enhancing local production of exportable goods and services, industries predominantly driven by local demand have been excluded from the analysis. These industries are primarily retail trade, construction, real estate, many service industries, and the government sector. In order to compare different regions properly, Economy.com constructed separate indices of worker productivity and earnings per worker for each metropolitan area, covering employment for each export industry at the three-digit Standard Industrial Classification level. However, a measure that used the aggregate output and earnings per worker would be biased by the region's industrial composition. Thus, the index of unit labor costs re-aggregates productivity and compensation per employee, using the national share of employment in each industry as the weights. This adjustment is necessary because certain industries have higher output per earnings ratios, due to the occupational mix of its employment and the capital structure of its operations. For example, productivity in the automotive industry is extremely high compared to other industries, whereas in the textile industry it is relatively low. As a result of these industry differences, a region with a high proportion of automotive manufacturing will appear to have lower unit labor cost than a region concentrated in textiles. However, by using the national share of employment in each industry to weight the productivity for each region, the index avoids this industry composition bias.

Employment composition is based upon SIC employment classifications. Economy.com uses three-digit SIC data in order to gauge the regional industry mix properly. However, since data in industries with a particularly small number of employees are subject to a higher degree of inaccuracy, a minimum size of 100 employees was imposed on the index. If the industry had fewer than the necessary 100 employees in the metropolitan area, then the relevant state labor cost measure was used.

The formula below is used to calculate Economy.com's wages and salary and productivity index for any level of aggregation, which weights each three-digit SIC equally for each area, with national employment share for each year serving as weights. This composition-adjusted aggregate is then indexed by the appropriate state earning or productivity measure. Labor costs are then calculated by dividing the earnings index by the analogous productivity index. The unit labor cost index was created for each year by dividing the region's unit labor cost index by the national unit labor cost index.

Definition of Relative Earnings or Productivity Indexes

$I^{St}{}_K = \{\Sigma_k (Y/Emp)^{St}{}_k * (Emp^{US}{}_k / Emp^{US}{}_K)\}/(Y/Emp)^{US}{}_K$

Where:
Y = Output or Earnings
St = State or Region
K = Total for all industries
k = Three-digit SIC industry

APPENDIX III

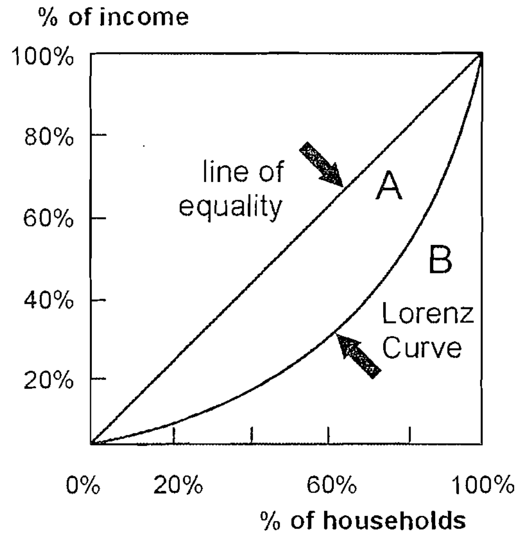
THE GINI COEFFICIENT

The Gini Coefficient is a summary measure that captures the deviation shown in the Lorenz curve. It is calculated as follows:

$$G = \frac{1}{2} \sum_{i=1}^{k} |x_i - y_i|$$

where x_i and y_i are the relative frequencies, rather than the cumulative frequencies, and k is the number of classes/groups.

The Gini Coefficient can be expressed graphically with the Lorenz curve, where: $G = A/(A+B)$, where A is the area between the line of equality and the Lorenz curve, and B is the area under the Lorenz curve.



A Lorenz Curve illustrates inequality.

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ISBN: 1-890624-28-4

S2002-02

A MACKINAC CENTER REPORT

THE ECONOMIC EFFECTS OF RIGHT-TO-WORK LAWS: 2007

Paul Kersey

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ISBN: 1-890624-67-5 | S2007-11

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The Mackinac Center for Public Policy

The Economic Effects of Right-to-Work Laws: 2007

Paul Kersey

Midland, Michigan

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Executive Summary

This paper is an update to Dr. William T. Wilson's 2002 study, "The Effect of Right to Work Laws on Economic Development."

In that report, Wilson compared right-to-work and non-right-to-work states on basic measurements of economic performance, such as gross state product growth, job creation and per-capita disposable income between 1970 and 2000. Wilson found that right-to-work states had significant advantages in economic growth and job creation. While incomes were still somewhat lower in right-to-work states, incomes were also growing faster in those states. Michigan, on nearly every economic measurement, had lagged behind.

This paper picks up where Wilson's study left off, tracking the same measurements from 2001 to 2006. We find that little has changed — if anything the apparent advantages of right-to-work states have grown larger. The economies of right-to-work states grew by an average of 3.4 percent compared to 2.6 percent for non-right-to-work states and 0.7 percent for Michigan. Jobs grew by 1.2 percent annually in right-to-work states, compared to 0.6 percent for non-right-to-work states, while jobs decreased by an average of 0.8 percent in Michigan.

Meanwhile, the gap in per-capita disposable income continues to shrink, to the point where most right-to-work states are likely to have higher incomes than Michigan does within just a few years.

On several measurements, the trends between 2001 and 2006 were more favorable towards right-to-work states than they had been in the period covered by Wilson's earlier study. In light of Michigan's current economic difficulties, this leads to the conclusion that the case for making Michigan a right-to-work state has only become stronger.

Introduction

In 2002, the Mackinac Center for Public Policy published a study written by former Comerica economist Dr. William T. Wilson titled "The Effect of Right-to-Work Laws on Economic Development." This study compared states that had enacted right-to-work laws and those that had not using common measurements such as gross state product, job creation, per-capita income and poverty rates. It was found that states with right-to-work laws had outperformed the other states in nearly every category, and that Michigan in particular had lagged behind.

Five years have passed, and the state has entered a condition of steady economic stagnation. Michigan-based automobile manufacturers have continued to lose market share, Michigan's largest bank has moved its headquarters out of state, families have left the state to pursue opportunities elsewhere and political leaders wrestle with the consequences of a shrinking economy and declining tax revenues.

With little grounds for belief that these trends will reverse on their own, Michigan's residents are increasingly open to fundamental changes in policy that will make the state more attractive to entrepreneurs, who are the real creators of wealth and jobs. One possible way to attract new investment and business into the state would be to enact a right-to-work law.

This report will pick up where the 2002 study left off, updating fundamental measurements of economic health and assessing whether the advantages held by right-to-work states in 2002 remain in place in 2007.

The basic concept of a right-to-work law is simple: workers should not be obligated to join or give support to a union as a condition of employment. Under federal law, workers have both the right to join unions and the right to refrain from union membership, and while a union contract will cover all employees within a given bargaining unit, individual workers are free to join or not join the union at their discretion.

But while a strict "union shop" contract, in which all workers covered by a collective bargaining agreement must formally join the union, is prohibited, federal law does allow something similar: the agency shop, in which covered workers who opt not to join the union must pay an agency fee, which generally is equal to the regular union dues paid by full union members.

The agency fee does not render the right to refrain from joining a union into a total dead letter. A worker who does not join the union is free from legal union sanctions if he chooses not to take part in a strike, and he can also invoke rights affirmed under the Supreme Court's *Beck* decision to reduce his agency fee. In theory, his union dues should be limited to a pro rata share of the costs of collective negotiations and contract administration, including the processing of grievances. In practice, Beck rights have proved difficult to enforce — but the remedy is there and offers some relief from supporting union political and social activities that workers often oppose.

Many states have given workers complete discretion to decline membership in, and financial support of, a union that they individually oppose. Enacting a right-to-work law abolishes agency fees and allows workers themselves to decide if a union deserves their financial support.

This policy has much to recommend it from the perspective of workers themselves. While union officials argue that right-to-work laws allow for "free riders" to enjoy the benefits of union representation without shouldering the costs, this argument is based on the presumption that all workers gain equally under collective bargaining agreements. Unions have the potential to be of great value to workers as a representative in contract negotiations, as an advocate in grievances and, if necessary, as a means for united action such as strikes.

But it is irresponsible for the law to assume that every union contract creates benefits for every worker it covers: an inept union may agree to terms that are not advantageous for its members and a corrupted union might sell its members short as part of a "sweetheart contract." Union officials may capriciously decide to favor the interests of one group of workers over another for entirely personal reasons. Even a capable and conscientious union negotiator may need to choose between competing interests among the rank-and-file.

Union officials are not infallible. Given the responsibility that they have as worker representatives, the lines of accountability between union and workers should be as firm as possible. Right-to-work laws strengthen accountability by giving dissatisfied members the option of withdrawing all financial support from a union that they believe is not serving their purposes. In the process, it creates incentives for union officials to pay attention to the interests of all members. This, in turn, reduces the temptation for unions to seek to use their position as worker representatives to influence day-to-day operations in ways that benefit only a handful of members. As a consequence, labor is more productive and more attractive to employers. In turn, higher labor productivity drives up the demand for labor in right-to-work states, increasing both wages and the number of jobs available.

In his 2002 study, Wilson found compelling evidence that right-to-work laws also improved state economic conditions across the board. In particular, between 1970 and 2000:

- The economies of right-to-work states grew faster. Between 1977 and 1999 the average right-to-work state's gross state product grew by 3.4 percent annually, compared to 2.9 percent in non-right-to-work states. Michigan's economy grew by 1.8 percent during that period.

- Between 1970 and 2000 overall employment increased by 2.9 percent annually in right-to-work states versus 2.0 percent for non-right-to-work states. Job growth in Michigan was barely half that of right-to-work states at 1.5 percent. Manufacturing employment grew by 1.5 percent annually in right-to-work states but declined by 0.2 percent in non-right-to-work states during that same period.

- The unemployment rate between 1978 and 2000 averaged 5.8 percent in right-to-work states versus 6.3 in non-right-to-work states, while Michigan's unemployment rate averaged 8.1 percent.

- Per-capita disposable income was higher in non-right-to-work states than in right-to-work states, but between 1970 and 2000 per-capita disposable income was rising faster in states with right-to-work laws, by 0.2 percent annually.

- From 1969 to 2000 the poverty rate in right-to-work states decreased by 6.7 percent, but in non-right-to-work states poverty decreased by only 2.0 percent. In Michigan the percentage of people living in poverty as defined by the Census Bureau increased by 0.6 percent during that same period.

Wilson also observed that unit labor costs — the cost of labor associated with a unit of output — were lower in right-to-work states than in non-right-to-work states, making labor a better overall value in right-to-work states, which, in turn, become more attractive places for businesses to locate. Michigan's per-unit labor costs were among the highest in the country, second only to New Jersey's.[1]

Wilson's study found that right-to-work states outperformed non-right-to-work states in every important economic category. Michigan in particular had performed poorly, placing in the bottom fifth for most of the preceding 30 years in economic growth, job creation, unit labor costs and change in the poverty rate. While the 1990s were a relative bright spot for Michigan, the growth of the state's overall economy, job creation and income were still little better than average. Wilson expressed particular concern about the state's high labor costs and their implications for the state's future: "As the forces of globalization and competition intensify, Michigan's high unit labor costs will increasingly discourage fresh capital from planting new seeds."[2]

These words appear to have been prophetic, as Michigan has encountered a string of economic setbacks at a time when the rest of the United States is experiencing steady economic growth. The accelerated decline of Detroit's automobile industry, evidenced by mass layoffs and buyout of employees at the main domestic auto manufacturers and the nettlesome Delphi bankruptcy, has generated constant headlines. At the same time, the state has largely failed to attract employers seeking to expand out of other states or to develop successful, growing firms from within.

The quickening erosion of jobs from the automotive industry, combined with the failure to attract new investment or develop new companies, has left the state with a declining tax base. In combination with structural flaws that make government services more expensive — binding arbitration of labor disputes involving public safety officers, an expensive public employee pension system and a severe prevailing wage law pegged strictly to union construction wages — this has led to a more or less constant budget crunch in Lansing and in many county and municipal governments.

This report will update Wilson's work, focusing on the economic performance of right-to-work and non-right-to-work states over the five year period from 2001 to 2006. For the purposes of this report, Oklahoma, which passed a right-to-work law by referendum in 2001, will be treated as a right-to-work state unless otherwise noted.

1 Wilson, William, *The Effect of Right-to-Work Laws on Economic Development*, Mackinac Center for Public Policy, June 2002 (hereinafter "Wilson study").

2 Wilson study, 25.

For the most part, this paper will examine the same fundamental economic measurements of economic growth, employment, income and productivity as the Wilson study. It should be noted that this period opens at the beginning of a brief national recession occasioned by the terrorist attacks of September 2001 and also includes the aftermath of Hurricane Katrina in August 2005. As a consequence, growth rates in employment and wages are somewhat lower for all states than for the period measured by Wilson, which generally covers the period from 1970 to 2000. Because Katrina mainly affected the right-to-work states of Louisiana, Mississippi and Alabama, the data may actually understate the value of right-to-work laws. Nonetheless, these measurements will show that the case for a Michigan right-to-work law remains strong and, if anything, has become stronger.

By themselves these statistical measurements do not prove that right-to-work laws alone are responsible for dramatic economic improvement; correlation suggests causation, but the two are not the same. But at a minimum, it seems fair to conclude that right-to-work laws are not incompatible with a strong state economy, high growth in jobs, low unemployment and steady wage gains. And it is certainly logical to ask right-to-work critics what exactly does cause right-to-work states to outperform non-right-to-work states in so many measurements of economic health.

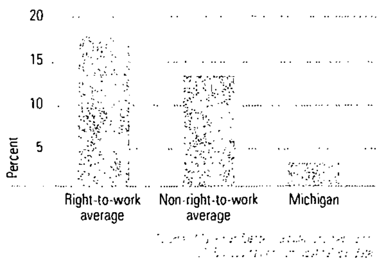
It is not our intention to make the right-to-work concept into a panacea, nor do we claim that right-to-work laws are an absolute necessity before Michigan's economy can recover. There are a large number of public policies that can affect a state's economy: high taxation levels, counterproductive government programs, state laws (such as the prevailing wage) that make necessary state activities needlessly expensive, and regulatory burdens that impede economic growth and limit employment. Michigan could probably become a leading state by reducing taxes and streamlining environmental rules, but in the absence of a right-to-work law, the fiscal and regulatory remedies would need to be more stringent. Passing right-to-work legislation is a step Michigan can take to make the state more attractive to employers and create jobs without complicating already difficult budget decisions or taking any environmental risks.

Growth in Gross State Product

Real gross state product is the market value of all goods and services produced in a state over the course of a year, corrected to account for inflation. Real GSP is the most basic measurement of economic growth. Over the five-year period between 2001 and 2006, the average right-to-work state saw its gross state product grow by 18.1 percent, versus 13.6 percent for non-right-to-work states.[3] During that same period Michigan's gross state product grew by only 3.4 percent, easily the slowest growth of any state in the union. Next-to-last West Virginia, another non-right-to-work state, managed GSP growth of 7.3 percent. The lowest performing

3 Mackinac Center calculations based on Bureau of Economic Affairs data.

Graphic 1: Total percentage growth in gross state product, 2001-2006



right-to-work states were Louisiana and Mississippi, both of which were struck by Hurricane Katrina in August 2005, yet both outperformed Michigan, with real GSP growth of 9.2 and 9.5 percent respectively.[4]

4 Ibid.

In the 2002 report, Wilson found that between 1977 and 1999 right-to-work states had an average annual (year-to-year, as opposed to cumulative) GSP growth rate of 3.4 percent, versus 2.9 percent for non-right-to-work and 1.8 percent for Michigan. This GSP growth gap of half a percent per year, while modest in appearance, had a significant impact when repeated over 30 years. That growth gap has gotten larger: between 2001 and 2006 annual GSP growth averaged 3.4 percent in right-to-work states, compared with 2.6 percent in non-right-to-work states, a difference of 0.8 percent. Michigan's annual GSP growth during that same period was only 0.7 percent.

Employment Growth

A growing state economy reflects the success of entrepreneurs in developing new businesses or expanding existing ones, creating opportunities for workers in the process. It should not come as a surprise, then, that right-to-work states, with their higher rates of overall growth, show a significant edge in creating jobs.

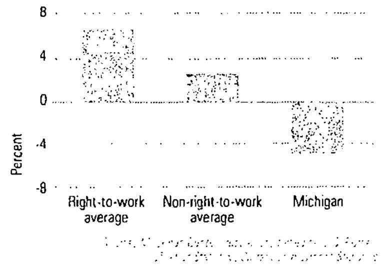
Between 1970 and 2000 employment grew by an average of 2.9 percent annually in right-to-work states, versus 2.0 percent in non-right-to-work states and 1.5 percent in Michigan. From 2001 to 2006 the rate of employment growth appeared to slow somewhat across the country, but right-to-work states still had a decided advantage, with average annual job growth of 1.2 percent compared to 0.6 percent for non-right-to-work states.[5]

5 Mackinac Center calculations based on data from the Bureau of Labor Statistics, Current Employment Statistics.

Over the full five-year period from 2001 to 2006, the average right-to-work state increased employment by 6.4 percent, while non-right-to-work states averaged 2.9 percent in job growth. Michigan saw employment decline by 4.8 percent — again, the worst performance in the nation — representing the loss of more than 220,000 jobs.[6] Only three other states lost jobs during this period, non-right-to-work Illinois and Ohio, and right-to-work Louisiana. Aside from Katrina-ravaged Louisiana, the right-to-work state with the worst job-creation record from 2001 to 2006 was Kansas, which managed to increase

6 Ibid.

Graphic 2: Total percentage change in non-farm employment, 2001-2006



nonfarm employment by 0.4 percent. If Michigan had merely kept pace with Kansas during that period, the state would have had 238,000 more jobs than it did.[7]

7 Ibid.

Manufacturing Employment Growth

Manufacturing has long been a mainstay of the Michigan economy and an important source of employment across the country. Over the last five years Michigan has lost a large number of manufacturing jobs, especially in the automobile sector. Michigan is far from alone in this; most states saw declines in manufacturing employment between 2001 and 2006. But right-to-work states saw much less severe losses in this area.

The trend away from manufacturing employment was already well underway five years ago; nationally, manufacturing employment reached its peak in 1979. Between 1990 and 2000 right-to-work states experienced an average increase of 1.0 percent annually in manufacturing employment, but non-right-to-work states saw annual declines in manufacturing payroll averaging 0.6 percent. Michigan, in the midst of a stretch of relative prosperity, gained manufacturing jobs by an average of 0.4 percent per year during that time, but had experienced losses in the 1980s.[8]

8 Wilson study, 27.

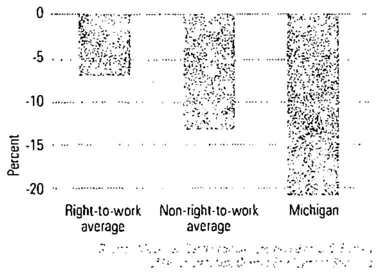
The tendency for non-right-to-work states to lose manufacturing jobs has become more pronounced over the last several years. Between 2001 and 2006 the typical right-to-work state saw manufacturing employment decline 1.5 percent annually, 7.1 percent overall. Non-right-to-work states, however, faced even sharper declines: averaging 3.0 percent annually and 13.7 percent over the five-year period. Every non-right-to-work state but one, Alaska, lost manufacturing jobs during that period, while five right-to-work states registered at least modest gains in this area.[9]

9 Mackinac Center calculations based on data from the Bureau of Labor Statistics, Current Employment Statistics.

It will come as no surprise to most readers that Michigan's record for manufacturing employment over the last five years is particularly disturbing: between 2001 and 2006 Michigan manufacturing employment declined an average of 4.6 percent per-year, or by a total of 20.9 percent over the whole five-year period.[10]

10 Ibid.

Graphic 3: Total percentage losses in manufacturing employment, 2001-2006



The decline in manufacturing employment is occurring nationwide and has been underway for nearly 30 years; large statewide gains in manufacturing employment are unlikely even with the best economic policies. But given Michigan's status as one of the most heavily industrialized states in the union, with 14.9 of Michigan's workforce in manufacturing compared to the national average of 10.2 percent, Michigan has a particular interest in preserving manufacturing employment as much as possible, an area where states with right-to-work laws appear to have a distinct advantage.[11]

11 Ibid.

Construction Employment

Between 1970 and 2000 employment in construction grew nearly half again as fast in right-to-work states. This trend was particularly sharp in the 1990s as the average annual growth in construction jobs reached 4.4 percent in right-to-work states versus 2.5 percent in non-right-to-work states.[12]

12 Wilson study, 16-17.

Since then, construction employment has slowed down somewhat, but right-to-work states continue to have a definite edge. Between 2001 and 2006 non-right-to-work states increased construction payrolls by an average of 1.7 percent per year or 9.5 percent for the five-year period. Right-to-work states increased their construction payrolls by 3.3 percent per year, which translates into 18.3 percent for the entire period, nearly double the growth rate of non-right-to-work states.[13]

Four states, all non-right-to-work, experienced declines. Michigan saw the sharpest decline, losing 12.6 percent of its construction payroll over the five-year period, an average of 2.7 percent decline per year.[14]

13 Mackinac Center calculations based on data from the Bureau of Labor Statistics, Current Employment Statistics. Statistics not available for Delaware, Hawaii, Maryland and Nebraska.

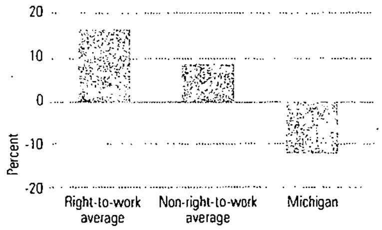
14 Ibid.

Service Employment

While Wilson's 2002 study did not address employment in the services sector, this is a growing area of the economy that is expected to provide the vast majority of new jobs for the foreseeable future. According to Bureau of Labor Statistics projections, 18.7 million out of 18.9 million new jobs created between 2004 and 2014 will be in the service sector.[15] If Michigan is to replace jobs lost from

15 Bureau of Labor Statistics, *Tomorrow's Jobs*, The Occupational Outlook Handbook 2006-07 Edition, p. 2, available online at http://www.bls.gov/oco/pdf/oco2003.pdf.

Graphic 4: Total percentage change in construction employment, 2001-2006



the retrenchment of automakers, the new jobs are far more likely to be found in services than in manufacturing. Sometimes derided as "burger-flipping," the services sector also includes well-compensated careers in health care, education, law, consulting, architecture and technology.[16]

16 Ibid., 2-3.

Job creation in the service sector has also favored right-to-work states for some time. Between 1990 and 2000, right-to work states added service-sector jobs at an average rate of 5.8 percent per year, while non-right-to-work states did so at a respectable — but not quite as rapid — rate of 4.1 percent per year.[17]

17 Mackinac Center calculations based on data from the Bureau of Labor Statistics, Current Employment Statistics.

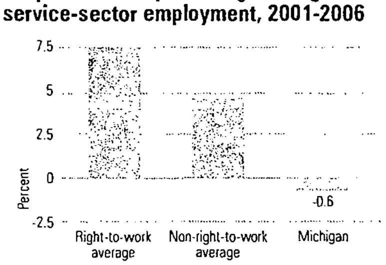
While job creation has slowed somewhat since then, right-to-work states have retained their advantage. Between 2001 and 2006, right-to work states increased service-sector payrolls by 7.5 percent, or a little more than 1.4 percent per year. That was more than half again the rate of non-right-to-work states, which on average increased service-sector employment by 4.7 percent over the five-year period, or 0.9 percent per year.[18]

18 Ibid.

Michigan's performance, again, was among the worst in the nation; from 2001 to 2006 Michigan lost 0.6 percent of its service-sector payroll, an average annual decline of 0.1 percent.[19] Only Louisiana, struck by Hurricane Katrina in 2005, fared worse. Because service-sector jobs in particular tend to focus on interactions with customers, the effects of Hurricane Katrina and the subsequent evacuation of New Orleans are likely to be particularly acute and, consequently, Louisiana's poor performance in creating service-sector jobs should be considered an anomaly.

19 Ibid.

Graphic 5: Total percentage change in service-sector employment, 2001-2006



Unemployment Rates

With slower job growth — and sharp job losses in manufacturing — one naturally would expect to see higher unemployment rates in non-right-to-work states. This held true between 1978 and 2000: right-to-work states had an average unemployment rate of 5.8 percent versus 6.3 for non-right-to-work states. Michigan, in spite of its relative prosperity during the 1990s, had a poor record for unemployment for the period, with an average unemployment rate of 8.1 percent.[20]

20 Wilson study, 17.

Unemployment rates were lower overall from 2001 to 2006, and the gaps between right-to-work and non-right-to-work states (including Michigan) tightened somewhat, but right-to-work states still tended to have lower rates of unemployment: 4.8 percent for right-to-work states, 5.1 percent for non-right-to-work states and 6.5 percent for Michigan.[21]

21 Mackinac Center calculations based on data from the Bureau of Labor Statistics, Current Employment Statistics.

The unemployment rate for Michigan may understate the difficulty that Michigan workers have in finding jobs. From 2000 to 2006 the Census estimates that Michigan's population grew by only 1.6 percent, while the national population grew by 6.4 percent.[22] Data compiled by United Van Lines, one of the nation's largest movers, indicates that in 2006 Michigan was tied with North Dakota for the highest rate of outbound migration in the country, with nearly two families leaving the state for every family moving in. The families that move out will not show up in the state's unemployment figures, but it is very likely that many of them are the families of Michigan workers who could not find jobs close to home.

22 U.S. Census Bureau.

Per-Capita Disposable Income

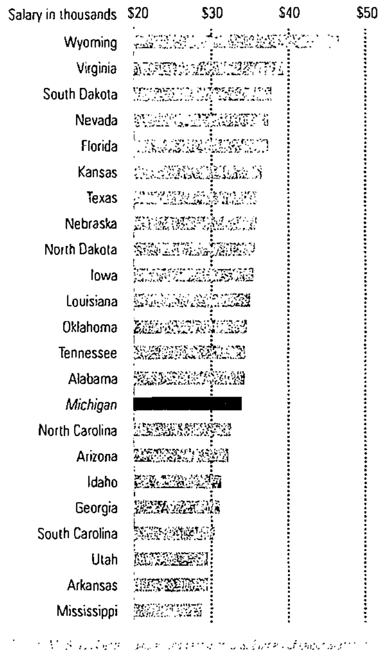
A common argument against right-to-work is that by weakening unions, right-to-work laws drive down compensation. In 2002, Wilson observed that right-to-work opponents "have often acknowledged the faster employment growth in right-to-work states, but counter that it comes at the expense of much lower wages and incomes. Organized labor's mantra, the 'right-to-work for *less*' or the 'right-to-starve' has resonated strongly both inside and outside union circles."[23] This rhetorical flourish had some basis in fact: Wilson found that per-capita disposable income, essentially income after taxes, was approximately $2,850 lower in states without right-to-work laws.[24]

23 Wilson study, 18 (emphasis in original).

24 Ibid.

Wilson argued that other factors related to compensation swung the advantage back to right-to-work supporters on the question of compensation. Several studies had found that non-right-to-work states tended to have higher costs of living, and that after accounting for this, compensation was actually higher in right-to-work states. Wilson also found that per-capita disposable income was growing a bit more quickly in right-to-work states; between 1970 and 2001 the average annual per-capita income growth in right-to-work states was 6.8 percent, compared with 6.6 percent in non-right-to-work states. (Michigan also averaged 6.6 percent.)

Graphic 6: Projected per-capita disposable income for Michigan and right-to-work states, 2010



Further research by University of Oklahoma economist W. Robert Reed has suggested that much of the gap in income favoring non-right-to-work states was due to the fact that many right-to-work states had been relatively poor prior to enacting right-to-work legislation. After accounting for economic conditions prior to enactment, Reed found that a significant, positive impact was associated with right-to-work.[25]

25 Reed, Robert, *How Right-to-Work Laws Affect Wages*, Journal of Labor Research, Vol. 24, No. 4 (2003): 713-730.

Since Wilson's paper was released, the difference in wage growth appears to have widened slightly: Per-capita disposable income increased by an average of 4.3 percent per year in right-to-work states, compared to 3.9 percent per year in non-right-to-work states between 2001 and 2006, a difference of 0.4 percentage points. Per-capital disposable income grew more slowly in Michigan, averaging 3.0 percent per year. Only one right-to-work state, Georgia, had slower per-capita disposable income growth than Michigan during this period.

These seemingly small changes have potentially dramatic ramifications: if the trend of the last five years continues, it is simply a matter of time before right-to-work states offer not only more jobs, but better paying jobs, than Michigan. The per-capita disposable income gap between Michigan and the average right-to-work state has already declined considerably, from $2,300 in 2001 to less than $1,000 in 2006.

As far back as 2001, three right-to work states, Nevada, Virginia and Wyoming, already had higher per-capita disposable income than Michigan.[26] Between 2001 and 2006, five more right-to-work states (Florida, Kansas, Nebraska, South Dakota and Texas) overtook Michigan. Assuming current trends hold, six more right-to-work states are poised to feature higher disposable income by 2010: Alabama, Iowa, Louisiana, North Dakota, Oklahoma and Tennessee. At this point, a majority of "right-to-work for less" states will exceed Michigan in per-capita disposable income.[27]

26 Bureau of Economic Analysis.

27 Mackinac Center calculations based on data from the Bureau of Economic Analysis.

Looking further into the future, every right-to-work state except Georgia will overtake Michigan by 2036 if the trend of the last five years holds. This projection should be taken with a grain of salt; much can and will change between now and 2036. But the exercise does illustrate one final, important point about the gap in wages between right-to-work and non-right-to-work states: the gap is real but it is not so large that it cannot be overcome, in the lifetime of many working Michiganians, by states with the sort of advantage in economic development that right-to-work appears to offer.

Poverty Rates

Poverty rates are measured by determining the number of people living in households with an income below a defined amount, called the poverty line, which is adjusted for family size. In his earlier study, Bill Wilson found that right-to-work states had historically been burdened by high poverty rates, but also found that they had great success in diminishing poverty. Between 1969 and 2000 poverty rates had dropped by 6.7 percent on average in right-to-work states, compared with a reduction of 2.0 percent in non-right-to-work states.[28]

28 Wilson study, 21.

During the 2001-2005 period, rates of poverty increased somewhat on account of a recession that affected both right-to-work and non-right-to-work states.* Right-to-work states still had higher poverty rates on average than non-right-to-work states, although the gap between the two did close slightly. For right-to-work states, poverty rates increased from an average of 12.9 in 2000 to 14.0 percent in 2006, an increase of 1.1 percentage points. In non-right-to-work states, the average poverty rate moved from 10.9 percent to 12.1 percent, an increase of 1.2 percentage points. While right-to-work states tend to have higher rates of poverty, the gap has been narrowing for 30 years and that narrowing continued over the past five years.†

* 2005 is the last year for which poverty rates are available at the time this is written. Because of the years covered, Oklahoma, which enacted right-to-work in 2001, will be disregarded.

† Mackinac Center calculations based on data from the U.S. Census Bureau, American Community Survey (2006 figures not available at time of publication).

Michigan, meanwhile, saw its rate of poverty increase sharply, with the number of Michiganians living in poverty jumping from 10.1 percent in 2000 to 13.2 percent in 2005. According to the latest figures, Michigan has a higher poverty rate than nine right-to-work states.

The method for determining poverty has been heavily criticized for being simplistic and arbitrary. Generally there is no adjustment made for local costs of living, which as we showed is generally lower in right-to-work states, a tendency that could inflate poverty rates.[29] Also, the tendency to focus on a single year's income can result in families with substantial savings from previous years being treated as poor. Even the process of determining an appropriate "poverty line" itself is somewhat subjective.[30] While the relative poverty rates of right-to-work and non-right-to-work states is worth considering, the arbitrariness of this measurement should lead citizens and policymakers to give this one particular statistic less weight than the measurements of economic growth, job creation, unemployment and income.

29 U.S. Census Bureau, *How the Census Bureau Measures Poverty*, available online at http://www.census.gov/hhes/www/poverty/povdef.html.

30 Rector, Robert, *The Myth of Widespread American Poverty*, Heritage Foundation Backgrounder #1221, September 18, 1998.

Unit Labor Costs

The last measurement of economic performance that this report will consider is arguably the most important for the long-term health of the state: the productivity of labor. For these purposes we use a measurement that reflects the cost of labor to employers, the unit labor cost index calculated by Moody's Economy.com. This index reflects labor compensation relative to productivity for each state.[31]

31 Wilson study, 20.

This is not merely a measure of compensation per hour; consequently, lower costs do not necessarily translate into lower wages or less generous pension and health-care benefits. A high-wage state can be competitive in this measurement as long as labor produces enough output to justify the compensation.

In 2000, Michigan's unit labor costs were among the highest in the nation, at 109.2. Only New Jersey had higher labor costs than Michigan. Overall the average labor cost index for right-to-work states was 4.9 points lower than for non-right-to-work states, meaning that labor was roughly 5 percent more productive in right-to-work states.[32]

32 Ibid.

By 2005, Michigan's per-unit labor costs had improved somewhat, dropping to 105. But several other high-labor-cost states have also seen improvements in productivity; consequently the only two states with higher per-unit labor costs than Michigan are Massachusetts and Maryland. And the advantage held by right-to-work states has grown to an average of 6.4 points.[33]

33 Mackinac Center calculations based on data found in the *North American Business Cost Review, 2006 Edition*, available through Moody's Economy.com.

While Michigan's labor cost has been reduced somewhat, the state remains at a significant disadvantage in this area. Unit labor costs are arguably the single largest component in determining competitiveness. In calculating its state business cost index, Moody's Economy.com will use labor costs as 75 percent of the overall index, more than all other factors combined.[34]

34 *North American Business Cost Review, 2006 Edition*, p. 4, available through Moody's Economy.com.

Michigan's high labor costs have a severe effect on the state's ability to attract and retain employers. A Mackinac Center review of applications for business tax relief that were submitted to the Michigan Economic Development Commission found that 66 percent of applicants listed the costs of employment in Michigan as a reason they were likely to locate or expand elsewhere. By comparison, only 40 percent mentioned taxes, 34 percent listed building costs and 31 percent described economic incentives given by other states.[35]

35 Mackinac Center analysis of applications submitted to the Michigan Economic Growth Agency. Totals add up to more than 100 percent because applicants frequently gave more than one reason for locating outside of Michigan.

As communications and transportation become more advanced, the opportunities for businesses to reach new markets have expanded greatly, but at the same time so has the level of competition. In such an environment, it is essential that labor costs be in line with labor productivity. Michigan's high per-unit labor costs are likely to remain a serious burden on the state's economy, dragging down both job creation and wages. Addressing this problem does not mean reducing wages and benefits, but if high wages are to be preserved they must be matched by high output, high quality and workplace flexibility.

Conclusion

Right-to-work laws change the incentive structure for unions. Because a union in a right-to-work state must persuade individual workers to pay union dues, unions are more likely to focus on bread-and-butter issues of pay, benefits and working conditions that provide immediate benefits to workers, and less likely to negotiate complex agreements that enhance their control over the workplace — and unionized workers — at the cost of impeding productivity.[36]

As a consequence, unions in right-to-work states are less of a drain on productivity, but not at the expense of workers. The benefits for employers are obvious; in a right-to-work state employers receive more productivity for each employee compensation dollar.

For employees, the benefit of a right-to-work law may be less obvious, but flows inevitably from fundamental economics: higher labor productivity in right-to-work states results in more demand for labor, and as demand increases, more jobs are offered and the wages attached to those jobs go up. The basic economic record bears this out: both jobs and wages are increasing faster in right-to-work states, a win-win proposition for workers.

If anything the advantage of right-to-work status is growing: comparing the 30-year period from 1970 to 2000 that Wilson covered with the 2001-2006 period covered by this report, we find larger gaps in GSP growth and job creation, both in favor of right-to-work states. Disposable income remains lower in right-to-work states, but right to-work states had been "catching up" in this category prior to 2000. The process accelerated between 2001 and 2006 to the point where the typical right-to-work state will surpass Michigan in a few years.

For Michigan, a state undergoing a difficult economic transition, the enactment of right-to-work legislation would make the state's workers more attractive to new employers, giving a boost to employment and wages at a time when both are sagging.

Michigan has a right to be proud of its past as a leader in providing workers with plentiful jobs at excellent wages, but its residents and political leaders must recognize that policies that were effective in the past are not viable now. The state's acceptance of compulsory union membership, and the burdens it placed on employers, could be borne easily when the state was the center of a lucrative industry that faced little competition.

But all industries confront new competition, and the auto industry in particular faces new competitors that do not bear that burden of compulsory unionism, either because they have avoided union representation or because they have located in right-to-work states. Michigan should not let pride in its past blind it to changes that are taking place today. The right-to-work states are poised to overtake Michigan in both job creation and wages. It is doubtful that Michigan can beat them. The state would be better off joining them.

36 Reid, Joseph, and Faith, Roger, Right-to-Work and Union Compensation Structure, Journal of Labor Research, Vol. 8, No. 2 (Spring 1987).

Acknowledgments

The author would like to express his gratitude to Fiscal Policy Research Assistant James Hohman and Research Intern Aaron Mead, both of whom provided invaluable assistance in assembling the data for this report.

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MACKINAC CENTER
FOR PUBLIC POLICY

ISBN: 1-890624-67-5 | S2007-11

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The Effect of Right-to-Work Laws on Economic Development

by William T. Wilson, Ph.D.

ISBN: 1-890624-28-4

S2002-02

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The Effect of Right-to-Work Laws on Economic Development

by William T. Wilson, Ph.D.

Executive Summary

"Right-to-work" (RTW) laws are state statutes or constitutional provisions that ban the practice of requiring union membership or financial support as a condition of employment. These laws establish the legal right of employees to decide for themselves whether or not to join or financially support a union. The right to enact a RTW law is assured by Section 14(b) of the Federal Labor-Management Relations Act (also called the Taft-Hartley Act) of 1947.

These laws establish the legal right of employees to decide for themselves whether or not to join or financially support a union.

Since the 1940s, 22 states have adopted RTW laws, the most recent being Oklahoma, which added a provision to its constitution in 2001. Michigan, a non-RTW state, is home to 972,000 unionized employees, which represents 21.8 percent of all private and public sector workers employed in Michigan in 2001.

Advocates of RTW laws cite a growing body of evidence showing that RTW states enjoy faster economic and employment growth than non-RTW states. This growth advantage—experienced predominantly by the southern and western states, which comprise the bulk of RTW states—has been in evidence ever since Taft-Hartley was passed.

Opponents of right-to-work laws argue, conversely, that compulsory unionism is necessary to offset the power of big business in a market economy. In this view, big business and free markets are responsible for a slowdown in real earnings for workers and for greater income inequality during the past quarter century.

To evaluate the merits of these arguments, this study compares economic development between RTW and non-RTW states. It examines a broad cross-section of state economic statistics from the past three decades. Michigan's economic performance receives particular attention. The results of this analysis contradict many of organized labor's long-standing contentions.

The following are the key conclusions of the research. Except where otherwise noted, these data are averages of annual figures taken from 1970 through 2000:

Employment grew almost 1 percent faster each year, on average, in right-to-work states. Employment in Michigan grew only half as fast as employment in RTW states.

- From 1977 through 1999, Gross State Product (GSP), the market value of goods and services produced in a state, increased 0.5 percent faster in RTW states than in non-RTW states. Michigan's GSP grew at roughly half the rate of RTW states.

- Employment grew almost 1 percent faster each year, on average, in RTW states. Employment in Michigan grew only half as fast as employment in RTW states.

- Manufacturing employment grew 1.7 percent faster in RTW states. Right-to-work states *created* 1.43 million manufacturing jobs, while non-RTW states *lost* 2.18 million manufacturing jobs. Michigan lost more than 100,000 manufacturing jobs during this period, performing even worse than many other non-RTW states.

- Construction employment grew 1 percent faster each year, on average, in RTW states. Michigan ranked 32nd in the nation in this category.

- From 1978 through 2000, average annual unemployment was 0.5 percent lower in RTW states. Unemployment in Michigan was 2.3 percent higher than in RTW states.

- Per-capita disposable income was 0.2 percent higher, on average, in RTW states. Michigan's rate of increase in this category matched the average for other non-RTW states. Although nominal per-capita disposable income was 10 percent higher in non-RTW states in 2000, research shows that the cost of living is also higher in these states; so high, in fact, that after-tax purchasing power—real income—is greater in RTW states.

- Unit labor costs—the measure of labor compensation relative to labor productivity—were 93.2 in RTW states and 98.1 in non-RTW states in 2000. Michigan, at 109.2, had the second highest unit labor costs in the nation that same year, exceeding all but New Jersey.

- The percentage of families living in poverty in RTW states dropped from 18.3 percent to 11.6 percent between 1969 and 2000. During this same period, seven states saw increases in poverty, all non-RTW states. Michigan was among them, with a poverty increase of 0.6 percent, ranking it 45th among the states in poverty rate improvement.

- Income inequality rose in both RTW and non-RTW states between 1977 and 2000. But while this inequality was greater in RTW states in 1977, by 2000 the situation had reversed.

This study attributes the better economic performance of RTW states to greater labor productivity. The post-World War II period has brought rapid economic globalization, which has dramatically increased the importance of labor productivity and of policies, such as right-to-work, that affect it.

Advances in information technology, greater capital mobility, and lower barriers to entry for business startups are making it increasingly difficult for businesses to pass higher costs on to suppliers and customers. The net effect is increasing pressure for firms to seek geographical regions with lower cost structures and higher rates of labor productivity.

This study attributes the better economic performance of right-to-work states to greater labor productivity.

Right-to-work laws increase labor productivity by requiring labor unions to earn the support of each worker, since workers are able to decide for themselves whether or not to pay dues. This greater accountability results in unions that are more responsive to their members and more reasonable in their wage and work rule demands.

The study predicts that Michigan will continue to fall behind economically relative to RTW states until it adopts a right-to-work policy.

The Effect of Right-to-Work Laws on Economic Development

by William T. Wilson, Ph.D.

The Oklahoma story is only the latest evidence of a growing interest in reassessing the costs and benefits of the compulsory union regime spawned during the Great Depression, and which remains today one of the primary determinants of labor productivity.

I. INTRODUCTION

In September of 2001, the citizens of Oklahoma overcame powerful union opposition to approve a "right-to-work" provision for their state constitution. "Right-to-work" laws are state statutes or constitutional provisions that ban the practice of requiring union membership or financial support as a condition of employment. This successful campaign made Oklahoma the 22nd state to achieve right-to-work (RTW) status since this option was assured under the Taft-Hartley amendments to the National Labor Relations Act in 1947.

The Oklahoma story is only the latest evidence of a growing interest in reassessing the costs and benefits of the compulsory union regime spawned during the Great Depression, and which remains today one of the primary determinants of lab productivity. With increasing global competitiveness taking a toll on manufacturing jobs, and state governments and municipalities struggling to achieve greater operating efficiencies in the face of declining revenues and increasing costs, the consequences of compulsory unionism are universally important.

Today labor union membership is at its lowest point since the 1950s. Eighty-four percent of Michigan's private sector workers (and 91 percent nationwide) pay no dues to any union; they either work for themselves or negotiate individually with employers, and manage for the most part to do rather well. In Michigan's manufacturing sector, however, which is a critical component of our economic vitality, 29.2 percent or 305,900 manufacturing employees are represented by unions. In addition, Michigan is home to 350,000 unionized state and local government employees, constituting 56.2 percent of the public sector workforce. Total union membership stands today at 972,000, or 21.8 percent of all workers employed in Michigan during 2001.

Advocates of right-to-work laws point toward a growing body of evidence showing faster economic and employment growth in right-to-work states. This growth advantage—experienced predominantly by the southern and western states, which comprise the bulk of right-to-work states—has been in evidence since the passage of the Taft-Hartley Act in 1947.

Opponents of right-to-work laws, conversely, maintain that compulsory union support is vital to organized labor, which protects workers from the negative aspects of big business and market economies. In this view, firms seeking to maximize profits at the expense of rank-and-file workers are responsible for the slowdown in real earnings and the growing income inequality over the past quarter century.

To evaluate the merits of these arguments, this study compares economic development between RTW states and non-RTW states by examining a broad cross section of economic statistics from the past three decades. The results of this analysis challenge many of organized labor's long-standing contentions. Particular attention is paid to Michigan's economic performance.

... this study compares economic development between right-to-work states and non-right-to-work states by examining a broad cross section of economic statistics from the past three decades. The results of this analysis challenge many of organized labor's long-standing contentions.

Section II provides an overview of compulsory unionism and RTW statutes as background for the economic analysis that follows. Section III provides a brief review of the literature on the impact of RTW laws. Section IV gives a geographical breakdown between RTW and non-RTW states. Section V discusses how globalization is impacting union activity. Section VI compares RTW and non-RTW states using nine economic measurements. The final section summarizes the results.

Some highlights from the economic analysis are summarized below:

From 1970 through 2000:

- RTW states' economies grew one-half percent faster annually.
- RTW states created 1.43 million manufacturing jobs; non-RTW states lost 2.18 million manufacturing jobs.
- RTW states have greater disposable income growth.
- RTW states have lower unit labor costs.
- RTW states' poverty rates are falling faster.

Michigan's performance:

- Annual economic growth averaged one-half the rate experienced by RTW states.
- The state lost over 100,000 manufacturing jobs since 1970.
- Annual construction employment growth was a full percent below that of RTW states.
- The state had the second highest unit labor costs in the nation.
- The poverty rate rose.

II. The Nature of the Right-to-Work Debate

Right-to-work is a labor law term used to describe state laws or state constitutional provisions that ban any requirement of union membership or financial dues obligations as a condition of employment. Currently RTW laws exist in 22 tates: Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Iowa, Kansas, Louisiana, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, Oklah South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, and Wyomin. A right-to-work law secures the right of employees to decide for themselves whether or not to join or financially support a union.

Exclusive representation therefore provides unions with total legal control in employee representation matters.

The opportunity to enact a right-to-work law is assured by Section 14(b) of the Federal Labor-Management Relations Act of 1947 (also called the Taft-Hartley Act). That section reads:

> Nothing in this Act 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.

These 44 words are fighting words to labor union officials who charge that their union security and solidarity is jeopardized by allowing individual workers to opt out of any union membership or financial requirements. Right-to-work proponents, however, argue that these laws uphold the civil right of Americans to work without being forced to pay union membership dues or agency fees in order to continue working.

In order to understand the role of economic analysis in the RTW debate, it i important to understand the main arguments marshaled by both supporters opponents of RTW laws. The primary argument of opponents is that workers b from union representation, and that therefore they should be required to pay the cost of this representation. Unions argue that RTW laws create "free riders," employees who receive the benefits of a bargaining contract while escaping any financial obligation to reimburse the union for the costs of collective bargaining.

To assess the merits of this claim, however, one must understand the nature of compulsory unionism as it relates to the rights and duties of workers covered by a collective bargaining contract. Most important is the fact that federal law grants unions "exclusive representation" privileges. This means that once a union is "recognized" (i.e., voted in by a majority of employees) it has the sole right to speak for the entire group of employees and negotiate on its behalf. Individual employee negotiations are prohibited. This is true even when individuals have neither voted for a union nor desire union representation. A right-to-work law does not affect this union privilege.

Exclusive representation therefore provides unions with total legal control in employee representation matters. Exclusivity not only makes it illegal for workers to bargain on their own, but also prevents them from hiring another union or agent to deal on their behalf with their employers. Exclusivity normally prevents any redress of a worker's problem without the union being present during an employer-worker meeting.

Supporters of RTW laws claim that because employees are prevented from selecting a competing representative during the union's period of exclusivity—that the union has in essence a monopoly on worker representation—the union is likely to be less accountable to its members. This means that the union may, with relative impunity, provide fewer services to employees or engage in political or social activities having nothing to do with workplace issues. Right-to-work advocates therefore argue that requiring unions to earn the voluntary support of workers is one way to assure that union policies reflect the interests of the represented workers.

... requiring unions to earn the voluntary support of workers is one way to assure that union policies reflect the interests of the represented workers.

One solution to the alleged "free-rider" problem would be to eliminate exclusive representation and permit a union to represent only those employees desiring its representation. If a worker did not join and pay dues, the union would not be required to represent him, and the worker could negotiate his own employment relationship with the employer. Labor union officials, however, consistently refuse to support this alternative. They fought hard for their federal exclusive representation privileges and jealously protect them. They claim that exclusivity permits the union to wield the bargaining power necessary to balance the interests of workers with the interests of management. Unions rely on their status as the sole representative for all bargaining unit workers to justify the payment of forced union dues.

Supporters of RTW laws also take issue with the assumption, implicit in organized labor's "free rider" argument, that union representation benefits all employees in the negotiating unit. Supporters state that workers are often "captive passengers" rather than "free riders." They claim there is always a group of highly skilled or ambitious workers whose ability to get ahead is impeded by union contract restrictions such as rigid seniority clauses, which prevent them from competing for advancement. Employees may also oppose union obligations because of union discrimination, which can result from employees objecting to forced financing of union political activities.

The other major argument used by opponents of RTW laws is that working in a right-to-work state is "the right-to-work for less" or "the right-to-starve." This is shorthand for the idea that enactment of a right-to-work law will weaken the union's ability to protect workers from management exploitation, and therefore reduce the economic gains of workers.

The remainder of this study examines this latter claim, and suggests what economic impact a right-to-work law might have in Michigan. The analysis concludes that RTW laws do not lead to a reduction in economic benefits for workers in RTW states and would not do so in Michigan. In fact, there are signs that RTW laws have produced significant benefits for workers in those states. The debate surrounding RTW principles often centers on emotional rhetoric. This analysis, however, provides empirical evidence that will help both supporters and opponents of right-to-work to assess more accurately the impact of a Michigan RTW law on Michigan workers and their families.

III. Literature Review

More than five decades of experience with RTW laws has yielded a large body of economic analysis of their impact on a variety of economic factors.

Right-to-work laws were enacted, in large part, to promote economic growth. Anecdotal evidence suggests that they have. The economies of RTW states have been growing faster than those of non-RTW states since the late 1940s. Much research attributes this phenomenon to employers seeking to avoid unions. (Cobb, 1982; Newman, 1983; 1984; Cappelli and Chalykoff, 1985; Kochan et al., 1986; Reder, 1988). For a review of the pre-1980s literature see Moore (1985).

The economies of RTW states have been growing faster than those of non-RTW states since the late 1940s.

Survey research also indicates that RTW laws are important in industry location decisions (for a review of the literature see Cobb, 1982 and Calzonetti and Walker, 1991). Businesses often cite RTW laws or "favorable business climate" as major factors in location decisions. For example, Schmenner (1982) reports that in his survey of Fortune 500 firms a "favorable labor climate" was the most important factor in industry location followed by proximity to markets.

Holmes (1996) finds a precipitous drop in manufacturing activity when crossing the border from a RTW into a non-RTW state. Relative manufacturing employment declines by one-third as one moves from within 25 miles of the border [illegible] the RTW state to within 25 miles of the border in the non-RTW state. Holmes [illegible] that this pattern did not become statistically significant until the early 1960s or [illegible] years after the passage of the Taft-Hartley Act (which permits RTW laws), suggesting that it may take years for these laws to yield significant returns in industrial development.

Examining 311 U.S. metropolitan areas, James Bennett (1994) finds that while families living in non-RTW states have higher average nominal incomes, the average urban family in a RTW state has $2,852 more in after-tax purchasing power per year than the same family would have in a non-RTW state. This is because on average, residents in states without RTW laws pay 24.5 percent more for food, housing, health care, utilities, property taxes, and college tuition than those in RTW states). Moreover, Bennett finds evidence that the gap in living standards between RTW and non-RTW states appears to be growing over time.

Employing similar methodology for nine Midwestern states, David Kendrick (2001) finds inflation-adjusted, after-tax income to be $1,145 higher in RTW states (IA, KS, NE, ND) than in non-RTW states (IL, IN, MN, MO, WI).

IV. RTW vs. Non-RTW: The Regional Breakdown

Most RTW states adopted RTW laws during late 1940s and 1950s. Today such laws are in effect in twenty-two states, most of them in the West and Southeast. The Northeast is the only region without a RTW state while the South (at 12) has the greatest concentration. Table 1 gives the geographic breakdown of RTW states.

The rosters of RTW and non-RTW states have changed little in a half century. After 19 states passed RTW legislation shortly after Taft-Hartley in 1947, only three non-RTW states enacted a RTW law from 1964 until 2001. Oklahoma's passage of a new law in 2001, however, shows that RTW legislation isn't entirely dormant. Only one RTW state, Indiana, has repealed its law, in 1965.

After 19 states passed right-to-work legislation shortly after Taft-Hartley in 1947, only three non-right-to-work states enacted a right-to-work law from 1964 until 2001.

Table 1 – Breakdown of States by Region and Right-to-Work Status, 2002

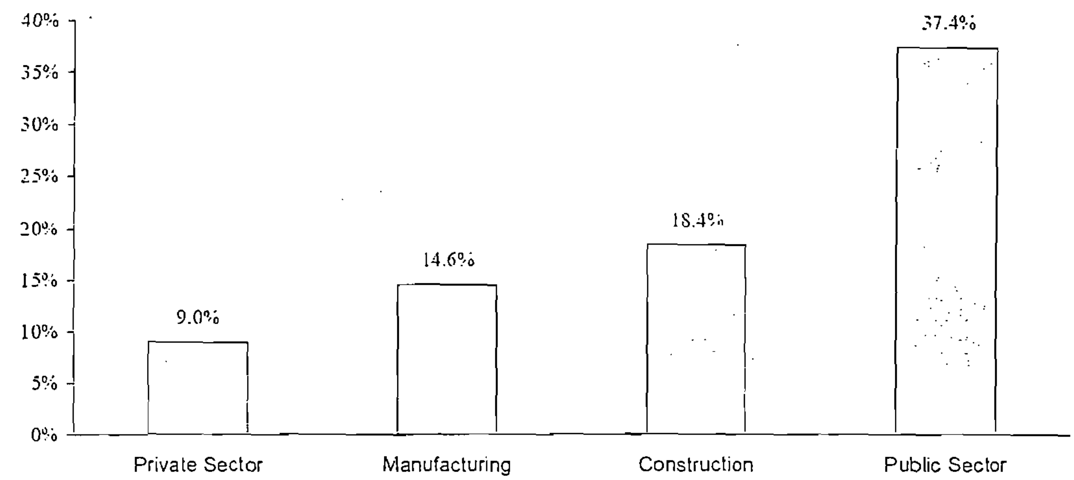
	Northeast	South	Midwest	West	Total
Non-right-to-work	11	2	7	8	28
Right-to-work	0	12	5	5	22
Total	11	14	12	13	50

Northeast	*South*	*Midwest*	*West*
Connecticut	**Alabama**	Illinois	Alaska
Delaware	**Arkansas**	Indiana	**Arizona**
Maine	**Florida**	**Iowa**	California
Maryland	**Georgia**	**Kansas**	Colorado
Massachusetts	Kentucky	Michigan	Hawaii
New Hampshire	**Louisiana**	Minnesota	**Idaho**
New Jersey	**Mississippi**	Missouri	Montana
New York	**North Carolina**	**Nebraska**	**Nevada**
Pennsylvania	**Oklahoma**	**North Dakota**	New Mexico
Rhode Island	**South Carolina**	Ohio	Oregon
Vermont	**Tennessee**	**South Dakota**	**Utah**
	Texas	Wisconsin	Washington
	Virginia		**Wyoming**
	West Virginia		

NOTES: Right-to-work states denoted in bold. Indiana repealed its RTW law in 1965. Louisiana, Idaho, and Oklahoma passed RTW legislation in 1976, 1985, and 2001, respectively.

State union membership rates are strongly correlated with RTW st According to the U.S. Bureau of Labor Statistics, all states in the Great Lakes, 1 Atlantic and Pacific regions (i.e., non-RTW regions) had union membership rates above the national average of 13.5 percent in 2001, while all states in the East South Central and West South Central divisions had below-average rates. Overall, 29 states had union membership rates below the U.S. average, while 21 states and the District of Columbia had higher rates.

Chart 1 – Percent of U.S. Workforce Belonging to a Union, 2001



Source: U.S. Bureau of Labor Statistics

Four states had union membership rates over 20 percent in 2001—New York, Hawaii, Alaska, and Michigan (in order of decreasing share). Two states, North and South Carolina, had membership rates below 5 percent. As of 2001, half of the nation's 16.3 million union members lived in six states—California, New York, Illinois, Michigan, Ohio, and Pennsylvania. These six states accounted for 35 percent of wage and salary employment nationally.

Workers in the public sector continued to have unionization rates that were about four-times higher than their counterparts in private industry. In 2001, the unionization rate of government workers was 37.4 percent, compared with 9 percent among private sector employees (see Chart 1). Local government, which includes many workers in the heavily unionized fields of public education (the NEA is the largest union in the country), firefighting and law enforcement, had the highest unionization rate, at 43.1 percent. The construction and manufacturing industries also had higher-than-average unionization rates, at 18.4 percent and 14.6 percent, respectively. The nonagricultural industry with the lowest unionization rate in 2001 was finance, insurance, and real estate at 2.1 percent.[1]

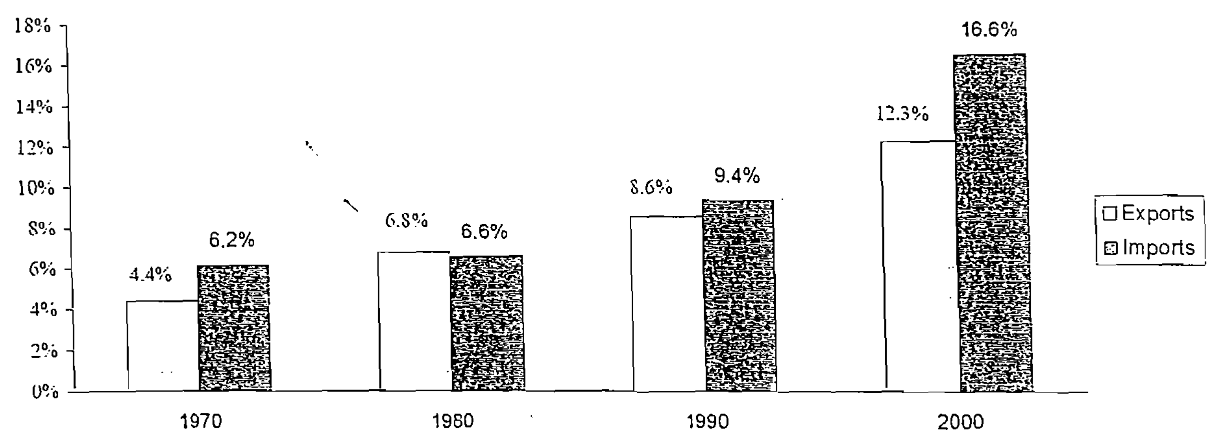
V. The Influence of Globalization

The post-World War II period has brought rapid economic globalization, which has dramatically increased the importance of labor productivity and of policies, such as right-to-work, that affect it. Advances in information technology, greater capital mobility, and lower barriers to entry for business startups are making it increasingly difficult for businesses to pass higher costs on to suppliers and customers. The net effect is increasing pressure for firms to seek geographical regions with lower cost structures and higher rates of labor productivity.

Between 1948 and 1994, seven tariff reduction rounds significantly liberalized world trade among the developed nations. The United States currently has zero tariffs on one-third of all imports, while the Most-Favored-Nation (MFN) tariff rate has declined to approximately 4.6 percent.

This trade liberalization has produced increasing import and export penetration as a share of the U.S. Gross Domestic Product (GDP). Between 1970 and 2000, the U.S. export share of GDP almost tripled (4.4 percent to 12.3 percent) while the U.S. import share of the economy more than doubled (6.2 percent to 16.6 percent) (see Chart 2). Interestingly, the 1990s witnessed the greatest percentage increase in trade penetration, with both export and import shares rising markedly. This fact will prove interesting throughout the analysis presented in section VI.

Chart 2 – Export and Import Share of U.S. GDP



Source: U.S. Bureau of Economic Analysis

Before the forces of globalization opened the relatively insular U.S. econo to increased trade, U.S. manufacturers were enjoying near monopolistic m conditions in the United States. The U.S. auto industry, for example, enjoyed a 90 percent domestic market share in 1960.

These benign market conditions for U.S. manufacturers in the early post-World War II period allowed them to pass on higher costs to consumers without a significant loss in market share. These conditions also permitted organized labor to thrive, swelling its ranks to one-third of the American workforce by 1955.

Union membership now hovers around 9 percent of the private sector workforce. Despite organized labor's persistent influence in the national and local political arena, the forces of globalization continue to shrink its ranks.

Union membership now hovers around 9 percent of the private sector workforce. Despite organized labor's persistent influence in the national and local political arena, the forces of globalization continue to shrink its ranks. There is every reason to believe that these forces will only intensify in the future as barriers to international trade continue to fall and as relative business costs play a greater role in regional economic performance. Advances in information technology, greater capital mobility and lower barriers to entry for business startups are making it increasingly difficult for businesses to pass on higher costs to suppliers and customers. The net effect is increasing pressure for firms to seek geographic regions with lower cost structures and higher rates of labor productivity.

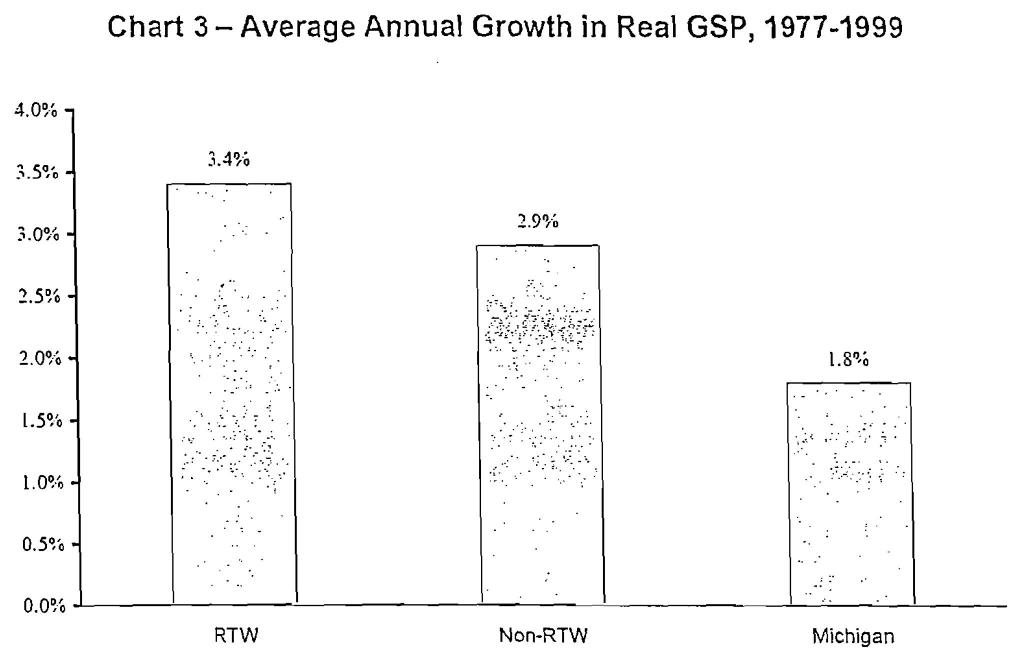
VI. Comparative Analysis of Economic Performance

Nine economic statistics (Gross State Product, employment growth, manufacturing and construction employment, the unemployment rate, per-capita disposable income, unit labor costs, poverty rate, and income inequality) provide the yardstick for comparing economic development between RTW and non-RTW states. These statistics represent a diverse cross-section of economic data, providing a multifaceted comparison of economic development between the states. Contingent upon data availability, results are presented over three decades, 1970 through 2000.[2]

To show key inflection points for each of the nine statistics, the results are presented for each decade in Appendix I. In addition to comparing key differences between RTW and non-RTW states, Michigan's results are presented separately.

The time series methodology will account for the status change of Louisiana and Idaho, which became RTW states in 1977 and 1985, respectively. Oklahoma is classified as a non-RTW state for purposes of this study, since its change to RTW status is too recent (2001) for the effects to be reflected in the statistics.

A. Gross State Product (GSP)



Source: U.S. Bureau of Economic Analysis

Note: 1977 is the first year GSP is available.[3]

Gross State Product (GSP), the market value of all goods and services produced in a state, is the broadest measure of a state's economic activity. Chart 3 summarizes average annual real GSP growth rates between RTW states, non-RTW states and Michigan from 1977-1999.

Right-to-work states enjoyed a 0.5 percent annual growth advantage over non-RTW states. This is a considerable growth advantage, particularly when compounded over 23 years.

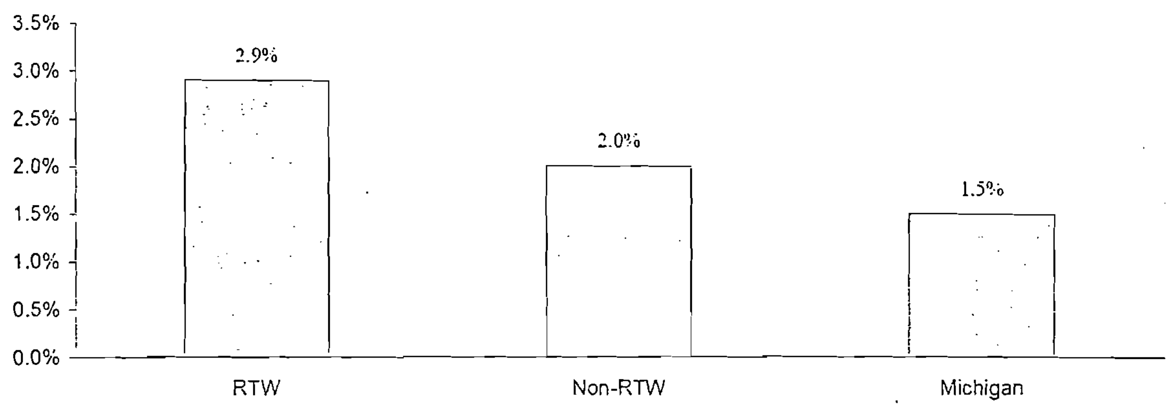
Dividing the results into two equal time periods (1977-88 and 1988-99, both of which include a recession) to discover any changes in relative growth rates yielded even more distinctions (see Table I, Appendix I). While the average annual growth advantage held by RTW states was just 0.1 percent from 1977-88, it accelerated to 1 percent from 1988-99.

Michigan averaged 1.8 percent growth from 1977-99, growing a little more than half as fast as the average RTW state. Michigan's growth even lagged that of its sister non-RTW states by more than 1 percent annually. Over this period, only three states have grown more slowly than Michigan (Montana at 1.6 percent, West Virg at 1.3 percent, and Louisiana at 1.4 percent).

While Michigan's annual GSP growth more than doubled during the 1988-99 period, it still lagged behind the GSP growth of the average RTW and non-RTW states by significant margins (Michigan's state ranking increased to 36th). While Michigan's growth did accelerate during this period, that growth was slower than the average growth in RTW and non-RTW states. Only two RTW states (Wyoming and Louisiana) failed to grow as fast.

B. Payroll Employment Growth

Chart 4 – Average Annual Employment Growth, 1970-2000

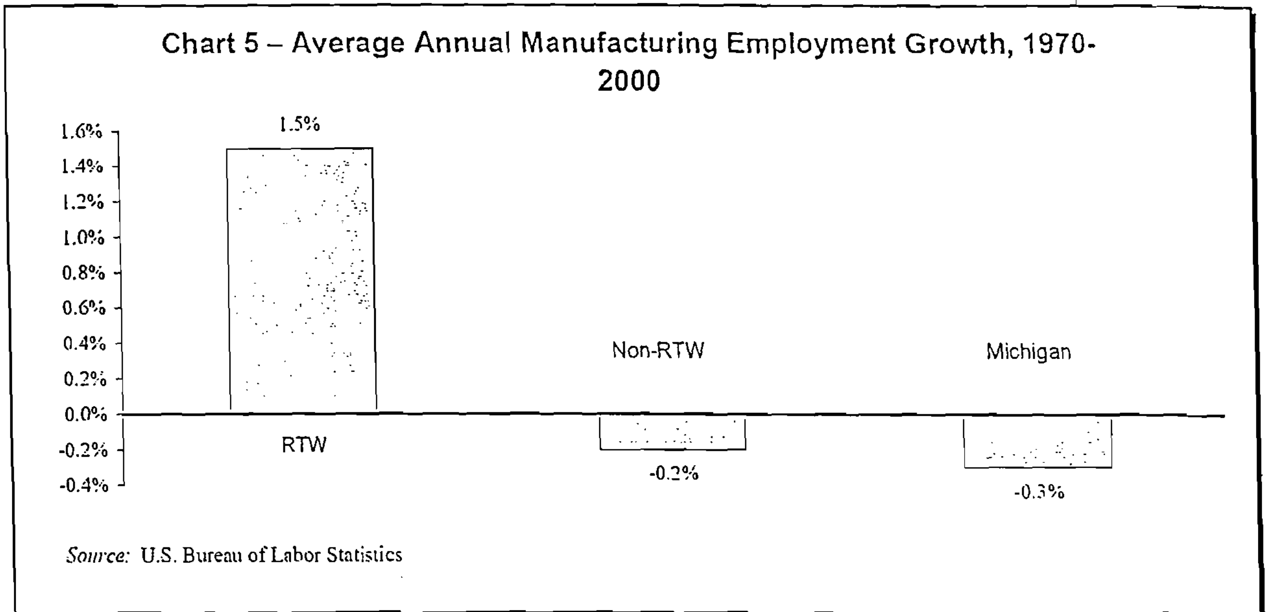


Source: U.S. Bureau of Labor Statistics

Chart 4 presents average *non-farm payroll employment growth* from 1970-2000. Right-to-work states averaged almost 1 percent faster annual growth. Although this difference dissipated temporarily during the 1980s, it widened significantly during the 1990s (see Table II, Appendix I).

At 1.5 percent, Michigan's employment growth averaged only half that of RTW states, placing it 41st in employment growth over this period (surpassed by every RTW state). Michigan's relative ranking barely improved during the 1990s, placing it in 35th place, again trailing all 21 RTW states.

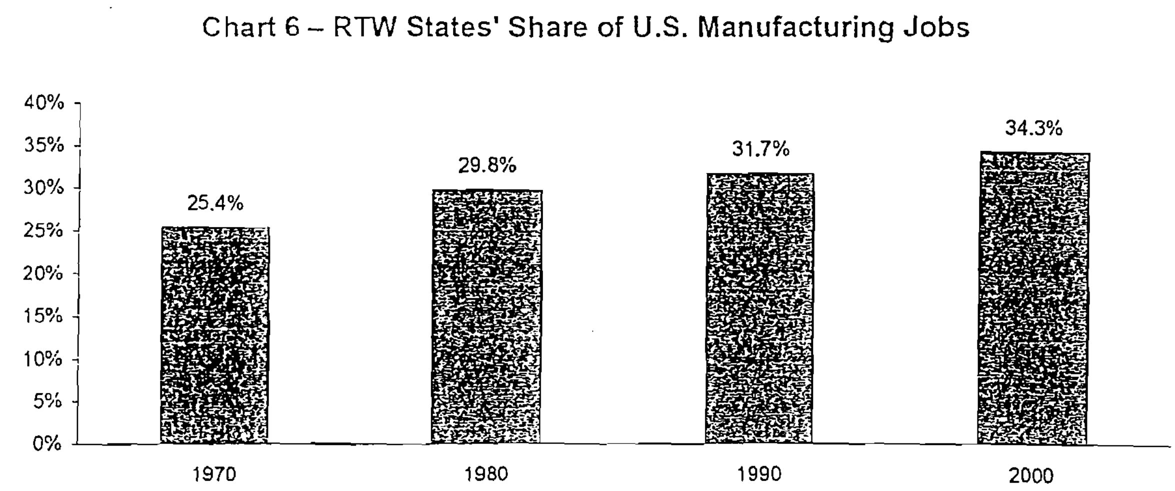
C. Manufacturing Employment Growth



Because the manufacturing workforce has much higher rates of unionization than the overall labor force, the RTW advantage should be even more amplified in this sector. If compulsory unionism drives up labor compensation levels without a commensurate rise in productivity, manufacturers will seek more attractive regions for expansion, leaving non-RTW states with shrinking manufacturing payrolls.

Chart 5 illustrates that this clearly has been the case. In a period (1970-2000) where total manufacturing employment dropped by 5 percent nationwide, RTW states augmented their employment base by 1.5 percent annually. Over the 1970-2000 period, RTW states enjoyed a 1.7 percent growth advantage over non-RTW states, a significantly larger margin than they posted for total payroll employment.

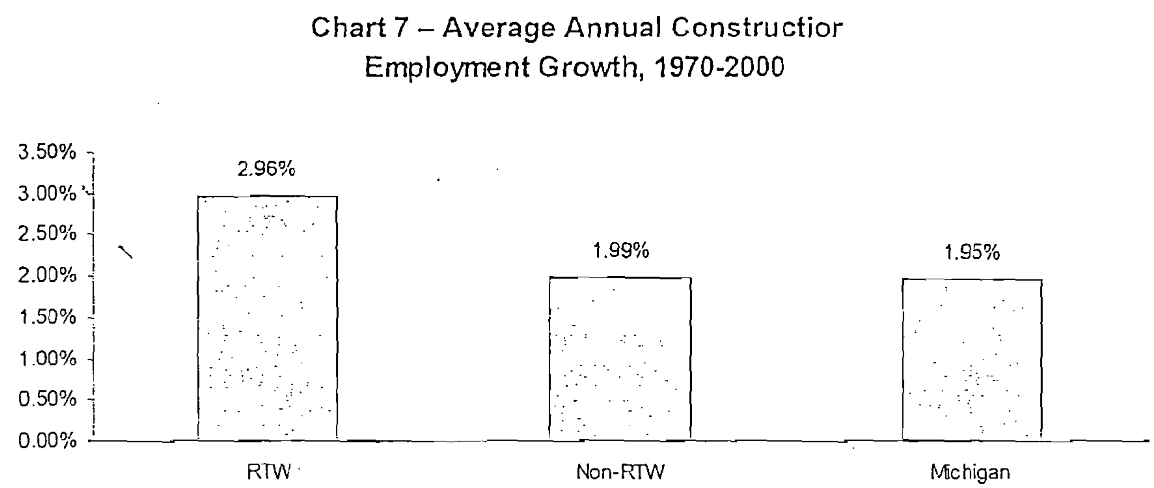
While non-RTW states were cutting manufacturing payrolls by 2.3 million from 1970-2000, RTW states were increasing their blue-collar payrolls by 1.4 million. The RTW states' share of total manufacturing jobs (see Chart 6) rose from 25.4 percent in 1970 to 34.3 percent by 2000. Despite the loss of 875,000 U.S. manufacturing jobs over this period, all of the 21 RTW states registered a net gain in manufacturing payrolls.



Source: U.S. Bureau of Labor Statistics

Once a manufacturing powerhouse, Michigan fared poorly even in relation to other non-RTW states, losing over 100,000 manufacturing jobs from 1970 to 2000. Unlike most non-RTW states, however, Michigan's manufacturing payrolls did managed to grow during the 1990s (see Table III, Appendix I), ranking it 23rd in growth among all states.

D. Construction Employment Growth

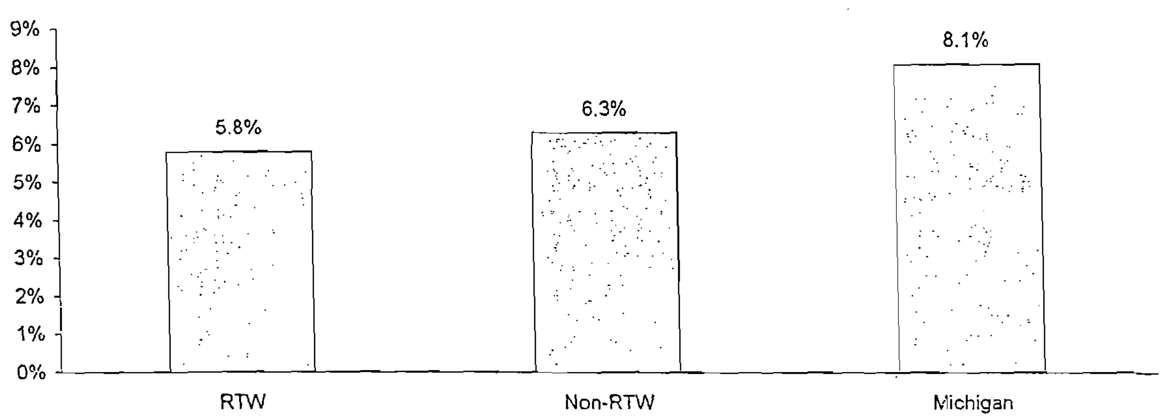


Source: U.S. Bureau of Labor Statistics

Not surprisingly, RTW states also had almost 1 percent faster construction employment growth over this period. While non-RTW states had higher growth in this category during the 1980s (without Wyoming's 7.5 percent decline, RTW states would have had positive construction job growth), the RTW advantage quickly reasserted itself during the 1990s. Michigan ranked 32nd in the nation (from 1970-2000), averaging 1.9 percent annual growth in construction employment.

E. Unemployment Rate

Chart 8 – Average Annual Unemployment Rate, 1978-2000



Source: U.S. Bureau of Labor Statistics

From 1978 through 2000, RTW states had lower average annual unemployment rates for all but 5 of 23 years. Right-to-work states also weathered the 1990-91 recession better, with unemployment rising only 0.43 percent (from 1990-91) compared to a 1.13 percent rise for non-RTW states.

The unemployment gap between RTW and non-RTW states dissipated during the 1990s, reflecting a national trend toward tighter labor markets (and full employment) in most states. This phenomenon produced labor shortages which were more acute in RTW states.

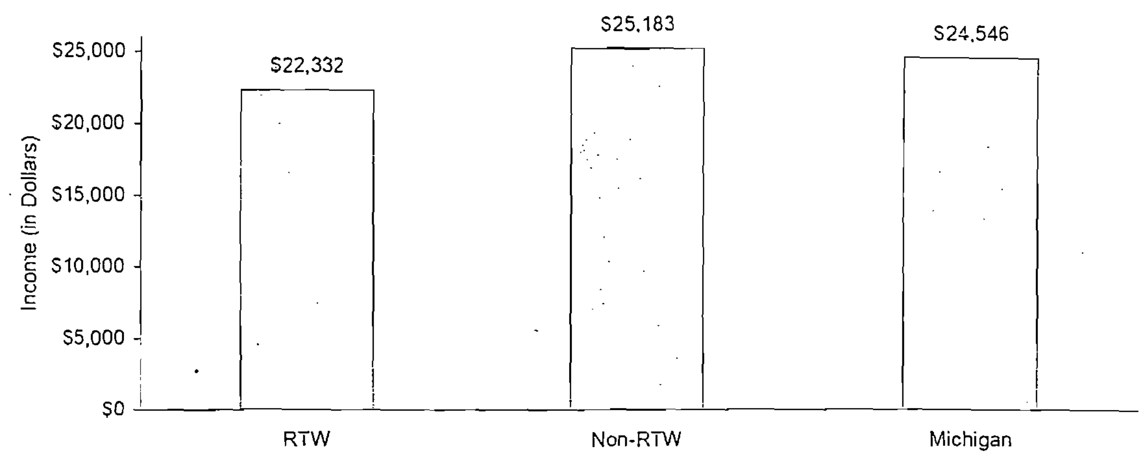
Michigan's unemployment rate averaged 8.1 percent from 1970-2000, significantly higher than the 5.8 and 6.3 percent average for RTW and non-RTW states, respectively. While Michigan's average rate did fall below the national average during much of the 1990s, this was more a consequence of slower growth in Michigan's workforce (i.e., fewer eligible workers), not faster employment growth.

F. Per-Capita Disposable Income Growth

Critics of RTW legislation have often acknowledged the faster employment growth in RTW states, but counter that it comes at the expense of much lower wages and incomes. Organized labor's mantra, the "right-to-work for *less*" or the "right-to-starve," has resonated strongly both inside and outside union circles.

Most economic studies have shown higher nominal or money income in non-RTW states. Chart 9 confirms that this is still the case. *Per-capita disposable income,* the per-person income available for spending and saving after paying taxes, was approximately 10 percent higher in non-RTW states in 2000.

Chart 9 – Per-Capita Disposable Income, 2000

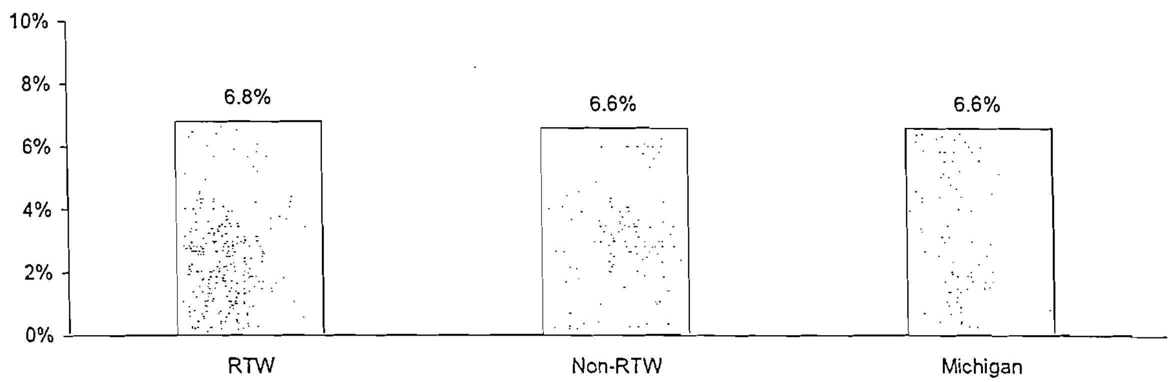


Source: U.S. Bureau of Economic Analysis

But this gap in favor of the non-RTW states does not necessarily mean that purchasing power, or the standard of living, is higher in these states. Higher nominal incomes may simply reflect a higher cost-of-living. This is, in fact, precisely what recent research is finding (see Bennett 1994 and Kendrick 2001). James Bennett, for example, found that a typical family in a RTW state had $2,852 *more* in after-tax purchasing power than the same family had in a non-RTW state (even thought the non-RTW families had higher nominal incomes).[4]

Besides evidence of greater purchasing power or higher living standards in the RTW states, there is also hard evidence that the nominal income gap between RTW and non-RTW states is narrowing. As shown in Chart 10, per-capita disposable income grew 0.2 percent *faster* annually for RTW states over the 1970-2000 period. So while non-RTW states have traditionally held a lead in nominal income, this gap continues to narrow.

Chart 10 – Average Annual Growth in Per-Capita Disposable Income, 1970-2000



Source: U.S. Bureau of Economic Analysis

Disposable income is growing faster in RTW states because they have a flexible work environment in which employers and employees can more easily respond to market incentives. This produces lower costs, higher productivity, and greater income and job growth. Businesses increasingly reject "top-down" management, relying instead upon employee participation in every aspect of a firm's decision-making process. This inevitably favors a work environment that is more responsive to the changing needs of both workers and employers.

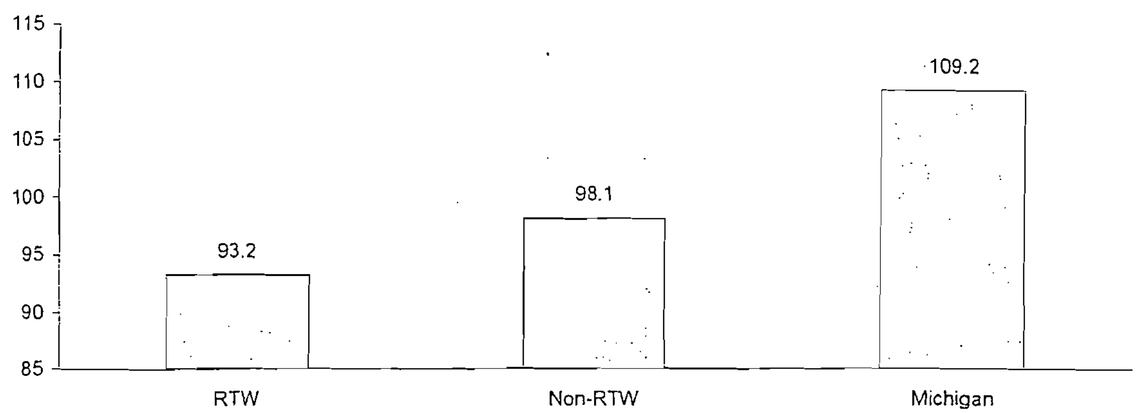
Employees protected by RTW legislation can quit supporting a union without quitting their job. Reid and Faith (1987) find that unions in RTW states reward members more equally and are less concerned with day-to-day administration of complex bargaining agreements. This makes collective job actions more difficult and prompts local union leaders to strive more for consensus among their members. Right-to-work legislation forces a union to bargain more in the immediate interest of all members because members can withdraw from a union at any time without cost to themselves.

Rigid union-negotiated employee contracts typically have the perverse effect of reducing the pay of the most productive workers while increasing compensation for less productive workers. Any system that grants union officials the legal power to impose unwanted union representation on its most productive workers, and then forces them to pay for it, ultimately lessens the income and standard of living of all its citizens.

Michigan, ranking fourth in the nation in private-sector union membershir a percent of the private workforce in 2001), matched the non-RTW state avera disposable income growth.

G. Unit Labor Costs

Chart 11– Unit Labor Costs, 2000



Source: Economy.com

Unit labor costs measure labor compensation relative to labor produc Defined as compensation per unit of real output (see Appendix II for a de d description of this index), unit labor costs are a better indication of business profitability than labor compensation alone, and are the most crucial component of the cost of doing business within a geographical region.

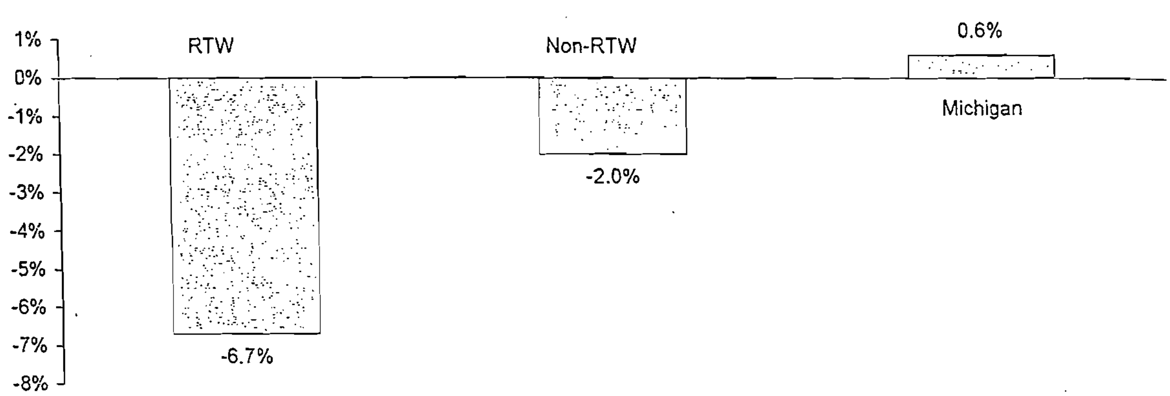
Labor compensation growth, over time, is directly linked to growth in labor productivity. A workforce that is producing more output per person (i.e., higher productivity) will experience higher growth in real earnings. This growth in real earnings will not jeopardize a region's business competitiveness when matched by commensurate productivity gains. Growth in labor compensation that is not matched by productivity gains, conversely, will result in higher unit labor costs and deteriorating business competitiveness.

Relative business costs have been a major factor affecting regional economic performance. As U.S. businesses find it increasingly difficult to raise prices due to greater competition from both home and abroad, relative business costs will likely play an increasingly important role in business location decisions. States or regions that maintain uncompetitive unit labor costs will see an exit of capital and business formation to more competitive regions.

Table VII in Appendix I shows the time series of unit labor costs for each state and the District of Columbia from 1990 through 2000. Not surprisingly, the results show a clear pattern of higher unit labor costs in non-RTW states during the past decade. According to Economy.com, only three RTW states in 2000—Florida, Utah and Virginia—had unit labor costs above the national average (U.S.=100) while 11 non-RTW states exceeded the average. In 2000, RTW and non-RTW states' unit labor costs averaged 93.2 and 98.1, respectively. Uncompetitive at the start of the decade, Michigan's unit labor costs rose to 109.2 by 2000, ranking it second in the nation behind New Jersey.

H. Poverty Rate

Chart 12 – Change in Poverty Rates, 1969-2000



Source: U.S. Bureau of Labor Statistics

The U.S. Bureau of Labor Statistics defines the poverty rate as the percentage of people who live in households with cash incomes below the "poverty line." This line is not a fixed dollar amount but varies by family size and type. For example, the poverty line for a single person in 2001 was $9,044 and $18,104 for a typical family of four.

The U.S. poverty rate fell between 1949 and 1969, from 39.7 percent to 14.4 percent. The official poverty rate reached a historic low in 1973, then stopped falling. Between that year and 2000, the poverty rate rose from 11.1 percent to 11.3 percent.

While the poverty rate failed to drop nationwide over the past three decades, it showed a distinctly different pattern in the RTW states. Starting with much higher poverty rates (averaging 18.3 percent in 1969), by 2000 RTW states had dropped sharply their average rate to 11.6 percent, placing the poverty rate only 0.3 percent igher than the U.S. poverty rate. All 21 RTW states' (including Louisiana and

Idaho) poverty rates have declined over the past 30 years. Based on the U.S. B· of Labor Statistics' decennial survey from the past four decades, the poverty .ıe declined 6.7 and 2.0 percent for RTW and non-RTW states, respectively, from 1969 to 2000 (see Table VIII, Appendix I for actual poverty rates).

Michigan's poverty rate showed a disturbing 0.6 percent rise over this same period, ranking it 45th overall in poverty rate improvement. Michigan is one of seven states, all non-RTW, whose poverty rate actually increased over the past 30 years.

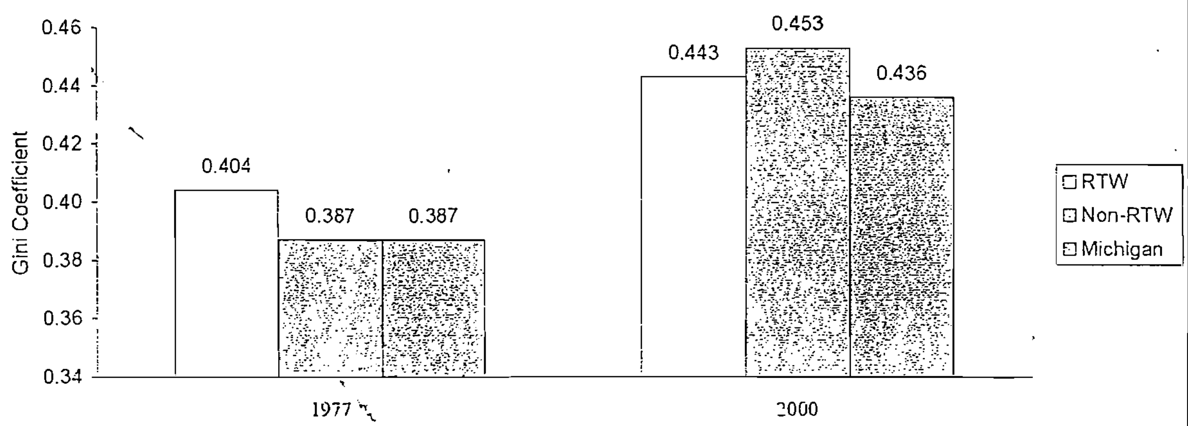
I. Income Inequality

In section F we found faster growth in disposable income in RTW states. In this section we examine *income inequality* to more accurately determine changes in the *distribution* of income.

Neither economic theory nor history suggests that a market economy should lead to an even distribution of earnings. In free markets, prices adjust to equate supply and demand. When demand for skilled workers outstrips supply, the wages of those at the top of the distribution grow faster than the wages of those at the bottom.

In other words, rising income inequality is not necessarily an unhealthy sign in a growing economy. Such a rise occurred in the second half of the 1800s, a period of strong economic growth and rising real incomes for most Americans. Falling incor inequality, conversely, is not necessarily positive. Inequality remained relativel going into the 20th century but declined rapidly during the Great Depres..ɔn. Nevertheless, income inequality, examined in context with the other statistics, may yield some additional insight into the differences between RTW and non-RTW states.

Chart 13 – Income Inequality



Source: Current Population Survey – March Supplement

Income inequality, as measured by the *Gini Coefficient* (see Appendix III), ranges from zero to one, with zero indicating perfect income equality (all income distributed equally to all households) and one indicating perfect income inequality (all income accruing to one household). The Gini Coefficients for RTW states, non-RTW states and Michigan are shown in Chart 13 for 1977 (first year available) and 2000. See Table IX in Appendix I for the Gini Coefficient for the years 1977, 1985, 1993 and 2000.[5]

Like poverty rates, income inequality started significantly higher in RTW states.[6] While inequality rose for both over the past quarter century (as a trend, it has risen in the United States), it has risen significantly faster for non-RTW states. By 1992, the positions had reversed: RTW states had, on average, *lower* income inequality than non-RTW states.

A quarter century of superior economic growth in the right-to-work states adds to the increasing evidence that economic growth is the best way to raise the incomes of all Americans.

Lower income inequality in the RTW states would have seemed unthinkable a generation ago. A quarter century of superior economic growth in the RTW states adds to the increasing evidence that economic growth is the best way to raise the incomes of all Americans.

Michigan's Gini coefficient rose from .387 to .436 over the same period. In 1977, the state ranked 17th in income inequality (i.e., 16 states had lower income inequality). Michigan's income inequality widened rapidly during late 1970s and early 1980s, and by 1985, its state ranking had dropped to 33rd. Since then, however, Michigan's income inequality has risen less rapidly than most states. By the turn of the millennium, its state ranking had risen to 18th.[7]

These results contradict the widely held belief that the presence of unions and the power of collective bargaining mitigate income inequality by distributing earnings more evenly. Although this may be true within individual unionized companies, it is not true for any state's economy as a whole. The favorable economic climate produced by RTW laws appears to be responsible for general income growth that benefits all workers and reduces income disparity.

VII. Conclusion

Table 2. Michigan: A Final Look

Economic Variable	*Year(s)*	*State Rank*
Gross State Product	1977-1999	47
	1988-1999	36
Employment Growth	1970-2000	41
	1990-2000	35
Manufacturing Employment Growth	1970-2000	37
	1990-2000	23
Construction Employment Growth	1970-2000	32
	1990-2000	18
Unemployment Rate	1978-2000	47
	1990-2000	14
Per-Capita P.I. Growth	1970-2000	34
	1990-2000	22
Unit Labor Costs	2000	49
	1990	48
Poverty Rate Improvement	1969-2000	45
Income Inequality	1977	17
	2000	18

Right-to-work laws were enacted by states primarily to attract and to promote economic growth. This study, employing a large cross-section of economic indices, finds a broad-based trend of superior economic development in RTW states over the past three decades.

The comparative statistics on income growth, unit labor costs and poverty rates are the most novel and interesting. Until now, organized labor has stressed the necessity of compulsory union support as a countervailing force against corporate power and rising income inequality. Although they have often derided RTW laws as "right-to-work for less," advocates of compulsory unionism have no economic basis upon which to support that claim.

The RTW economic growth advantage clearly accelerated during the 1990s. Poverty fell further; disposable income grew faster and manufacturing employment expanded in RTW states. There is a strong possibility that this widening in economic development will only continue in the future. Heightened competition, both at home and from abroad, has increased the importance for firms of finding regions with a flexible labor environment and lower cost structures. The advent of the Internet advances in information technology, lower barriers to entry for most industries, and the increased mobility of financial capital all favor states with RTW legislation.

Table 2 above summarizes Michigan's ranking, vis-à-vis all 50 states, over the 1970-2000 period with a separate listing for the 1990s. The state rank is enumerated so that the higher the ranking, the better the economic performance. The 1990s were singled out because the decade is widely regarded as a period of "superior" performance for the state's economy.

Michigan's relative economic performance over the past three decades was dismal, finishing in the bottom quintile in economic and employment growth, unit labor costs and poverty rate improvement. Interestingly, with the exception of per-capita personal income growth (for which it was tied) and income inequality, Michigan performed worse in every category vis-à-vis the average non-RTW state.

Corroborated by a growing body of research conducted by many independent scholars, the compelling conclusion is that right-to-work laws increase state economic development and overall prosperity.

More worrisome, however, are the startling statistics on Michigan's unit labor costs. As the forces of globalization and competition intensify, Michigan's high unit labor costs will increasingly discourage fresh capital from planting new seeds.

While the 1990s brought some very modest improvement in Michigan's relative standing, it was hardly a decade of economic superiority. The state continued its three-decade tradition of below-average growth in output, employment and income. The recipient of key economic headwinds, Michigan's relative economic performance should have excelled during the 1990s. Relatively low energy prices and interest rates were a boon to the state's heavy industry. The exchange value of the dollar, significantly weaker since the 1980s, was a boost to state exporters (Michigan is a major exporter). Equally important, the Big Three automakers, riding the wave of light-truck mania, registered record sales and profits.

Interestingly, the 1990-91 recession also favorably impacted Michigan's relative growth statistics. With economic growth contracting more here than in most states during the late 1980s and the 1990-91 recession, Michigan's economic recovery came off a relatively low base, biasing its growth figures upward. Michigan's ensuing cyclical recovery (1991-1999) should have produced much more robust economic growth. Instead, Michigan still lagged behind RTW states.

Communism as a political philosophy eventually died because it couldn't "deliver the goods." Like communism, compulsory union support hasn't delivered the goods but has managed to survive in the majority of states. This paper shows a clear correlation between economic growth and RTW status. Corroborated by a growing body of research conducted by many independent scholars, the compelling conclusion is that RTW laws increase state economic development and overall prosperity.

NOTES

[1]Paragraph provided by the Bureau of Labor Statistics' *"Union Members Summary 2001."*

[2]RTW and non-RTW summary statistics are weighted by the number of states in each category (typically 29 and 21 for non-RTW and RTW, respectively).

[3]1999 was the last year available as of this writing.

[4]Lacking cost-of-living data by state, Bennett used Consumer Price Index data from a large number of metropolitan areas to compare RTW versus non-RTW states.

[5]The Census Bureau's decennial survey data on *family* income starts in 1969 but the most recent survey (i.e. – 1999) is currently unavailable. The series from the *household* survey (used in the study), conversely, has data for 2000 but dates back only to 1977. The annual series from the Current Population Survey is not interchangeable because the series uses a different scale than the decennial survey.

[6]The poverty gap between RTW and non-RTW states was even greater in earlier periods. The U.S. Census Bureau's 1969 decennial survey shows Gini coefficients of .372 and .348 for RTW states and non-RTW, respectively.

[7]But in the decennial survey on *family* income, Michigan has the distinction of having the greatest increase in income inequality among all 50 states from 1969 through 1989, with the Gini coefficient rising from .329 to .395.

APPENDIX I

SUMMARY TABLES

Table I. Real Gross State Product Growth (1977-1999)

	RTW	Non-RTW	Overall Difference	Michigan
1977-1988	3.1%	3.0%	0.1%	1.1%
1988-1999	3.8%	2.8%	1.0%	2.5%
1977-1999	3.4%	2.9%	0.5%	1.8%

Table II. Employment Growth (1970-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1970-79	4.4%	2.9%	1.5%	2.2%
1980-89	2.0%	1.9%	0.1%	1.5%
1990-2000	2.6%	1.6%	1.0%	1.7%
1970-2000	2.9%	2.0%	0.9%	1.5%

Table III. Manufacturing Employment Growth (1970-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1970-79	3.4%	1.2%	2.2%	0.8%
1980-89	0.7%	-0.6%	1.3%	-0.3%
1990-2000	1.0%	-0.6%	1.6%	0.4%
1970-2000	1.5%	-0.2%	1.7%	-0.3%

Table IV. Construction Employment Growth (1970-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1970-79	5.7%	2.8%	2.9%	1.8%
1980-89	-0.3%	2.4%	-2.7%	2.0%
1990-2000	4.4%	2.5%	1.9%	4.0%
1970-2000	3.0%	2.0%	1.0%	1.9%

Table V. Unemployment Rate (1980-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1980	6.20%	7.30%	1.10%	12.40%
1990	5.20%	5.60%	0.40%	7.60%
2000	3.80%	4.00%	0.20%	3.60%

Table VI. Per-capita Disposable Income Growth (1970-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1970-79	10.0%	9.4%	0.6%	9.6%
1980-89	6.7%	6.9%	-0.2%	6.5%
1990-2000	4.0%	3.8%	0.2%	4.0%
1970-2000	6.8%	6.6%	0.2%	6.6%

Table VII. Unit Labor Cost Index (1990-2000)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alaska	90.5	91.2	91.0	91.1	91.5	92.1	92.9	92.8	91.8	91.0	90.9
Alabama	93.9	94.9	94.7	94.7	95.5	96.2	96.6	96.7	97.0	96.8	96.7
Arkansas	88.7	88.4	88.5	87.8	87.5	87.8	87.8	88.2	88.8	89.8	90.5
Arizona	104.6	106.0	103.8	101.2	97.9	96.3	96.2	96.8	98.0	98.5	98.7
California	103.0	102.5	102.4	102.8	102.9	102.4	102.7	102.7	102.7	102.1	101.9
Colorado	104.1	104.3	104.5	103.9	103.3	103.3	104.2	103.8	103.3	103.0	103.7
Connecticut	107.1	105.9	105.6	105.6	105.4	105.0	105.6	106.5	106.6	106.5	106.1
District of Columbia	111.8	112.1	112.6	111.4	109.8	109.1	109.7	110.8	110.5	112.1	113.8
Delaware	89.7	88.3	87.3	86.5	87.2	88.0	89.3	90.7	92.9	94.7	95.7
Florida	101.0	101.4	101.7	101.5	101.5	101.0	100.8	100.4	100.9	101.1	101.3
Georgia	98.9	98.6	97.9	96.6	95.9	95.4	94.9	94.9	95.4	96.0	96.3
Hawaii	95.4	95.1	95.4	97.5	98.9	99.1	98.6	98.6	98.8	98.7	98.4
Iowa	81.0	80.8	81.0	82.0	82.7	83.7	83.1	82.2	82.6	85.1	88.1
Idaho	88.3	89.9	91.3	90.5	89.6	89.2	89.8	90.6	91.4	92.4	92.5
Illinois	100.7	100.6	100.8	101.5	101.3	102.0	101.3	101.6	101.7	102.6	103.5
Indiana	95.8	96.2	96.3	96.5	96.7	97.8	98.3	98.1	97.6	98.5	99.3
Kansas	87.4	87.2	87.6	89.7	91.2	93.1	93.6	94.1	93.8	94.2	94.5
Kentucky	86.3	87.1	88.3	88.9	89.2	89.5	90.1	90.9	91.5	92.0	92.3
Louisiana	85.2	85.6	87.3	90.0	91.6	90.6	89.9	89.7	91.3	91.9	92.4
Massachusetts	108.5	108.3	109.2	108.9	108.8	108.4	108.7	109.7	109.8	109.4	108.7
Maryland	98.7	99.2	100.2	101.3	102.3	103.1	103.6	104.0	103.7	103.4	103.1
Maine	99.4	99.8	99.8	98.8	99.0	98.4	98.6	98.1	98.6	99.0	99.5
Michigan	**105.2**	**105.0**	**105.8**	**106.4**	**106.9**	**107.6**	**108.4**	**108.7**	**109.2**	**109.1**	**109.2**
Minnesota	98.0	98.3	99.4	101.0	101.6	102.6	102.2	101.2	99.8	98.6	98.4

Missouri	96.2	96.3	96.4	97.0	97.7	98.1	97.3	96.8	96.5	97.1	97.6
Mississippi	84.0	84.7	84.6	84.7	85.4	86.6	87.5	88.6	90.5	92.0	92.8
Montana	86.2	85.2	85.5	85.9	87.1	88.2	89.7	89.8	89.7	89.5	89.6
North Carolina	94.2	94.1	95.0	95.6	96.1	96.2	96.8	96.8	97.2	96.1	95.5
North Dakota	87.3	85.7	84.9	87.3	88.1	90.4	89.5	90.6	90.1	92.0	92.5
Nebraska	85.9	84.5	84.0	84.9	85.0	84.6	81.0	80.2	80.1	82.2	82.5
New Hampshire	100.3	99.3	97.6	96.5	97.8	97.6	96.9	96.2	96.1	95.7	94.5
New Jersey	108.5	108.6	108.1	106.7	106.4	106.3	107.5	108.5	109.7	110.1	110.4
New Mexico	100.9	94.1	88.2	79.9	76.4	75.5	77.2	78.7	78.2	77.0	76.1
Nevada	93.8	94.1	94.5	94.0	93.7	92.9	93.5	94.0	94.8	96.0	96.6
New York	103.4	104.2	103.8	104.0	103.8	103.8	103.5	103.7	103.3	102.8	101.7
Ohio	98.1	97.1	96.7	97.8	98.4	99.0	98.4	97.9	97.5	97.3	97.4
Oklahoma	82.9	82.2	81.4	81.5	81.8	82.1	82.1	81.8	82.3	82.8	83.1
Oregon	99.8	100.4	100.0	99.8	99.9	99.5	98.1	97.1	96.0	96.5	95.5
Pennsylvania	102.9	102.1	101.1	100.1	100.2	99.6	99.7	99.3	100.1	100.6	100.8
Rhode Island	99.5	97.4	95.9	93.8	94.2	94.5	94.4	91.3	91.1	90.2	90.7
South Carolina	95.6	96.0	96.9	96.9	97.1	96.0	96.0	96.3	97.2	97.9	98.6
South Dakota	68.4	67.6	66.8	65.8	65.8	66.1	66.7	67.6	68.4	70.4	71.9
Tennessee	96.5	96.9	95.8	94.2	94.1	95.4	96.9	98.3	98.6	98.5	98.4
Texas	93.6	94.0	94.7	94.7	94.0	93.5	94.2	94.5	95.5	95.8	96.7
Utah	101.9	101.6	101.5	103.0	105.1	105.4	102.7	100.5	99.3	100.4	100.2
Virginia	99.8	99.6	99.6	99.4	99.6	99.4	99.6	99.9	100.1	101.1	101.7
Vermont	91.9	92.2	92.3	92.5	93.0	94.4	95.7	96.1	96.3	96.6	97.2
Washington	94.5	94.9	96.1	96.6	97.6	98.3	100.6	102.6	103.8	104.2	103.6
Wisconsin	94.9	95.8	96.9	97.4	98.2	99.0	99.7	99.6	99.0	99.1	99.0
West Virginia	92.5	92.7	93.2	93.1	92.7	92.6	92.6	93.0	93.3	93.9	94.5
Wyoming	78.2	77.6	78.6	80.0	82.1	81.5	79.9	77.9	77.1	77.8	78.5

U.S. = 100

Source: Economy.com

Table VIII. Poverty Rate (1969-2000)

	RTW	Non-RTW	Overall Difference	Michigan
1969	18.3%	12.2%	-6.1%	9.4%
1979	14.2%	11.3%	-2.9%	10.4%
1989	14.9%	11.7%	-3.2%	13.1%
2000	11.6%	10.2%	-1.4%	10.0%

Table IX. Income Inequality (1977-2000)

	RTW	Non-RTW	Michigan
1977	0.405	0.388	0.387
1985	0.416	0.406	0.417
1993	0.432	0.437	0.433
2000	0.443	0.453	0.436

APPENDIX II

Unit Labor Cost Calculation – Provided by Economy.com

The wage and output data for both the states and metropolitan areas come from the U.S. Bureau of Economic Analysis (BEA) and the U.S. Bureau of the Census, with missing data estimated by Economy.com. The labor compensation measure used is total wages and salaries by place of work, divided by total employment in each industry. Productivity per worker for metropolitan areas is estimated by applying the 1992 ratio of metropolitan to state level productivity to gross state product release of the BEA. This ratio is calculated using data on revenues and costs obtained from the 1992 Economic Census.

Since relative regional economic growth is most influenced by enhancing local production of exportable goods and services, industries predominantly driven by local demand have been excluded from the analysis. These industries are primarily retail trade, construction, real estate, many service industries, and the government sector. In order to compare different regions properly, Economy.com constructed separate indices of worker productivity and earnings per worker for each metropolitan area, covering employment for each export industry at the three-digit Standard Industrial Classification level. However, a measure that used the aggregate output and earnings per worker would be biased by the region's industrial composition. Thus, the index of unit labor costs re-aggregates productivity and compensation per employee, using the national share of employment in each industry as the weights. This adjustment is necessary because certain industries have higher output per earnings ratios, due to the occupational mix of its employment and the capital structure of its operations. For example, productivity in the automotive industry is extremely high compared to other industries, whereas in the textile industry it is relatively low. As a result of these industry differences, a region with a high proportion of automotive manufacturing will appear to have lower unit labor cost than a region concentrated in textiles. However, by using the national share of employment in each industry to weight the productivity for each region, the index avoids this industry composition bias.

Employment composition is based upon SIC employment classifications. Economy.com uses three-digit SIC data in order to gauge the regional industry mix properly. However, since data in industries with a particularly small number of employees are subject to a higher degree of inaccuracy, a minimum size of 100 employees was imposed on the index. If the industry had fewer than the necessary 100 employees in the metropolitan area, then the relevant state labor cost measure was used.

The formula below is used to calculate Economy.com's wages and salary and productivity index for any level of aggregation, which weights each three-digit SIC equally for each area, with national employment share for each year serving as weights. This composition-adjusted aggregate is then indexed by the appropriate state earning or productivity measure. Labor costs are then calculated by dividing the earnings index by the analogous productivity index. The unit labor cost index was created for each year by dividing the region's unit labor cost index by the national unit labor cost index.

Definition of Relative Earnings or Productivity Indexes

$$I^{St}{}_K = \{\Sigma_k (Y/Emp)^{St}{}_k * (Emp^{US}{}_k / Emp^{US}{}_K)\} / (Y/Emp)^{US}{}_K$$

Where:
Y = Output or Earnings
St = State or Region
K = Total for all industries
k = Three-digit SIC industry

APPENDIX III

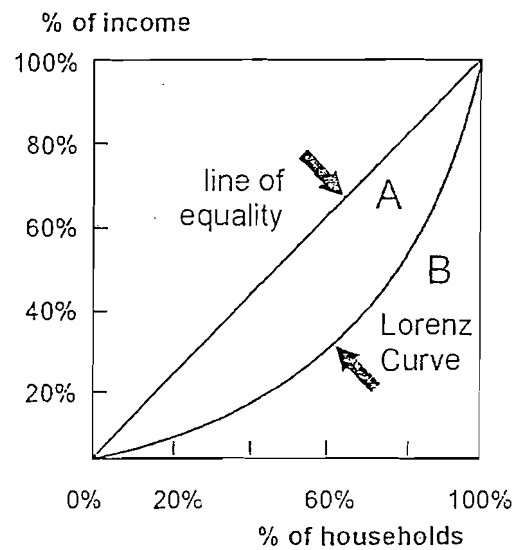
THE GINI COEFFICIENT

The Gini Coefficient is a summary measure that captures the deviation shown in the Lorenz curve. It is calculated as follows:

$$G = \frac{1}{2} \sum_{i=1}^{k} |x_i - y_i|$$

where x_i and y_i are the relative frequencies, rather than the cumulative frequencies, and k is the number of classes/groups.

The Gini Coefficient can be expressed graphically with the Lorenz curve, where: A/(A+B), where A is the area between the line of equality and the Lorenz curve, B is the area under the Lorenz curve.



A Lorenz Curve illustrates inequality.

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Did "Right-to-Work" Work for Idaho?

Emin M. Dinlersoz and Rubén Hernández-Murillo

RIGHT-TO-WORK LAWS AND ECONOMIC ACTIVITY

The right-to-work (RTW) law ensures that workers are not forced to join unions or pay union dues as a condition of employment.[1] Despite many years of research, the impact of these laws on a state's economic performance is still a controversial issue. Using a diverse set of data and methods, a sizeable body of literature has concentrated on understanding whether the passage of RTW laws matters.[2] RTW laws continue to be an important issue on states' agendas and a source of fierce campaigning by pro- and anti-union groups. For instance, in September 2001, Oklahoma adopted the RTW law after a lengthy period of campaigns for and against it.

States with RTW laws usually offer additional policies as part of a pro-business profile designed to attract new firms and boost industrial development. This is the view taken by Holmes (1998), who uses the RTW law as a proxy for the state's business-friendly climate. He studies the effects of pro-business policies on economic activity by examining the performance of manufacturing industries across state borders where one state has a RTW law and the other does not. His analysis identifies a large, positive impact of an overall favorable business climate, but the effects cannot be traced to any particular state legislation, such as a RTW law.

Many states passed RTW laws in the mid-1940s to early 1950s. Since then, except for the 2001 adoption by Oklahoma, only two other states adopted them: Louisiana in 1976 and Idaho in 1986. Indiana adopted the law in 1957, but repealed it in 1965. It is natural to think that economic conditions today are quite different from those that prevailed during the earlier period when many states passed the law en masse. An important question then is whether the late adopters of this law have experienced any real benefits.

Idaho's Case

In this paper, we reassess the economic impact of the RTW law by focusing on Idaho's experience.[3] Idaho adopted their RTW law in 1986, at a time when the decline in unionization in the U.S. had substantially run its course.[4] Was the passage of the law merely a gesture that simply reflected a trend of decline in unionization, or did it have a significant influence in making Idaho a more attractive location for business in the years following the adoption? Our goal is to provide some evidence on how Idaho's unionization rate and industrial performance evolved over time, both before and after the passage of the RTW law, thereby contributing to the literature on the effect of business-friendly policies on states' industrial performance.

One important aspect of Idaho's experience is that the passage of the law itself was a long and controversial process that took nearly two years. The critical events related to the legislation process are summarized in Abraham and Voos (2000). The original bill was introduced to Idaho's House in January 1985, and the law was eventually passed in November 1986, after a lengthy political and bureaucratic process involving several confrontations between pro-law and anti-law groups, as well as a veto and several delays. The law finally took effect in 1987.

A detailed investigation of other business policies adopted in Idaho around 1987 reveals that there were no other major changes in Idaho's business

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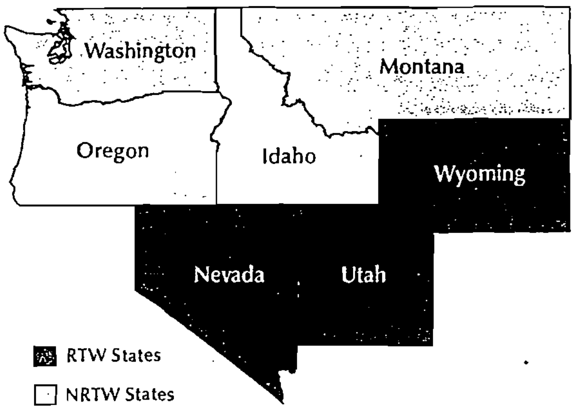
1 Section 14(b) of the Taft-Hartley Act, passed in 1947 by Congress, reaffirms states' rights to pass RTW laws. These laws may or may not apply to federal workers, depending on the specifics.

2 See Moore and Newman (1985) and Moore (1998) for a comprehensive review of this literature.

3 Louisiana is also a candidate for such a study. However, the unavailability of long time series data before Louisiana's adoption year (1976) prevents the investigation of this case in detail.

4 Goldfield (1987) reports that between 1954 and 1978 the union membership rate in the United States declined from 34.7 percent to 23.6 percent. See Goldfield (1987) for a comprehensive analysis of the declining unionization in the United States. According to Hirsch, Macpherson, and Vroman (2001), the union membership rate declined from 29.3 percent in 1964 to 24.1 percent in 1977, and then to 13.6 percent in 2000.

Figure 1



climate regarding incentives for new investments or firm relocation.[5]

Idaho offers an interesting case study not only because it is a late adopter, but also because three of its six neighboring states have had the RTW law for a long time and three have traditionally been non-right-to-work (NRTW) law states.[6] Figure 1 shows Idaho and its neighbors, which provide potential controls against which to judge Idaho's performance. Clearly, these states are imperfect controls. However, among all other states, Idaho's neighbors seem to be a natural choice for comparison for the reason, if nothing else, that we can control for common region-specific factors that do not vary over time. Responses to nationwide economic fluctuations vary substantially across regions. Focusing on a particular region minimizes this problem. In analyzing the evolution of unionization rates, we also consider the experience of states with an industry mix that was similar to that of Idaho to account for differences arising from the composition of industrial activity.

Our empirical analysis has two main parts. First, we look at the evolution of the unionization rate before and after the law. We find that there was a large decline in unionization between 1981 and 1984, the year before the bill was introduced to the legislature. The unionization rate then rebounded somewhat until 1987, the year the law officially took effect, but continued to decline persistently thereafter. Idaho's unionization rate gradually became very similar to the average unionization rate of other RTW states with a similar industrial mix. When we compare Idaho's unionization rate also to that of its geographic neighbors, we find that, particularly in the manufacturing sector, Idaho's unionization rate exhibits a significantly faster decline.

Second, we investigate the manufacturing sector's performance pre- and post-law. We observe that in the post-law period, Idaho experienced a significant and persistent annual growth in manufacturing employment and in the number of establishments, as opposed to virtually zero growth in both of these variables in the pre-law period. The difference between the pre-law and post-law growth rates in Idaho was significantly larger compared with other states in the region. In addition, we find that the fraction of total manufacturing employment in large manufacturing establishments increased significantly in Idaho after the law was passed. The average size of large manufacturing establishments also grew substantially in the post-law period.[7] Our observations are consistent with the hypothesis that Idaho became more attractive for large plants because of declining unionization.

Overall, our findings indicate that the increase in Idaho's industrial growth rate is strongly related to the decline in unionization. While we are tempted to associate the patterns observed with the passage of the law itself, the timing of the decline in the unionization rate prevents such a definitive conclusion. The large decline in unionization started about four years prior to the almost two-year-long bureaucratic process that eventually led to the passage of the law. This prompts us to consider the hypothesis that the passage of the law might actually have been a consequence of the decline in unionization and growing anti-unionism in Idaho, rather than a cause. Consequently, while the declining unionization appears to be responsible for the strong post-law growth trends in Idaho, we cannot fully ascribe the initiation of the trends to the law itself. The *passage* of the law, however, seems to have strengthened and reinforced the trends.

Literature Review

One expects that a first-order effect of the passage of a RTW law would be a reduction in the

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[5] We examined, in particular, the *Directory of Incentives for Business Investment and Development in the United States*, published by the National Association of State Development Agencies.

[6] The RTW neighbors, Nevada, Utah, and Wyoming, adopted the law in 1951, 1955, and 1963, respectively. The time period between these years and our first observation year (1975) is long enough to give us some comfort that the potential effects of the RTW law must have already been realized to a large extent in these states.

[7] In general, larger establishments are more likely to be unionized and, therefore, have more incentives to avoid unions. See Long (1993), Galarneau (1996), and Lowe (1998) for evidence on this in Canada.

union membership rate. There are several reasons why this might be the case. As Ellwood and Fine (1987) point out, the most obvious reason is that the passage of the law makes unions less attractive to workers because unions no longer have the ability to enforce payments and fines. These effects depress new union organizing and also deter the replacement of decertified unions. If a state's labor force is growing, then less union organizing means also a reduction in the union membership rate.

Most earlier studies, surveyed by Moore and Newman (1985) and Moore (1998), found a weak relationship between the passage of RTW laws and the level of the union membership rate. However, this does not mean that unionization activity was not influenced by RTW laws. Using 1951-77 data for 50 states on new union organizing activity (a measure of new membership flow into unions, rather than the level of unionization), Ellwood and Fine (1987) presented convincing evidence that the passage of RTW laws led to a decline in new union organizing of about 46 percent for the first five years after the legislation and 30 percent during the next five. This reduction in organizing disappears after a decade. The level of union membership, as a result, declines in most states by about 5 to 10 percent after the 10 years, which may not have been detected by the econometric methods used in the previous studies. Further tests reveal that these findings are robust to time-invariant differences across states. Idaho's experience provides a natural setting to further assess the evolution of the union membership rates before and after the passage of the law. Since we are looking at the same state both before and after, time-invariant state-specific factors should be irrelevant for the pattern of evolution in the union membership rates.

As we mentioned before, an important concern is whether declining union strength is a catalyst for the passage of RTW laws, as opposed to being a result of it. If the passing of RTW laws is a consequence rather than the cause, then the reduction in union organizing should be visible during the immediate years before the passage of the law. Ellwood and Fine (1987) investigated this possibility by analyzing the evolution of new union organizing for seven states prior to the adoption of the law; they detected no reduction in union organizing during that period and concluded that the decline in union organizing is likely to have been caused by the passage of RTW laws.

According to the anecdotal evidence in Kendrick (1996), one possible source of the events that led to the eventual passage of the law was the "Bunker Hill" incident. In 1984, employees of the Bunker Hill mining company in Idaho voted for voluntary pay cuts and other concessions to keep the company from going out of business. The union headquarters in Pittsburgh overruled this vote, resulting in a loss of 1500 jobs. The Bunker Hill incident might have initiated a change in attitude toward unions in Idaho. If this is the case, then a growing anti-unionism in the state might be the reason for the eventual passage of the law.

The rest of our paper is organized as follows. We present evidence in the next section on the evolution of unionization before and after the RTW law was enacted, followed by evidence on the growth in manufacturing.

PATTERNS OF UNIONIZATION IN IDAHO

Unionization Across Industries

We used data from the Census Bureau's Current Population Survey (CPS) to estimate unionization rates. We describe the characteristics of the data and methodology in the appendix. The employment and establishments data for our analysis of manufacturing comes from the Census Bureau's County Business Patterns data set and is also described in the appendix.

We start our analysis by examining the evolution of the unionization rate in Idaho. We compare the trends in Idaho's unionization rate with the average trend in both RTW states and NRTW states that had an industrial mix similar to that of Idaho in the years prior to the passage of the law, 1977-86. For this we construct a measure of dispersion using the employment shares in broadly defined industries.[8] We identi-

[8] We computed the following measure of *distance* ($\bar{\Delta}_k$) to Idaho for each of the 50 states in terms of industrial mix and performed the comparison for the closest "neighbors":

$$\bar{\Delta}_k = \frac{1}{T}\Sigma_{t=1}^{T}\Sigma_{i=1}^{N}(s_k^{it} - s^{it})^2,$$

where s_k^{it} is the employment share in industry i in state k in year t. N is the number of industries, T is the total number of years in the sample period, and s^{it} is the index for Idaho, defined similarly. We used employment data from the following industry classifications: agricultural, mining, construction, manufacturing, transportation, wholesale trade, retail trade, finance insurance and real estate services, and personal services. The distribution of this measure had the following characteristics: the maximum value was 0.143, the mean was 0.019, and the 5th, 25th, 50th, 75th, and 90th percentiles were 0.002, 0.005, 0.014, 0.024, and 0.035. We selected states with a distance of less than 0.005.

Figure 2

Evolution of Unionization in Manufacturing Industries
Idaho vs. RTW States

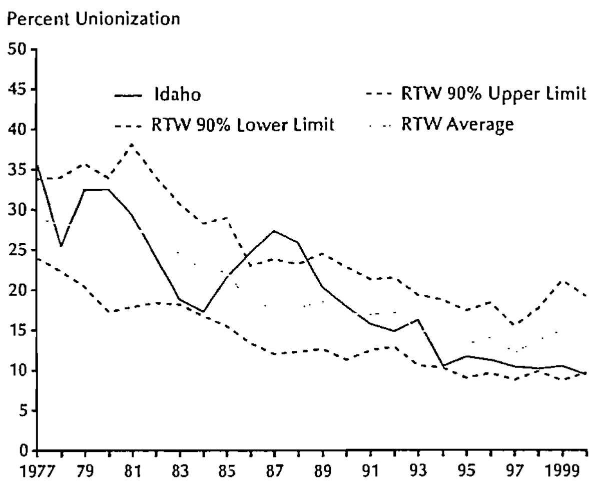
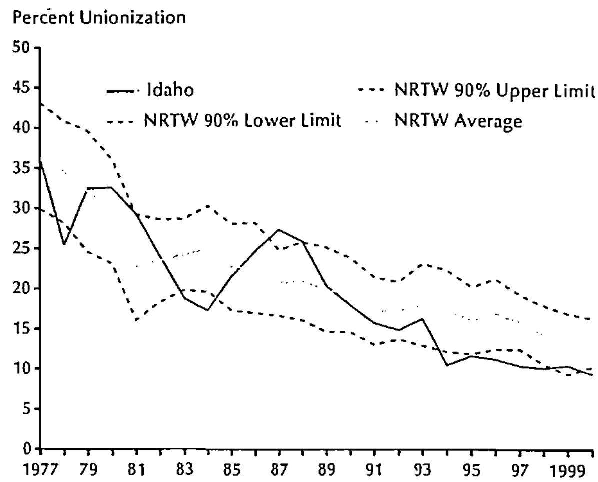


Figure 3

Evolution of Unionization in Manufacturing Industries
Idaho vs. NRTW States



fied 11 such states: 5 RTW states (Kansas, Nebraska, Utah, Virginia, and Iowa) and 6 NRTW states (California, Colorado, Minnesota, Oklahoma, Oregon, and Washington).

So how do the patterns in unionization rates differ across industries? The manufacturing sector, being traditionally highly unionized, behaved quite differently compared with the nonmanufacturing sector. Figures 2 and 3, respectively, compare the unionization rate in manufacturing to the average of RTW and NRTW states. What is most interesting about the trend for Idaho's unionization is the relatively large decline that occurred between 1981 and 1984, prior to the passage of the law, and the pronounced recovery in the 1984-87 period, during which much of the debate about the passage of the law took place. We observe that the manufacturing unionization rate in Idaho gradually converged to the average unionization rate in RTW states. The convergence took place mostly after 1987, and this rate remained within the confidence bands and below the average for RTW states that had similar industrial composition prior to 1987. Figure 3 indicates that the manufacturing unionization rate in Idaho remained within the confidence bands for the average for NRTW states for most of the sample period, but fell below the lower confidence band in 1994 and remained away from the average thereafter.

The patterns observed in Idaho's manufacturing unionization rate do not seem to result from business cycles that affected all other states uniformly. However, since Idaho is a small state, its manufacturing unionization rate may have been subject to fluctuations in the unionization rate of a small number of industries, particularly in the period prior to the passage of the RTW law. Examining Idaho's unionization rates in narrowly defined manufacturing industries, we discovered that fluctuations in the years prior to 1987 were closely related to fluctuations in the food manufacturing industry.

Figure 4 shows the evolution of the overall unionization rate in Idaho versus the average unionization rate in the five states with RTW laws and a similar industrial mix.[9] Idaho's unionization rate was around 17 percent in 1977; by 2000 it was down to about 9 percent, a decline of almost 50 percent. The average rate for RTW states also declined steadily, starting in 1981. Throughout the period of analysis, in 1983, 1984, and then again in 1987, 1989, 1991, 1992, and 1994, Idaho's unionization rate was significantly different from the average RTW state's unionization rate, at the 90 percent confidence level. In the years 1977-81 we observe that Idaho's unionization rate was close to the upper confidence band. In just three years, during the period 1981-84, the

[9] Note that there was no change in other states' RTW law status during 1977-2000. Idaho was the only state that changed status during this period. Louisiana became a RTW state in 1976 and is included with the other RTW states throughout the period. Excluding Louisiana did not change our conclusions.

Figure 4

Evolution of Unionization in All Industries

Idaho vs. RTW States

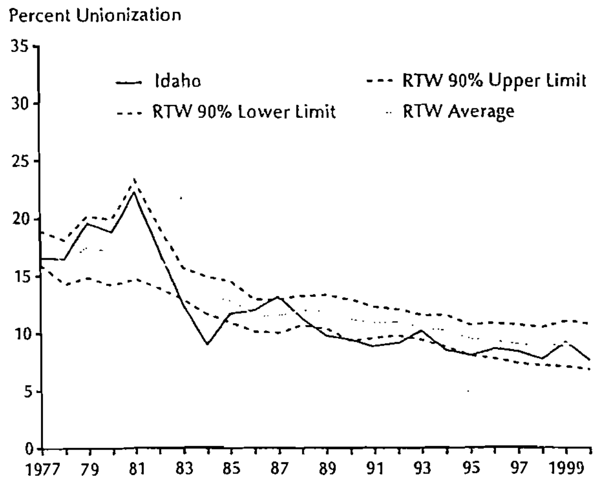
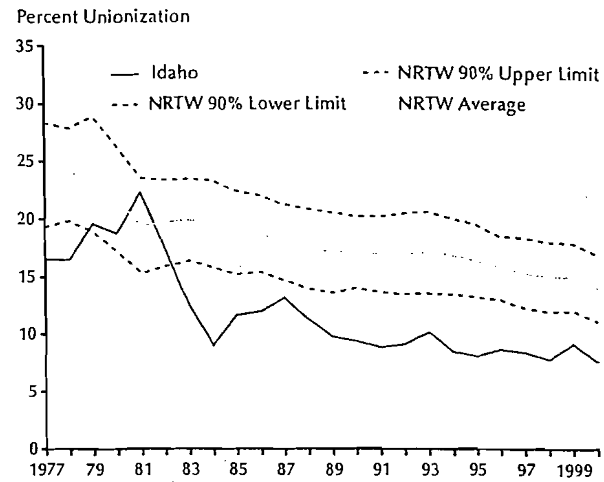


Figure 5

Evolution of Unionization in All Industries

Idaho vs. NRTW States



unionization rate fell from about 22 percent to almost 9 percent, a decline of about 60 percent. The decline observed for the average rate for RTW states was not as pronounced.[10] The pattern between 1984 and 1987 also exhibits a partial recovery in the unionization rate. After the law took effect in 1987, however, we observe a persistent decline in the unionization rate.

In Figure 5, we compare Idaho with the six closest NRTW states. First, note that on average, a NRTW state had a unionization rate of about 24 percent in 1977, compared with 17 percent for RTW states. These figures were about 14 percent and 9 percent, respectively, in 2000. The difference in unionization rates between the two groups of states persisted throughout the sample period. In the years 1979-82, Idaho's unionization rate is not statistically distinguishable from the average unionization rate in NRTW states. In the years following the 1981-84 decline, however, we can reject the equality of the two rates. Idaho's unionization rate hit the lower confidence bound for the NRTW states' average around 1982 and consistently remained below that bound for the rest of the analysis period. From the patterns observed in Figures 4 and 5, Idaho's unionization rate very early diverged from the NRTW states' average unionization rate and approached the RTW states' average. As shown in Figures 6 and 7, this behavior was largely due to the behavior observed in the nonmanufacturing sector. In both figures, the dip during the 1981-84 period is visible and highly pronounced, and even as early as 1982 the unionization rate in nonmanufacturing industries had converged to the average unionization rate in RTW states and was statistically below the NRTW states' average. It is therefore likely that the quick convergence in Idaho's overall unionization rate was unrelated to the passage of the RTW.[11]

Idaho's Neighbors

To investigate the trends in the unionization rate further, we concentrate on Idaho's geographic neighbors and run a simple state-by-state regression of the form

[10] As explained in the appendix, prior to 1983, unionization rates were calculated based on samples that are roughly one-third of the samples that are used after 1983. The estimated unionization rates are less precise for the period before 1983 due to sample variability, especially for smaller states, and in particular for 1981, when the sample sizes were roughly one-third of the samples in 1977-80. Estimates of overall and nonmanufacturing unionization rates were less sensitive to sampling problems than those for the manufacturing sector. Still, when we discount 1981 and 1982, the decline observed in the manufacturing unionization rate from 1980 to 1983 is reliably estimated.

[11] As previously footnoted, the estimates of overall and nonmanufacturing unionization rates during the period 1977-86 were not likely to be seriously affected by the small sample sizes used by the CPS before 1983, even accounting for 1981, as the sample sizes used in the estimation exceeded the thresholds described in the appendix for reliability of the estimates. We are, however, silent on the driving factors of unionization in Idaho's nonmanufacturing industries, as the focus of our analysis is the manufacturing sector. We did verify, however, that the 1981-84 decline was not due to closures of large unionized firms.

Figure 6

Evolution of Unionization in Nonmanufacturing Industries
Idaho vs. RTW States

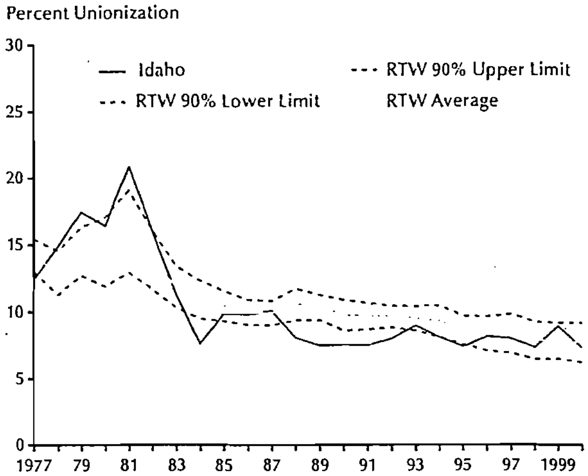


Figure 7

Evolution of Unionization in Nonmanufacturing Industries
Idaho vs. NRTW States

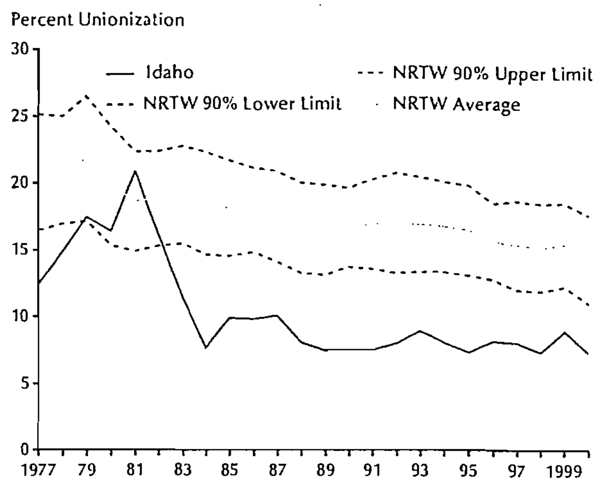


Table 1

Change in Unionization Rate by State and Industry

	Overall			Manufacturing			Nonmanufacturing		
	1977-86	1987-2000	F (Prob)	1977-86	1987-2000	F (Prob)	1977-85	1987-2000	F (Prob)
U.S.	**–3.7**	**–1.8**	27.37***	**–4.7**	**–3.3**	15.54***	**–2.8**	**–1.2**	17.97***
	[–0.3]	[0.06]	(0.00)	[0.3]	[0.06]	(0.00)	[0.3]	[0.08]	(0.00)
Idaho	**–6.4**	**–2.8**	3.2*	**–5.8**	**–8.0**	1.06	–6.3	–0.5	4.75**
	[1.8]	[0.7]	(0.08)	[2.0]	[0.8]	(0.31)	[2.5]	[0.7]	(0.04)
Washington	**–3.0**	**–1.7**	2.98*	**–4.1**	**–2.5**	2.73	**–2.4**	**–1.2**	2.25
	[0.7]	[0.3]	(0.09)	[0.9]	[0.3]	(0.11)	[0.7]	[0.3]	(0.14)
Oregon	**–3.6**	**–2.1**	1.71	**–7.6**	**–5.7**	3.14*	–1.6	**–1.3**	0.06
	[1.0]	[0.4]	(0.20)	[0.7]	[0.7]	(0.09)	[1.1]	[0.4]	(0.81)
Montana	**–4.2**	**–2.1**	6.48***	–3.0	**–5.3**	0.65	**–4.4**	**–1.8**	11.36***
	[0.7]	[0.4]	(0.01)	[2.7]	[0.9]	(0.43)	[0.6]	[0.3]	(0.00)
Nevada (RTW)	**–3.1**	0.2	10.34***	–9.2	–0.5	3.46*	**–2.9**	0.2	10.22***
	[0.9]	[0.4]	(0.00)	[3.9]	[2.5]	(0.07)	[0.8]	[0.4]	(0.00)
Utah (RTW)	**–5.5**	**–3.7**	1.26	**–9.6**	–2.6	11.49***	–4.7	**–4.0**	0.17
	[1.4]	[0.6]	(0.27)	[1.7]	[1.2]	(0.00)	[1.4]	[0.7]	(0.68)
Wyoming (RTW)	–3.5	**–3.8**	0.02	0.2	2.8	0.45	–3.7	**–4.0**	0.04
	[1.5]	[0.2]	(0.88)	[2.1]	[3.3]	(0.51)	[1.6]	[0.2]	(0.83)

NOTE: Heteroskedasticity-autocorrelation consistent standard errors are in brackets. Figures in bold indicate significance at 1 percent. "F" gives the F statistic for the test of equality of coefficients across two time periods. Probability values for the F statistic are in parentheses. *, **, and *** indicate significance of the F statistic at the 10, 5, and 1 percent levels, respectively.

$$(1)\quad \log u_t = \alpha_{PRE} + \beta_{PRE} D(t-t_0) + \Delta\alpha_{POST}(1-D) + \beta_{POST}(1-D)(t-t_0) + \varepsilon_t,$$

where $t_0 = 1977$, $t = 1977,...,2000$, and D is a dummy variable that takes on a value of 1 if $t < 1987$ and 0 otherwise. In this projection, α_{PRE} is the intercept term for the pre-law period, β_{PRE} is the pre-law slope coefficient, $\Delta\alpha_{POST}$ is the post-law increment in the intercept, and β_{POST} is the post-law slope coefficient. The estimated values of β_{PRE} and β_{POST} are multiplied by 100 and are presented in Table 1. With the log specification, the figures in the table can be interpreted as the annual percent rate of change in unionization. We also present the test results for the equality of the growth rates across the two periods $\beta_{PRE} = \beta_{POST}$.

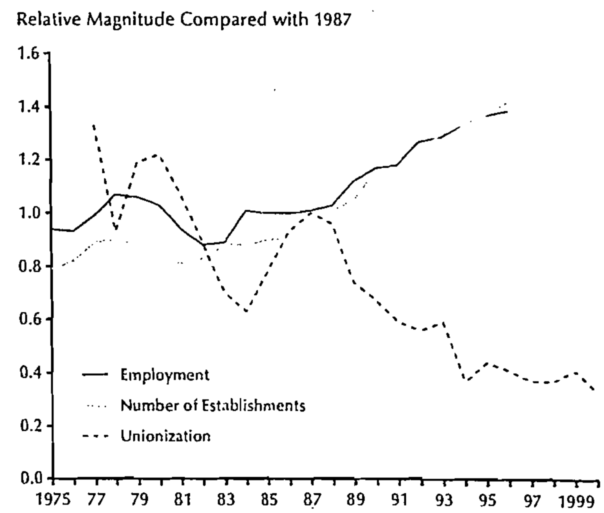
We observe a persistent decline in unionization rates. When all industries are considered, columns 1 and 2 reveal that, in general, the magnitude of the decline was higher in the 1977-86 period in all states in the region and in the United States, except for Wyoming. In Idaho, the rate of decline in overall unionization slowed down from 6.4 percent in the pre-law period to 2.8 percent in the post-law period. The difference between these two rates, however, is statistically significant only at the 10 percent level. Note also that, in both periods, Idaho's rates of decline were higher than the U.S. rates and most of those for its neighboring states.

When manufacturing is considered separately, columns 4 and 5 provide a different view. In fact, the decline in Idaho's manufacturing unionization rate accelerated somewhat in the post-law period, surpassing both the U.S. and its neighboring states, which, for the most part, exhibited a slowdown in the rate of decline. The difference between Idaho's unionization rates in manufacturing pre-law and post-law is not statistically significant because of the relatively high standard deviation for the pre-law period. Overall, the slowdown in the rate of decline of unionization did not apply to Idaho's manufacturing and was primarily driven by nonmanufacturing industries, as can be seen in the last two columns.

The findings in this section suggest that Idaho's unionization rate declined substantially over the sample period, approaching the average unionization rate in RTW states. While the decline in the unionization rate, especially in manufacturing, is persistent after 1987, a substantial part of the decline appears to have happened before 1987. The pattern between 1984 and 1987, during which much of the debate about the passage of the law took place, exhibits a partial recovery in the unionization rate. After the law took effect in 1987, we observe a continuing decline in the unionization rate, especially in manufacturing. Particularly during the period prior to 1987, large fluctuations in Idaho's unionization rate in manufacturing seem to be related to the behavior of individual industries.

Figure 8

Evolution of Key Indicators in Idaho's Manufacturing Industry



MANUFACTURING

We now turn to the industrial organization consequences of declining unionization in Idaho. We focus on two main indicators. First, we look at the growth in employment and the number of establishments in manufacturing industries and compare Idaho with its neighbors, in both the pre- and post-law periods. If the passage of the law has had an important positive effect on manufacturing growth, then we expect to observe an acceleration in the growth rate of employment and the number of establishments in Idaho. Second, we look at the changes in the importance of large establishments in manufacturing in Idaho, again, for both periods. As Holmes (1998) argues, large manufacturing establishments are more likely to be attracted to RTW states because larger plants are more likely to be unionized. This argument suggests that we might expect an influx of new large establishments into Idaho or an expansion of existing establishments.

Employment Growth

Figure 8 is a preliminary look at the evolution of the three key variables in Idaho's manufacturing.

Table 2

Manufacturing Growth Rates in Idaho and Its Neighbors (Simple Time Averages, Percent Annual Growth)

	Employment			No. of establishments			Average establishment size		
	1975-86		1987-96	1975-86		1987-96	1975-86		1987-96
Idaho	0.76		3.71	1.27		3.99	–0.39		–0.21
	[6.38]		[2.56]	[4.20]		[3.16]	[6.73]		[3.17]
		(1.36*)			(1.98**)			(0.08)	
Washington	1.57		2.18	2.86		1.96	–1.04		0.29
	[5.34]		[6.23]	[4.16]		[2.44]	[7.48]		[6.94]
		(0.25)			(–0.59)			(0.43)	
Oregon	1.18		1.67	2.32		1.19	–0.98		0.55
	[6.86]		[2.64]	[4.23]		[2.52]	[7.54]		[4.30]
		(0.21)			(–0.74)			(0.57)	
Montana	–0.33		1.35	1.94		2.09	–2.10		–0.51
	[6.80]		[3.47]	[5.43]		[4.34]	[6.79]		[6.33]
		(0.71)			(0.07)			(0.56)	
Nevada (RTW)	6.15		4.84	5.46		6.01	0.96		–1.00
	[9.22]		[5.02]	[6.52]		[3.43]	[10.42]		[5.64]
		(–0.40)			(0.24)			(–0.53)	
Utah (RTW)	3.51		3.26	3.01		3.57	0.58		–0.17
	[4.52]		[2.64]	[2.93]		[3.55]	[5.69]		[4.96]
		(–0.15)			(0.41)			(–0.32)	
Wyoming (RTW)	–1.42		3.32	2.19		2.69	–0.53		0.87
	[9.66]		[3.39]	[6.50]		[4.16]	[9.63]		[7.26]
		(0.59)			(0.21)			(0.38)	

NOTE: Standard deviations in brackets. Figures in parentheses are the t statistics associated with the difference of the variable's average across two periods of analysis. * and ** indicate significance at the 10 and 5 percent levels, respectively, for a one-sided test; t statistics are based on unpaired comparisons with unequal variances.

where we have normalized each variable by its 1987 value. Before 1987, there is considerable fluctuation in both employment and the number of establishments, with no visible growth trend. Unionization exhibits a decline, but is also subject to wide fluctuations, as discussed before. The pattern after 1987 is remarkably stable for all three series. Employment and the number of establishments grew steadily in that period by about 40 percent compared with their 1987 level, and unionization declined by more than 60 percent.

Table 2 shows the simple average annual growth rates in employment, number of establishments, and average establishment size in manufacturing for Idaho and its neighbors. Consider employment and the number of establishments first. From 1975 to 1986, Idaho's manufacturing employment grew at a rate of 0.76 percent annually on average. The average growth rate in the number of establishments was around 1.27 percent per year. However, there is a large standard deviation associated with both of these figures, a reflection of the fluctuating manufacturing growth in the state in that period, as depicted in Figure 8. Idaho's NRTW neighbors did not fare much better. Washington and Oregon appear to have experienced higher growth rates, but the standard deviations are so high that the differences with respect to Idaho are not statistically significant. Idaho's RTW neighbors appear to have fared much better in this period, except for Wyoming. Overall, it seems that the period before the law was a period of weak growth, especially for NRTW states.

This pattern changes dramatically in the post-law period. Idaho's growth rates were much higher compared with those in the pre-law period. Furthermore, the difference between the two periods' growth

Table 3

Manufacturing Growth Rates: Results from State-by-State Regressions

	Employment			No. of establishments		
	1977-86	1987-2000	F (Prob)	1977-85	1987-2000	F (Prob)
Idaho	–0.03	**3.7**	**58.97**	0.6	**4.1**	**82.71**
	[0.4]	[0.2]	(0.00)	[0.3]	[0.2]	(0.00)
Washington	1.1	0.4	0.48	**2.4**	**2.1**	0.93
	[0.5]	[0.8]	(0.49)	[0.2]	[0.2]	(0.34)
Oregon	0.02	**1.2**	3.17	**2.0**	**1.6**	2.04
	[0.6]	[0.2]	(0.09)	[0.2]	[0.2]	(0.17)
Montana	–1.3	**1.2**	**15.74**	**1.8**	**2.6**	2.58
	[0.6]	[0.1]	(0.00)	[0.6]	[0.2]	(0.12)
Nevada (RTW)	**5.0**	**4.3**	0.49	**4.9**	**6.1**	4.39
	[0.7]	[0.6]	(0.49)	[0.5]	[0.2]	(0.05)
Utah (RTW)	**3.3**	**3.1**	0.28	**2.9**	**4.0**	**8.85**
	[0.3]	[0.1]	(0.60)	[0.2]	[0.3]	(0.00)
Wyoming (RTW)	–0.03	**2.7**	3.99	**2.1**	**3.0**	2.07
	[1.3]	[0.2]	(0.06)	[0.4]	[0.3]	(0.16)

NOTE: Heteroskedasticity-autocorrelation consistent standard errors are in brackets. Figures in bold indicate significance at 1 percent. "F" gives the F statistic for the test of equality of coefficients across two time periods. Probability values for the F statistic are in parentheses.

rates turns out to be statistically significant, unlike the case with neighboring states. Idaho's post-law growth rates also exceeded those of its NRTW neighbors and were similar to those of its RTW neighbors (although the pairwise comparisons are not always statistically significant due to large standard errors). Overall, the patterns of change in the growth of employment and the number of establishments point to a post-law acceleration of growth in Idaho, but not in any of the neighboring states.

Table 3 shows the results of a regression analogous to equation (1). The dependent variable is either the logarithm of employment or the number of establishments in manufacturing. The most notable result from this table is the exceptionally large growth rate of Idaho in the post-law period for both variables. The annual employment growth rate was about 3.7 percent post-law, compared with an almost zero annual average growth pre-law. The growth rate in the number of establishments was about seven times larger compared with that in the pre-law period. Idaho did much better after the RTW law was passed, compared with most other states in the region, both in employment and the number of establishments. The differences in these growth rates across the two periods have high statistical significance for Idaho, but not for most of the other states.

Manufacturing Employment Share

Before turning to the analysis of establishment size, we report how the share of manufacturing as a fraction of total private employment evolved in Idaho. Again we compare Idaho against other states that had a similar industrial mix in the period prior to 1987. This analysis indicates that Idaho experienced a substantial change in industrial mix, especially after the passage of the RTW law.[12] Figure 9 compares Idaho's manufacturing share with the average manufacturing share in the six NRTW states we identified earlier. First, note that manufacturing's average employment share in NRTW states declined throughout the sample period, which is an indication of the steady decline in the manufacturing sector in the United States, especially during the last quarter of the twentieth century. Idaho's manufacturing share was far below the NRTW average

[12] Constructing a distance measure analogous to that of footnote 9, we observed that Idaho also experienced a substantial change during our sample period in the composition of its manufacturing industry. For brevity, we omit this analysis.

Figure 9

Evolution of Manufacturing Share
Idaho vs. NRTW States

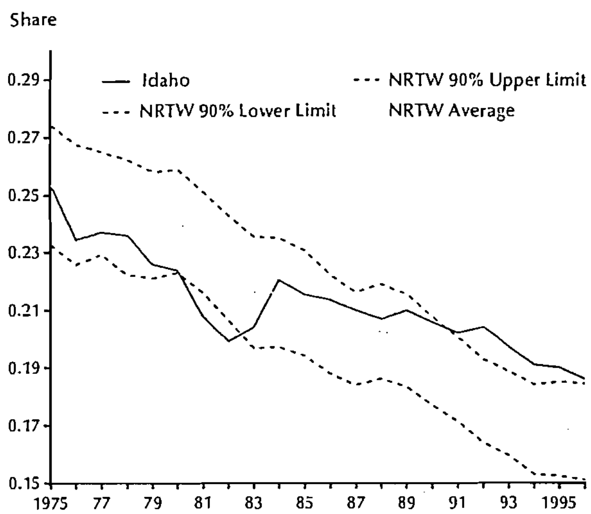
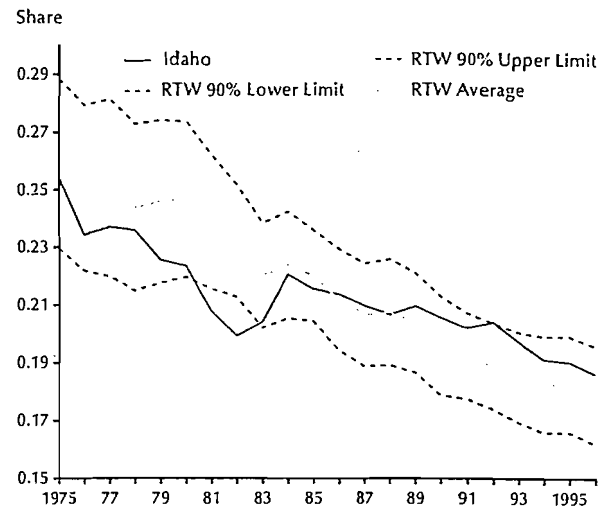


Figure 10

Evolution of Manufacturing Share
Idaho vs. RTW States



during the 1975-82 period and declined at a much faster rate than the average share in NRTW states. This trend slowly started to change around 1982; from 1984 onward, the manufacturing share in Idaho was above the NRTW average and declined much more slowly, which is consistent with accelerated growth in Idaho's manufacturing employment in this period. By 1987, Idaho's share exceeded the NRTW average, and the difference gradually became statistically significant. By the end of the analysis period, we can reject the hypothesis that Idaho had a manufacturing share similar to an "average" NRTW state with, initially, a similar industrial composition. The comparison with the RTW states' average share in Figure 10 is consistent with this finding. While Idaho's share was much lower than the average RTW states' share before 1982, it gradually became closer to the average afterward.[13]

Average Establishment Size

Considering the results in Table 2 regarding the change in average establishment size, defined by the number of employees per establishment, we do not observe any definitive pattern. In all states, the difference in the average growth rates in this variable across the two periods was insignificant. This, however, does not necessarily mean that Idaho did not become an attractive location for larger plants or that existing plants had less incentive to expand. It is well-known that there has been an ongoing nationwide trend toward smaller establishments.[14] It is possible that the increasing fraction of small plants in Idaho masked the increasing importance of larger establishments. To investigate this possibility, we look at the evolution of two measures: (i) the fraction of manufacturing employment in large establishments and (ii) the average size of large establishments. Following Holmes (1998), we define an establishment as "large" if it has at least 100 employees.[15] If large establishments became more important in Idaho's manufacturing sector after the law, then the first measure is expected to be higher in the post-law period. Similarly, if existing large establishments expanded, or if new large establishments that chose Idaho as a location after the law were larger than their pre-law counterparts on average, then we should see an increase in the second measure, too.

As Table 4 clearly indicates, the two variables

[13] The observations in this section also apply if we consider *all* RTW and NRTW states, not just those with an industrial mix similar to that of Idaho.

[14] See, for example, Davis (1990) and Davis and Haltiwanger (1990). The trend toward smaller establishment sizes might also be responsible for declining unionization, as explored by Even and Macpherson (1990).

[15] This choice is somewhat ad hoc, but as reported by Holmes (1998), 70 percent of all manufacturing establishments in 1992 were classified in this category. Outside manufacturing, the figure was 38 percent.

Table 4

Large Establishments in Manufacturing: Idaho and Its Neighbors

	Average fraction of employment in large establishments			Average establishment size in large establishments		
	1975-86		1987-96	1975-86		1987-96
Idaho	0.66		0.68	324.6		348.2
	[0.015]		[0.007]	[16.3]		[10.8]
		(2.97)			**(4.03)**	
Washington	0.70		0.69	444.1		451.6
	[0.013]		[0.018]	[25.3]		[42.1]
		(–1.06)			(0.49)	
Oregon	0.63		0.61	157.9		148.4
	[0.016]		[0.007]	[7.5]		[3.7]
		(–3.69)			**(–3.84)**	
Montana	0.51		0.43	261.6		224.8
	[0.035]		[0.028]	[22.6]		[11.1]
		(–5.84)			**(–4.96)**	
Nevada (RTW)	0.51		0.47	236.5		236.6
	[0.020]		[0.035]	[21.4]		[16.3]
		(–2.84)			(0.01)	
Utah (RTW)	0.68		0.68	355.3		358.3
	[0.015]		[0.011]	[30.0]		[11.0]
		(0.01)			(0.32)	
Wyoming (RTW)	0.43		0.42	198.9		184.3
	[0.035]		[0.020]	[16.6]		[8.9]
		(–0.31)			(–2.48)	

NOTE: Standard deviations in brackets. Figures in parentheses are the t statistics associated with the test for the equality of the variable's average across two periods of analysis. Figures in bold indicate significance at 1 percent; t tests are based on unpaired comparisons wth unequal variances.

measuring the importance of large establishments in the manufacturing sector experienced a significant increase in Idaho after the law was passed, but this did not occur in any of the neighboring states. There was about a 3 percent increase in the average fraction of employment in large establishments after the law, and the average establishment size for large establishments grew by about 24 employees, or by 7 percent. These results are consistent with the view (i) that Idaho became an attractive location for large establishments after the RTW law was passed and (ii) that the importance of large establishments in the manufacturing sector increased.

CONCLUSION

We have examined the impact of RTW laws on a state's industrial performance using Idaho's recent experience. We have presented evidence that, even as a late adopter of the law, Idaho experienced a strong decline in unionization and an acceleration in manufacturing growth. Evidence from Idaho's neighbors suggests that a similar pattern was not experienced by other states in the region, which indicates that a regional boom is not a likely explanation. We are cautious, however, in associating the increase in manufacturing growth with the passage of the law. The exact starting time of the decline in unionization and the narrow time frame of fluctuations in the unionization rate before the passage of the law suggest that the relation is not clear cut. The initial decline in unionization and its subsequent rebounding between 1984 and 1987 can potentially be related also to evolving expectations about the eventual ruling on the RTW law—because the bureaucratic process and political battles for the passing of the RTW law took almost two years, with several developments in favor of and against unionism. Adding to our skepticism is the Bunker Hill incidence mentioned earlier, which, by itself, may have been a turning point for the attitudes toward unions in Idaho. In summary, while we are tempted to associate the growth patterns and the decline in unionization with the passage of the law, we cannot rule out the possibility that the RTW law was a result of growing anti-unionism in Idaho and may not have been the cause of growth, per se.

In terms of policy implications, one has to be cautioned before prematurely claiming that Idaho's exceptional growth pattern would apply to every state considering the adoption of the law. Idaho's experience would definitely be more valuable than the evidence from other RTW legislation in the past because it took place in an environment where unionization had already lost considerable ground. As the analysis presented here suggests, even the process leading to the passage of the law may be quite important for the timing of events and the patterns of growth in key variables. Examining the behavior of union organizing activity through certification elections, as well as analyzing the effects on wages, can provide a more detailed analysis of the impact of the RTW law on unionization. The recent experience of Oklahoma, together with Idaho's, can be used for this purpose. The ongoing work by Dinlersoz and Hernández-Murillo (2001) aims to provide more evidence in this direction.

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Appendix

DATA DESCRIPTION

Unionization Rates

Estimates of union membership rates by state and by state industry were obtained using the May files of the Census Bureau's Current Population Survey (CPS) for the period 1977-81, and from the Merged Outgoing Rotation Groups CPS files for the period 1983-2000, following the methodology of Hirsch, Macpherson, and Vroman (2001). The 1982 CPS did not include any questions pertaining to unions, and we set our estimate for 1982 to the average of the estimates in 1981 and 1983. For 1983 and onward, each year included all 12 months of the CPS, with each month including the outgoing rotation groups that were asked the union questions. Prior to 1981, the May surveys administered the union questions to *all* rotation groups; therefore the estimates before 1981 are based on samples that are one third of the size of the samples used after 1983. The May 1981 CPS administered the union questions only to the *outgoing* rotation groups, making sample sizes roughly one-third of the samples used in 1977-80. Union estimates for 1981 are, therefore, the least reliable.[16]

Due to the varying sample sizes, much of the year-to-year variation in the estimated unionization rates before 1983 can be attributed to sampling error. This would be a more serious problem if one wished to reliably estimate union earnings, for example, as opposed to simply estimate union membership rates as we did. The sample sizes of major industry groups in Idaho (overall, manufacturing, and nonmanufacturing) were within the standard measures used in the literature and the Census Bureau's guidelines (larger than 100 employees), except for manufacturing and particularly in 1981.

We were able to verify that our estimates of the proportion of union members from the employed population closely matched those of Hirsch, Macpherson, and Vroman (2001) at the national and state levels. Our estimates of state-industry rates use the same methodology, but there were no available series to verify accuracy.

Data on Industries

The data on industries come from the Census Bureau's County Business Patterns data series for the years 1975-96. The data covers all taxpaying establishments with one or more paid employees. The employment figures are taken from the mid-March period of every year. An establishment is defined as a single location where business is conducted or where services or industrial operations are performed. Establishment size designations are measured by paid employment in the mid-March pay period. Establishment counts for 1983 and onward are based on a determination of active status as of anytime during the year. For the years prior to 1983, establishment counts are based on whether the establishment was active in the fourth quarter. The data is available at the national, state, and county levels. Further details on this data set can be obtained from the Census Bureau's Web site, <www.census.gov>.

[16] Every household that enters the CPS is interviewed each month for 4 months, then ignored for 8 months, then interviewed again for 4 more months. The union questions are asked only to households in their fourth and eighth interview. These are the outgoing rotation groups.

THE COMMONWEALTH FOUNDATION
for Public Policy Alternatives

ISSUE BRIEF

Right to Work:
It's Right and It Works

INTRODUCTION

Pennsylvania is one of 29 states that continues to allow labor unions to force individual employees to become union members or pay union fees in lieu of membership, regardless of whether that person wants to join a union.[1] This stance not only violates an individual's right to free association, it also costs Pennsylvania needed jobs. Those 21 states that prohibit forced union membership and dues, through what is known as a Right to Work law (RTW), have witnessed significant increases in business expansion, job creation, and economic growth, not to mention a lower overall cost of living. Although it is difficult to prove that RTW laws directly caused the improvements, it is even more difficult to discount this phenomenon as a mere coincidence.

HISTORICAL CONTEXT

During the Roosevelt Administration, as part of the New Deal legislation in 1935, Congress passed the National Labor Relations Act (Wagner Act), Section 7 of which gave unions the right to organize and the right to bargain as a collective entity. The Wagner Act created the National Labor Relations Board (NLRB) with the primary responsibilities of enforcing Section 7 and mediating labor disputes.

Besides guaranteeing the rights of organized labor, the Wagner Act also contained several provisions strengthening a union's bargaining power vis-à-vis management. The legislation condoned the establishment of "closed shops"—businesses where management must require union membership before an individual may be employed—in addition to "union shops," where unions themselves force membership once an individual is hired.

The Labor Management Relations Act (Taft-Hartley Act) of 1947 reversed some of these provisions in order to facilitate labor-management relations. In particular, the Taft-Hartley Act outlawed the establishment of "closed shops" and gave states the power to outlaw "union shops" by enacting RTW legislation.

THE BENEFITS OF RIGHT TO WORK LAWS

Despite the caterwauls of organized labor which argue that RTW laws decrease wages and allow non-union workers to unfairly reap the benefits of union endeavors, RTW supporters emphasize that states with RTW laws perform better economically and financially. Advocates contend that just as the rising tide is said to lift all boats, positive economic growth is attributed to the pro-business incentives inherent in voluntary unionism.

1) Rate of Economic Growth is Better in RTW States

Collectively, the 21 states with RTW laws have achieved 25 percent more economic growth from 1991 to 1997 than states without such laws.[2] Furthermore, this gap is expected to widen an additional 9 percent by the year 2001.[3] Indeed, Pennsylvania's projected growth rate is even lower than the average for non-RTW states. Pennsylvania's projected annual growth rate in gross state product (GSP) is 1.7 percent from 1992 to 2005 (second to last among the states), compared to a 2.2 percent annual national average and a 2.5 percent annual average for RTW states.[4]

Typical business costs (i.e., labor, energy, taxes, rent, etc.) largely dictate the economic well-being of a given area. In 1996, *Site Selection Magazine* found that seven of the top ten states rated by "business climate" have enacted RTW laws.[5] At the time, Pennsylvania ranked 14th in the nation. In the 1997 study, RTW states continued to outrank non-RTW states in "business climate" ratings. Furthermore, Pennsylvania's rating dropped to twenty-first in the nation.[6]

In addition, the Pennsylvania Chamber of Business and Industry conducted a study in 1996 describing the "economic momentum" of the 50 states, relying on employment figures, income data, and population to calculate the averages. Pennsylvania ranked fifth from the bottom, with a negative economic momentum of -1.09 percent, meaning that Pennsylvania actually *lost* workers and potential income in 1996.[7] While Pennsylvania's economic performance has improved since the time period studied by the Chamber, many underlying problems remain to be addressed, such as the lack of a RTW law. The study placed some of the blame on labor's considerable strength, stating that:

> It's no accident that PA and states with even less momentum are dominated by deeply entrenched and well-heeled organized labor operations. Given the choice, businesses will gravitate to states with more fresh and modern prospectives on how to create and maintain jobs. In Pennsylvania, Indiana, Michigan, New York, labor's death-grip is destroying economic momentum.[8]

2) Job Creation is Higher in RTW States

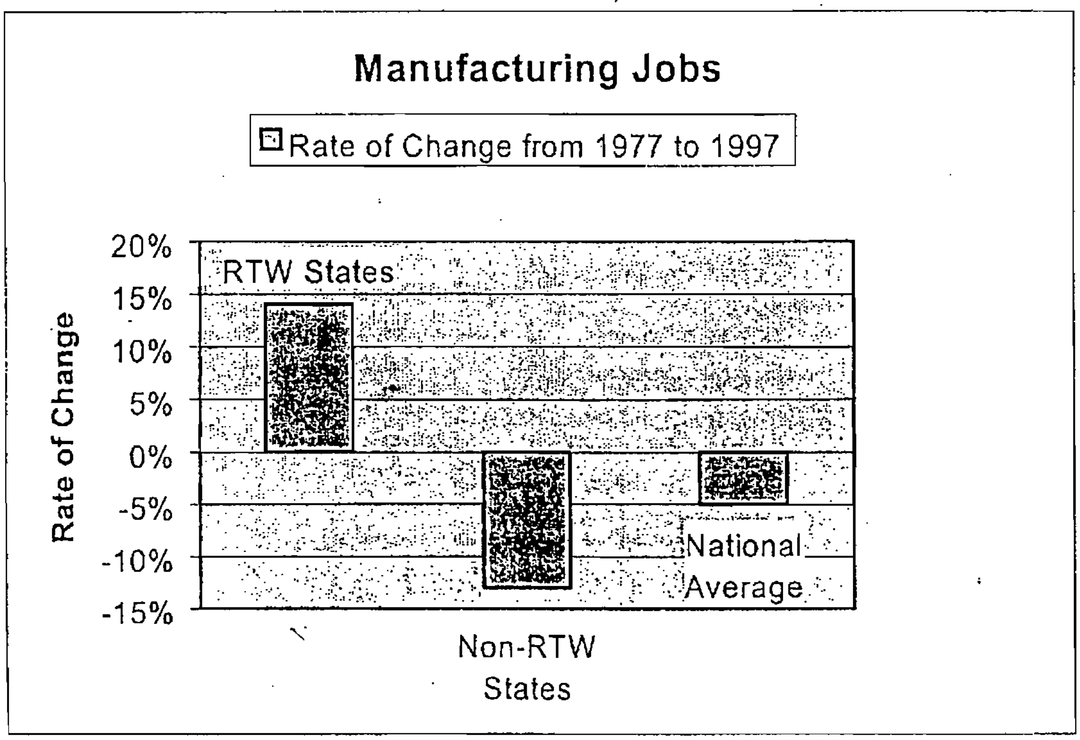
RTW states surpass Pennsylvania and other non-RTW states in overall job creation figures. In 1996, *Forbes Magazine* conducted a survey about job creation and availability; Pennsylvania's 1.8 percent rate of increase in jobs from 1990 to 1996 ranked 41st.[9] According to this study, "eighteen of the 21 Right to Work states (86%) outranked Pennsylvania in job creation."[10]

This bleak assessment is confirmed by other sources. The Harrisburg Patriot News reported that, despite a projected 1.5 percent national average annual job growth rate from 1993 to 2006, Pennsylvania is projected to have only a 1 percent annual rate of state job growth.[11] This trend is advanced by recent statistics. Four out of the top five states that had the strongest rates of job growth in 1996 were RTW states, whereas Pennsylvania ranked sixth from last with a 0.5 percent job growth rate.[12] RTW states continued to outpace non-RTW states in 1997. While Pennsylvania's job growth rate improved significantly to 2.0 percent, it still lagged behind the 2.26 percent average job growth rate of RTW states.[13]

The deficiency in job creation figures is evident when analyzing unemployment statistics. The U.S. Department of Labor reported that Pennsylvania's 1997 unemployment rate was 5.2 percent of the total labor force.[14] The national average unemployment rate was 4.9 percent and the average unemployment rate in RTW states was 4.38 percent. Fifteen of the 21 RTW states had lower unemployment rates than Pennsylvania.

Another noticeable difference between RTW states and those without RTW is the migration of manufacturing jobs. From 1988 to 1993, states without RTW lost 1.26 million manufacturing jobs, compared to an average gain of 10,600 by states with RTW laws.[15] Table 1 displays the differences in manufacturing employment growth from 1977 to 1997 in RTW states and non-RTW states. States without RTW actually lost manufacturing jobs during that period.

Table 1[16]

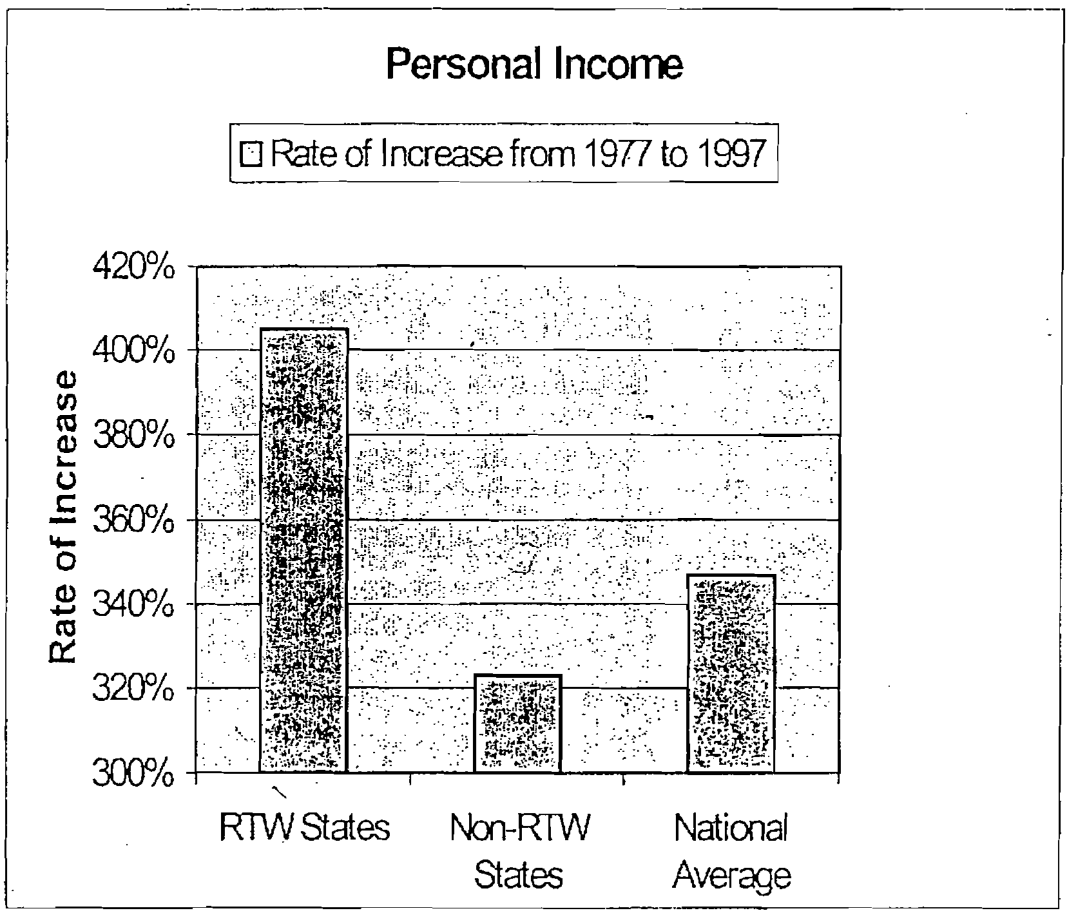


3) **Families in RTW States Have Higher Adjusted Personal Incomes**

In addition to having a superior business climate and job creation history, Dr. James T. Bennett, a professor of economics at George Mason University, claims that "on average, residents of SMSAs [Standard Metropolitan Statistical Areas] in states without Right to Work laws pay 24.5 percent more for food, housing, health care, transportation, utilities, property taxes and college tuition than in Right to Work states."[17] Also, in 1994, states without RTW laws averaged $1,226 more in state and local taxes. In fact, after adjusting taxes and cost of living across the nation, families in RTW states had a real income of $36,540, compared to $33,688 for families in states without a RTW law—a difference of $2,852 in purchasing power.[18]

RTW states also experience faster growth rates in per capita personal income. The United States Department of Commerce projected Pennsylvania's average growth in per capita personal income from 1993 to 2005 to be 1.2% annually.[19] Nineteen of the 21 states with RTW laws ranked higher than Pennsylvania in this analysis.[20] Table 2 shows the difference in rates of growth among RTW states and states without RTW.

Table 2[21]



CONCLUSION

Comparative studies unanimously suggest that a RTW law is both beneficial and valuable in terms of economic growth and job creation. The data cited are rationally plausible effects of Right to Work implementation. Not only may businesses profit as a result of lower labor costs and a more hospitable economic climate, but the greatest beneficiaries of a RTW law would be Pennsylvania's workers who will experience greater freedom, a more stable job market, and a lower overall cost of living.

ENDNOTES

1. The twenty-one states that have Right to Work laws are: Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Iowa, Kansas, Louisiana, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, and Wyoming.

2. "Idaho and the Right to Work, "*Policy Review*, July - August 1997.

3. Rep. Mark Paschall, "Right to Work is Pro-Freedom, Pro-Growth," *Colorado Statesman*, March 28, 1997.

4. *Advocate*, Pennsylvania Chamber of Business and Industry, October 1996.

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7. "Advocates for Pennsylvania Business," Pennsylvania Chamber of Business and Commerce, November 1996.

8. Ibid.

9. *Forbes Magazine*, October 21,1996.

10. "Fingertip Facts: Right to Work and Pennsylvania," Harrisburg, PA: Pennsylvanians for Right to Work, Inc., 1997.

11. *The Harrisburg Patriot News*, January 12-13, 1997.

12. *Kiplinger Washington Newsletter*, November 15, 1996. The top five states, from first to last, are: Nevada, Utah, Idaho, Arizona, and Oregon. Oregon is the only state without a RTW law.

13. Kathleen O'Leary Morgan, Scott Morgan and Mark Uhlig., eds. State Rankings 1998: A Statistical View of the 50 United States, Lawrence, KS: Morgan Quitno Press, 1998. 178.

14. Ibid., 174.

15. Carl A.J. Wright, "Right to Work Bill Would Enhance Image," *Baltimore Business Journal*, March 24,1995.

16. David Kendrick. "Right to Work States Continue Tradition of Economic Growth." Springfield, VA: National Institute for Labor Relations Research, June 10, 1998.

17. James T. Bennett, "A Higher Standard of Living in Right to Work States," Springfield, VA: National Institute for Labor Relations Research, 1994. The "Standard Metropolitan Statistical Area" refers to data collected about certain cities in a state. Dr. Bennett used this data to compare cities within Right to Work states with cities that are not in Right to Work states in order to determine any noticeable differences in a more particular setting.

18. Ibid.

19. Morgan, 111.

20. Ibid.

21. Kendrick.

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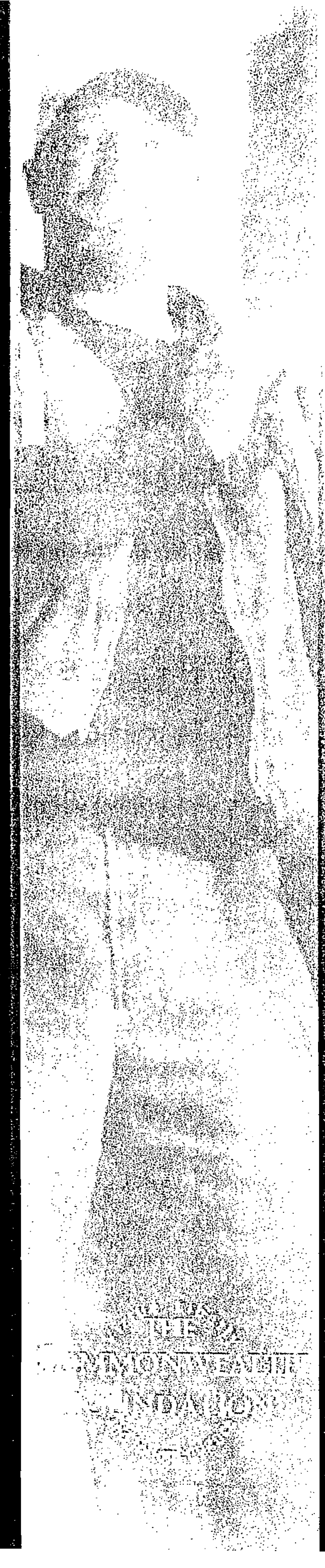
September 1998

A report from
The Commonwealth Foundation

The Impact of Compulsory Unionism on Economic Development

William T. Wilson, Ph.D.



The Impact of Compulsory Unionism on Economic Development

William T. Wilson, Ph.D.

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The Impact of Compulsory Unionism on Economic Development

William T. Wilson, Ph.D.

Executive Summary

With increasing global competition taking a toll on U.S. manufacturing jobs, and state governments and municipalities struggling to achieve greater operating efficiencies in the face of declining revenues and increasing costs, it is time for Pennsylvania policymakers to reassess the costs and benefits of compulsory unionism on the state's economic development. The evidence suggests that the Keystone State and its citizens would greatly benefit if Pennsylvania became a "right-to-work" state.

"Right-to-work" (RTW) laws are state statutes or constitutional provisions that ban the practice of requiring union membership or financial support as a condition of employment. These laws establish the legal right of employees to decide for themselves whether or not to join or financially support a union. The right to enact a RTW law is assured by Section 14(b) of the Federal Labor-Management Relations Act (also called the Taft-Hartley Act) of 1947.

This study predicts that Pennsylvania will continue to fall behind economically relative to RTW states until it adopts a right-to-work policy.

Since the 1940s, twenty-two states have adopted RTW laws, the most recent being Oklahoma, which added such a provision to its constitution in 2001. Pennsylvania, a non-RTW state, is home to 888,000 unionized employees—or 17 percent of all private and government sector workers employed in Pennsylvania in 2001.

Advocates of RTW laws cite a growing body of evidence showing that RTW states enjoy faster economic and employment growth than non-RTW states. This growth advantage—experienced predominantly by the southern and western states, which comprise the bulk of RTW states—has been in evidence ever since Taft-Hartley was passed.

Opponents of right-to-work laws argue, conversely, that compulsory unionism is necessary to offset the power of big business in a market economy. In this view, big business and free markets are responsible for a slowdown in real earnings for workers and for greater income inequality during the past quarter century.

To evaluate the merits of these arguments, this study compares economic development results in RTW and non-RTW states. It examines a broad cross-section of state economic statistics from the past three decades. Pennsylvania's economic performance receives particular attention. The results of this analysis contradict many of organized labor's long-standing contentions.

The following are the key conclusions of the research. Except where otherwise noted, these data are averages of annual figures taken from 1970 through 2000:

- **Pennsylvania's annual economic growth was more than *one-third* slower than that of RTW states.** From 1977 through 1999, Gross State Product (GSP)—the market value of all goods and services produced in a state—increased at a rate 55 percent faster in RTW states than in Pennsylvania, ranking it 41st in the nation in economic growth.

- **Pennsylvania's employment growth was 49th in the nation.** Employment grew at a rate 45 percent faster each year, on average, in RTW states than in non-RTW states. Pennsylvania's employment growth rate was outpaced by RTW states, on average, by 222 percent.

- **Pennsylvania's manufacturing job growth was 46th in the nation.** While RTW states *created* 1.43 million manufacturing jobs between 1970 and 2000, non-RTW states *lost* 2.18 million manufacturing jobs. Pennsylvania lost more than 600,000 manufacturing jobs during this period, a number exceeded only by New York.

- **Pennsylvania ranked 46th in the nation in construction employment growth.** Construction employment grew at a rate 50 percent faster each year, on average, in RTW states than in non-RTW states. Compared to Pennsylvania, construction employment in RTW states grew at a rate 233 percent faster.

- **Pennsylvania's average unemployment rate was 36th in the nation.** Average annual unemployment was 0.5 percentage points lower in RTW states than in non-RTW states.

- **Pennsylvania's rate of increase in per-capita disposable income was slightly lower than that of RTW states.** Per-capita disposable income in Pennsylvania was 1.49 percent higher, on average between 1970 and 2000, than that in RTW states. Although nominal per-capita disposable income was 10 percent higher in non-RTW states in 2000, research shows that the cost of living is also higher in these states; so high, in fact, that after-tax purchasing power—real income—is greater in RTW states. Between 1990 and 2000, per-capita personal income growth in Pennsylvania ranked 31st in the nation.

- **Pennsylvania had the 12th highest unit labor costs—the measure of labor compensation relative to labor productivity—in the nation in 2000.** Unit labor costs were, on average, 93.2 in RTW states and 98.1 in non-RTW states in 2000, while Pennsylvania's were 100.8.

- **Pennsylvania ranked 31st in the nation in poverty rate improvement between 1969 and 2000.** The poverty rate fell only 16 percent in Pennsylvania during this period, while poverty rates in RTW states fell by 37 percent. Only seven states saw increases in poverty—all non-RTW states.

- **Pennsylvania's income inequality ranked 26th in the nation in 2000.** While the income gap rose in both RTW and non-RTW states between 1977 and 2000, it has risen significantly faster in non-RTW states.

It would not be an exaggeration to characterize Pennsylvania's relative economic development during the past three decades as abysmal. Pennsylvania finished in the bottom two quintiles in seven out of nine economic statistics.

While the 1990s brought some very modest improvement in Pennsylvania's relative standing, it was hardly a decade of economic superiority. The state continued its three-decade tradition of below-average growth in output, employment and income. Once a manufacturing powerhouse with a per-capita income well above the national average, the Keystone State failed to finish in the top half of any of the nine economic statistics.

The post-World War II period has brought rapid economic globalization, which has dramatically increased the importance of labor productivity and of policies, such as right-to-work, that affect it. Advances in information technology, greater capital mobility, and lower barriers to entry for business startups are making it increasingly difficult for businesses to pass higher costs on to suppliers and customers. The net effect is increasing pressure for firms to seek geographical regions with lower cost structures and higher rates of labor productivity.

Right-to-work laws increase labor productivity by requiring labor unions to earn the support of each worker, since workers are able to decide for themselves whether or not to pay dues. This greater accountability results in unions that are more responsive to their members and more reasonable in their wage and work rule demands.

There is a clear correlation between economic growth and RTW status. Corroborated by a growing body of research conducted by many independent scholars, the compelling conclusion is that RTW laws increase state economic development and overall prosperity. This study predicts that Pennsylvania will continue to fall behind economically relative to RTW states until it adopts a right-to-work policy.

The Impact of Compulsory Unionism on Economic Development

William T. Wilson, Ph.D.

Introduction

In September 2001, the citizens of Oklahoma overcame powerful union opposition to approve a "right-to-work" provision for their state constitution. "Right-to-work" laws are state statutes or constitutional provisions that ban the practice of requiring union membership or financial support as a condition of employment. This successful campaign made Oklahoma the 22nd state to achieve right-to-work (RTW) status since this option was assured under the Taft-Hartley amendments to the National Labor Relations Act in 1947.

The Oklahoma story is only the latest evidence of a growing interest in reassessing the costs and benefits of the compulsory union regime spawned during the Great Depression, and which remains today one of the primary determinants of labor productivity. With increasing global competition taking a toll on U.S. manufacturing jobs, and state governments and municipalities struggling to achieve greater operating efficiencies in the face of declining revenues and increasing costs, the consequences of compulsory unionism are universally important.

Right-to-work laws increase labor productivity by requiring labor unions to earn the support of each worker, since workers are able to decide for themselves whether or not to pay dues.

Today labor union membership is at its lowest point since the 1950s. Nearly 89 percent of Pennsylvania's private sector workers (and 91 percent nationwide) pay no dues to any union; they either work for themselves or negotiate individually with employers, and manage for the most part to do rather well. In Pennsylvania's manufacturing sector, however, which is a critical component of the state's economic vitality, 19.9 percent or 179,900 manufacturing employees are represented by unions. In addition, Pennsylvania is home to 359,300 unionized state and local government employees, constituting 56.9 percent of the government sector workforce. Total union membership stands today at 888,000, or 17 percent of all workers employed in Pennsylvania during 2001.[1]

Advocates of right-to-work laws point toward a growing body of evidence showing faster economic and employment growth in right-to-work states. This growth advantage—experienced predominantly by the southern and western states, which comprise the bulk of right-to-work states—has been in evidence since the passage of the Taft-Hartley Act in 1947.

Opponents of right-to-work laws, conversely, maintain that compulsory union support is vital to organized labor, which protects workers from the negative aspects of big business and market economies. In this view, firms seeking to maximize profits at the expense of rank-and-file workers are responsible for the slowdown in real earnings and the growing income inequality over the past quarter century.

To evaluate the merits of these arguments, this study compares economic development results in RTW states and non-RTW states by examining a broad cross section of economic statistics from the past three decades. The results of this analysis challenge many of organized labor's long-standing contentions. Particular attention is paid to Pennsylvania's economic performance.

The Nature of the Right-to-Work Debate

Right-to-work is a labor law term used to describe state laws or state constitutional provisions that ban any requirement of union membership or financial dues obligations as a condition of employment. Currently RTW laws exist in 22 states: Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Iowa, Kansas, Louisiana, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, and Wyoming. A right-to-work law secures the right of employees to decide for themselves whether or not to join or financially support a union.

The opportunity to enact a right-to-work law is assured by Section 14(b) of the Federal Labor-Management Relations Act of 1947 (also called the Taft-Hartley Act). That section reads:

> Nothing in this Act 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.

These 44 words are fighting words to labor union officials who charge that their union security and solidarity is jeopardized by allowing individual workers to opt out of any union membership or financial requirements. Right-to-work proponents, however, argue that these laws uphold the civil right of Americans to work without being forced to pay union membership dues or agency fees in order to continue working.

Right-to-work is a labor law term used to describe state laws or state constitutional provisions that ban any requirement of union membership or financial dues obligations as a condition of employment.

In order to understand the role of economic analysis in the RTW debate, it is important to understand the main arguments marshaled by both supporters and opponents of RTW laws. The primary argument of opponents is that workers benefit from union representation, and that therefore they should be required to pay the cost of this representation. Unions argue that RTW laws create "free riders," employees who receive the benefits of a bargaining contract while escaping any financial obligation to reimburse the union for the costs of collective bargaining.

To assess the merits of this claim, however, one must understand the nature of compulsory unionism as it relates to the rights and duties of workers covered by a collective bargaining contract. Most important is the fact that federal law grants unions "exclusive representation" privileges. This means that once a union is "recognized" (i.e., voted in by a majority of employees) it has the sole right to speak for the entire group of employees and negotiate on its behalf. Individual employee negotiations are prohibited. This is true even when individuals have neither voted for a union nor desire union representation. A right-to-work law does not affect this union privilege.

Exclusive representation therefore provides unions with total legal control in employee representation matters. Exclusivity not only makes it illegal for workers to bargain on their own, but also prevents them from hiring another union or agent to deal on their behalf with their employers. Exclusivity normally prevents any redress of a worker's problem without the union being present during an employer-worker meeting.

Supporters of RTW laws claim that because employees are prevented from selecting a competing representative during the union's period of exclusivity—that the union has in essence a monopoly on worker representation—the union is likely to be less accountable to its members. This means that the union may, with relative impunity, provide fewer services to employees or engage in political or social activities having nothing to do with workplace issues. Right-to-work advocates therefore argue that requiring unions to earn the voluntary support of workers is one way to assure that union policies reflect the interests of the represented workers.

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One solution to the alleged "free-rider" problem would be to eliminate exclusive representation and permit a union to represent only those employees desiring its representation. If a worker did not join and pay dues, the union would not be required to represent him, and the worker could negotiate his own employment relationship with the employer. Labor union officials, however, consistently refuse to support this alternative. They fought hard for their federal exclusive representation privileges and jealously protect them. They claim that exclusivity permits the union to wield the bargaining power necessary to balance the interests of workers with the interests of management. Unions rely on their status as the sole representative for all bargaining unit workers to justify the payment of forced union dues.

Supporters of RTW laws also take issue with the assumption, implicit in organized labor's "free rider" argument, that union representation benefits all employees in the negotiating unit. Supporters state that workers are often "captive passengers" rather than "free riders." They claim that there is always a group of highly skilled or ambitious workers whose ability to get ahead is impeded by union contract restrictions such as rigid seniority clauses, which prevent them from competing for advancement. Employees may also oppose union obligations because of union discrimination, which can result from employees objecting to forced financing of union political activities.

The other major argument used by opponents of RTW laws is that working in a right-to-work state is "the right-to-work for less" or "the right-to-starve." This is shorthand for the idea that enactment of a right-to-work law will weaken the union's ability to protect workers from management exploitation, and therefore reduce the economic gains of workers.

The remainder of this study examines this latter claim, and suggests what economic impact a right-to-work law might have in Pennsylvania. The analysis concludes that RTW laws do not lead to a reduction in economic benefits for workers in RTW states and would not do so in Pennsylvania. In fact, there are signs that RTW laws have produced significant benefits for workers in those states. The debate surrounding RTW principles often centers on emotional rhetoric. This analysis, however, provides empirical evidence that will help both supporters and opponents of right-to-work to assess more accurately the impact of a Pennsylvania RTW law on Pennsylvania workers and their families.

Literature Review

More than five decades of experience with RTW laws has yielded a large body of economic analysis of their impact on a variety of economic factors.

Right-to-work laws were enacted, in large part, to promote economic growth. Anecdotal evidence suggests that they have. The economies of RTW states have been growing faster than those of non-RTW states since the late 1940s. Much research attributes this phenomenon to employers seeking to avoid unions. (Cobb, 1982; Newman, 1983; 1984; Cappelli and Chalykoff, 1985; Kochan et al., 1986; Reder, 1988). For a review of the pre-1980s literature see Moore (1985).

Survey research also indicates that RTW laws are important in industry location decisions (for a review of the literature see Cobb, 1982 and Calzonetti and Walker, 1991). Businesses often cite RTW laws or "favorable business climate" as major factors in location decisions. For example, Schmenner (1982) reports that in his survey of Fortune 500 firms a "favorable labor climate" was the most important factor in industry location followed by proximity to markets.

On average, residents in states without RTW laws pay 24.5 percent more for food, housing, health care, utilities, property taxes, and college tuition than those in RTW states

Holmes (1996) finds a precipitous drop in manufacturing activity when crossing the border from a RTW into a non-RTW state. Relative manufacturing employment declines by one-third as one moves from within 25 miles of the border in the RTW state to within 25 miles of the border in the non-RTW state. Holmes finds that this pattern did not become statistically significant until the early 1960s or many years after the passage of the Taft-Hartley Act (which permits RTW laws), suggesting that it may take years for these laws to yield significant returns in industrial development.

Examining 311 metropolitan areas in the U.S. , James Bennett (1994) finds that while families living in non-RTW states have higher average nominal incomes, the average urban family in a RTW state has $2,852 more in after-tax purchasing power per year than the same family would have in a non-RTW state. This is because on average, residents in states without RTW laws pay 24.5 percent more for food, housing, health care, utilities, property taxes, and college tuition than those in RTW states. Moreover, Bennett finds evidence that the gap in living standards between RTW and non-RTW states appears to be growing over time.

Employing similar methodology for nine Midwestern states, David Kendrick (2001) finds inflation-adjusted, after-tax income to be $1,145 higher in RTW states (IA, KS, NE, ND) than in non-RTW states (IL, IN, MN, MO, WI).

RTW vs. Non-RTW: The Regional Breakdown

Most RTW states adopted RTW laws during late 1940s and 1950s. Today such laws are in effect in twenty-two states, most of them in the West and Southeast. The Northeast is the only region without a RTW state while the South (at 12) has the greatest concentration. Table 1 gives the geographic breakdown of RTW states.

The rosters of RTW and non-RTW states have changed little in a half century. After 19 states passed RTW legislation shortly after Taft-Hartley in 1947, only three non-RTW states enacted a RTW law from 1964 until 2001. Oklahoma's passage of a new law in 2001, however, shows that RTW legislation is not entirely dormant. Only one RTW state, Indiana, has repealed its law, in 1965.

Table 1 – Breakdown of States by Region and Right-to-Work Status, 2002

	Northeast	South	Midwest	West	Total
Non-right-to-work	11	2	7	8	28
Right-to-work	0	12	5	5	22
Total	11	14	12	13	50

Northeast	South	Midwest	West
Connecticut	Alabama	**Illinois**	**Alaska**
Delaware	Arkansas	**Indiana**	Arizona
Maine	Florida	Iowa	**California**
Maryland	Georgia	Kansas	**Colorado**
Massachusetts	**Kentucky**	**Michigan**	**Hawaii**
New Hampshire	Louisiana	**Minnesota**	Idaho
New Jersey	Mississippi	**Missouri**	**Montana**
New York	North Carolina	Nebraska	Nevada
PENNSYLVANIA	Oklahoma	North Dakota	**New Mexico**
Rhode Island	South Carolina	**Ohio**	**Oregon**
Vermont	Tennessee	South Dakota	Utah
	Texas	**Wisconsin**	**Washington**
	Virginia		Wyoming
	West Virginia		

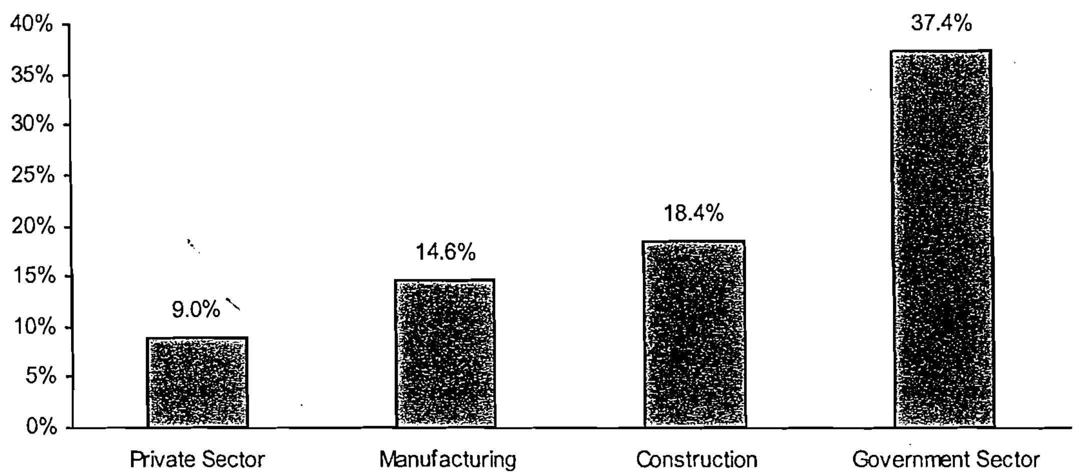
*NOTES: Non-right-to-work states denoted in **bold**. Indiana repealed its RTW law in 1965. Louisiana, Idaho, and Oklahoma passed RTW legislation in 1976, 1985, and 2001, respectively.*

State union membership rates are strongly correlated with RTW status. According to the U.S. Bureau of Labor Statistics, all states in the Great Lakes, Mid-Atlantic and Pacific regions (i.e., non-RTW regions) had union membership rates above the national average of 13.5 percent in 2001, while all states in the East South Central and West South Central divisions had below-average rates. Overall, 29 states had union membership rates below the U.S. average, while 21 states and the District of Columbia had rates higher than average.

Four states had union membership rates over 20 percent in 2001—New York, Hawaii, Alaska, and Michigan (in order of decreasing share). Two states, North and South Carolina, had membership rates below 5 percent. As of 2001, half of the nation's 16.3 million union members lived in six states—California, New York, Illinois, Michigan, Ohio, and Pennsylvania. These six states accounted for 35 percent of wage and salary employment nationally.

Workers in the government sector continued to have unionization rates that were about four-times higher than their counterparts in private industry. In 2001, the unionization rate of government workers was 37.4 percent, compared with 9 percent among private sector employees (see Chart 1). Local government, which includes many workers in the heavily unionized fields of public education (the National Education Association is the largest union in the country), firefighting and law enforcement, had the highest unionization rate, at 43.1 percent. The construction and manufacturing industries also had higher-than-average unionization rates, at 18.4 percent and 14.6 percent, respectively. The nonagricultural industry with the lowest unionization rate in 2001 was finance, insurance, and real estate at 2.1 percent.[2]

Chart 1 – Percent of U.S. Workforce Belonging to a Union, 2001



Source: U.S. Bureau of Labor Statistics

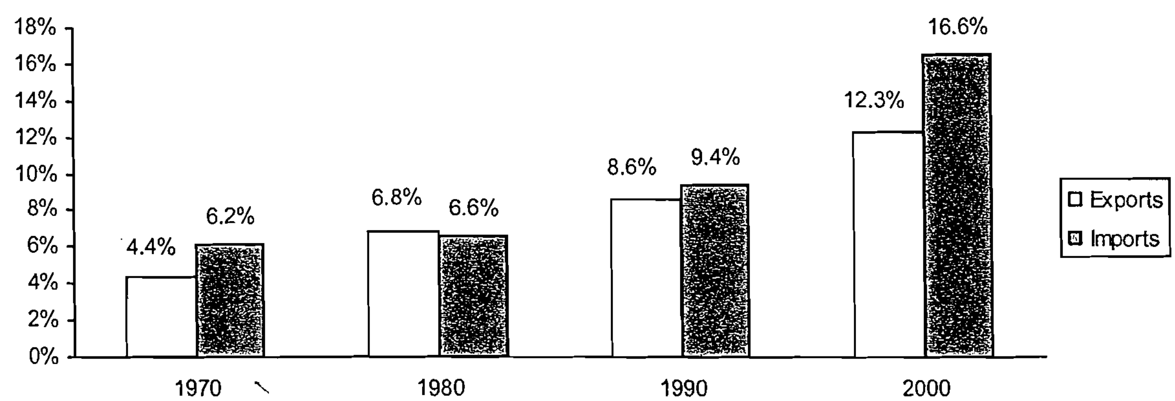
The Influence of Globalization

The post-World War II period has brought rapid economic globalization, which has dramatically increased the importance of labor productivity and of policies, such as right-to-work, that affect it. Advances in information technology, greater capital mobility, and lower barriers to entry for business startups are making it increasingly difficult for businesses to pass higher costs on to suppliers and customers. The net effect is increasing pressure for firms to seek geographical regions with lower cost structures and higher rates of labor productivity.

Between 1948 and 1994, seven tariff reduction rounds significantly liberalized world trade among the developed nations. The United States currently has zero tariffs on one-third of all imports, while the Most-Favored-Nation (MFN) tariff rate has declined to approximately 4.6 percent.

This trade liberalization has produced increasing import and export penetration as a share of the U.S. Gross Domestic Product (GDP). As demonstrated in Chart 2, below, the U.S. export share of GDP almost tripled (4.4 percent to 12.3 percent) while the U.S. import share of the economy more than doubled (6.2 percent to 16.6 percent) between 1970 and 2000. Interestingly, the 1990s witnessed the greatest percentage increase in trade penetration, with both export and import shares rising markedly. This fact will prove interesting throughout the analysis presented in the following sections.

Chart 2 – Export and Import Share of U.S. GDP



Source: U.S. Bureau of Economic Analysis

Before the forces of globalization opened the relatively insular U.S. economy to increased trade, U.S. manufacturers were enjoying near monopolistic market conditions in the United States. The U.S. auto industry, for example, enjoyed a 90 percent domestic market share in 1960.

These benign market conditions for U.S. manufacturers in the early post-World War II period allowed them to pass on higher costs to consumers without a significant loss in market share. These conditions also permitted organized labor to thrive, swelling its ranks to one-third of the American workforce by 1955.

Union membership now hovers around 9 percent of the private sector workforce. Despite organized labor's persistent influence in the national and local political arena, the forces of globalization continue to shrink its ranks. There is every reason to believe that these forces will only intensify in the future as barriers to international trade continue to fall and as relative business costs play a greater role in regional economic performance.

Comparative Analysis of Economic Performance

Nine economic statistics (Gross State Product, employment growth, manufacturing and construction employment, the unemployment rate, per-capita disposable income, unit labor costs, poverty rate, and income inequality) provide the yardstick for comparing economic development between RTW and non-RTW states. These statistics represent a diverse cross-section of economic data, providing a multifaceted comparison of economic development between the states. Contingent upon data availability, results are presented over three decades, 1970 through 2000.[3]

To show key inflection points for each of the nine statistics, the results are presented for each decade in Appendix I. In addition to comparing key differences between RTW and non-RTW states, Pennsylvania's results are presented separately.

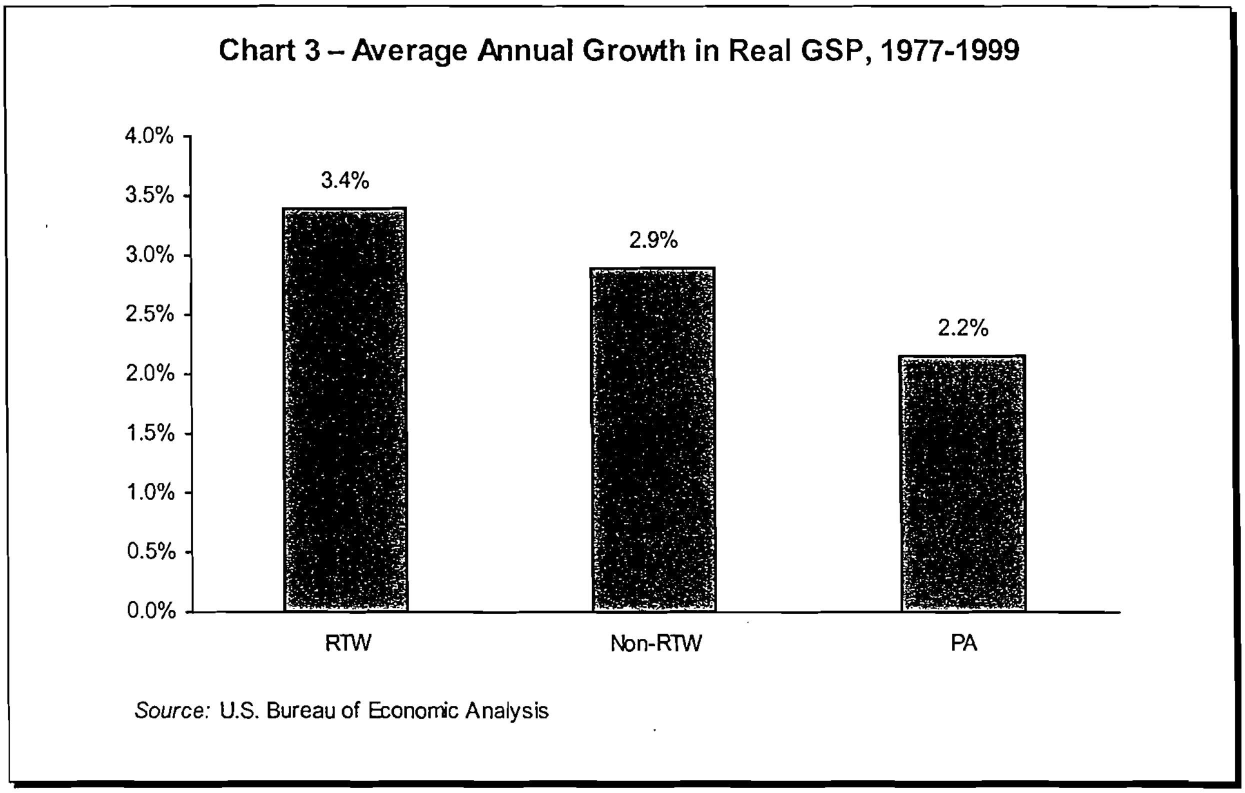
The time series methodology will account for the status change of Louisiana and Idaho, which became RTW states in 1977 and 1985, respectively. Oklahoma is classified as a non-RTW state for purposes of this study, since its change to RTW status is too recent (2001) for the effects to be reflected in the statistics.

Gross State Product (GSP)

Gross State Product (GSP), the market value of all goods and services produced in a state, is the broadest measure of a state's economic activity. Chart 3, next page, summarizes average annual real GSP growth rates between RTW states, non-RTW states and Pennsylvania from 1977-1999.

Right-to-work states enjoyed an average annual GSP growth rate 17 percent higher than the rate of non-RTW states during this time period This is a considerable growth advantage, particularly when compounded over 23 years.

Dividing the results into two equal time periods (1977-88 and 1988-99, both of which include a recession) to discover any changes in relative growth rates yielded even more distinctions (see Table I, Appendix I). While the average annual growth advantage held by RTW states was just 3 percent from 1977-88, it accelerated to 36 percent from 1988-99.



Gross state product growth in RTW states between 1977 and 1999 outpaced growth in Pennsylvania by a stunning 55 percent. Pennsylvania's growth rate even lagged that of its sister non-RTW states by 32 percent. Over this period, Pennsylvania was ranked 41st in economic growth, with Michigan being the only large industrial state to experience slower growth.

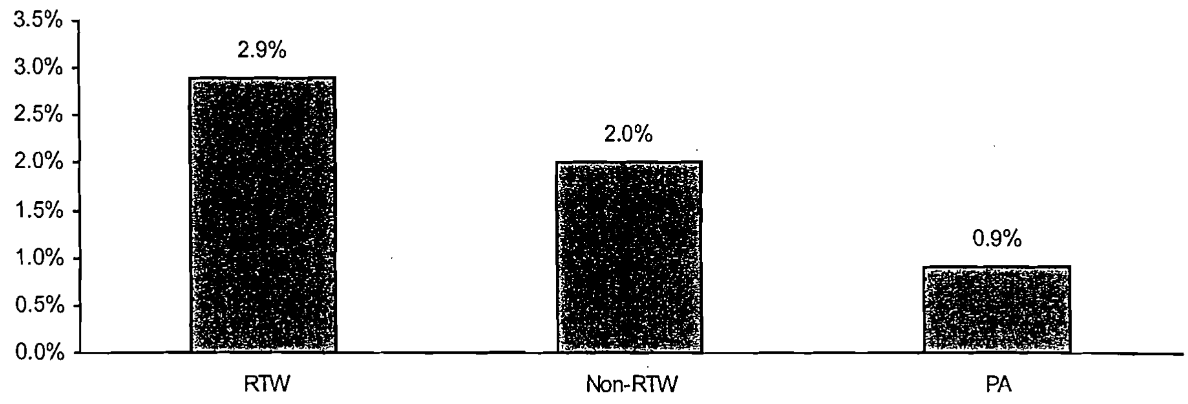
While Pennsylvania's annual GSP growth increased slightly during the 1988-99 period, it still lagged behind the GSP growth of the average RTW and non-RTW states by significant margins (Pennsylvania's state ranking improved to 38th). Only two RTW states (Wyoming and Louisiana) failed to grow as fast.

Payroll Employment Growth

Pennsylvania's total employment growth was abysmal between 1970 and 2000. Right-to-work states averaged on annual *payroll employment growth* rate 222 percent faster than Pennsylvania during this period, placing it 49th in employment growth over this period (only New York fared worse).

Chart 4 (next page) presents average non-farm payroll employment growth from 1970-2000. Although differences dissipated temporarily during the 1980s, it widened significantly in the following decade (see Table II, Appendix I). Pennsylvania's employment growth did not improve during the 1990s, averaging just 1 percent annual growth while RTW states grew at a rate 160 percent faster.

Chart 4 – Average Annual Employment Growth, 1970-2000



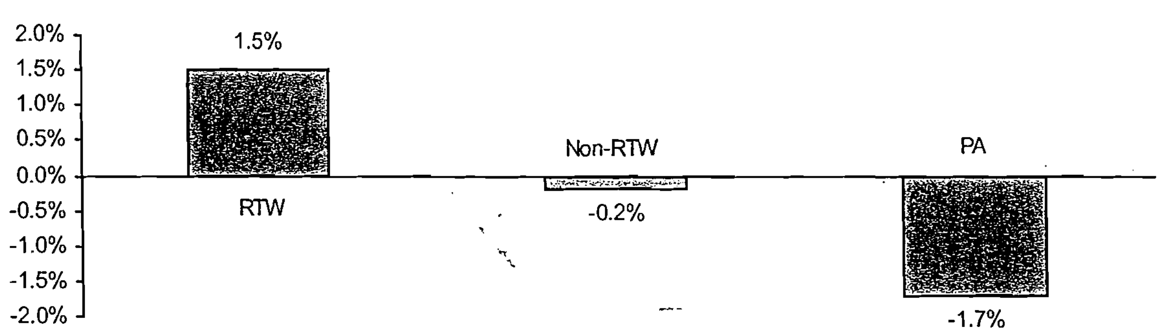
Source: U.S. Bureau of Labor Statistics

Manufacturing Employment Growth

Because the manufacturing workforce has much higher rates of unionization than the overall labor force, the RTW advantage should be even more amplified in this sector. If compulsory unionism drives up labor compensation levels without a commensurate rise in productivity, manufacturers will seek more attractive regions for expansion, leaving non-RTW states with shrinking manufacturing payrolls.

Chart 5, below, illustrates that this clearly has been the case. In a period (1970-2000) where total manufacturing employment dropped by 5 percent nationwide, RTW states augmented their employment base by 1.5 percent annually. Over this period, RTW states enjoyed a 1.7 percentage point growth advantage over non-RTW states, a significantly larger margin than they posted for total payroll employment.

Chart 5 – Average Annual Manufacturing Employment Growth 1970-2000

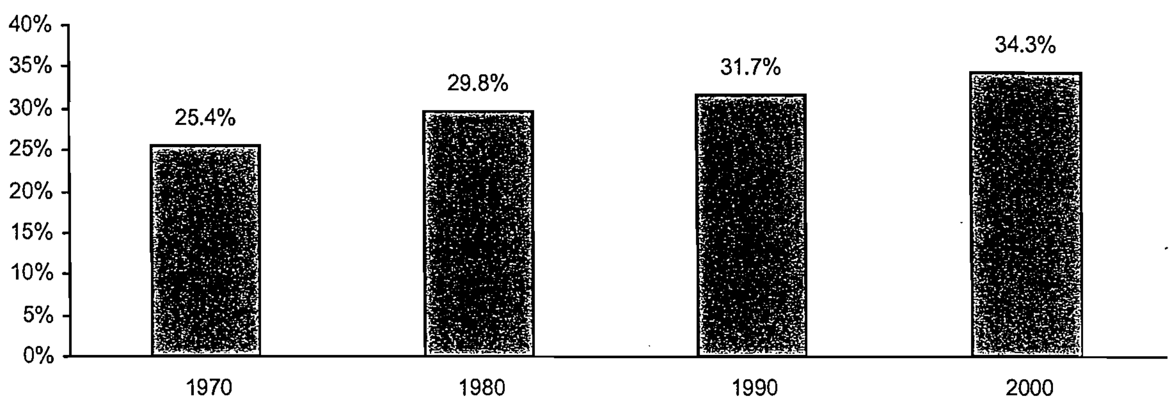


Source: U.S. Bureau of Labor Statistics

While non-RTW states were cutting manufacturing payrolls by 2.2 million from 1970-2000, RTW states were increasing their blue-collar payrolls by 1.4 million. The RTW states' share of total manufacturing jobs (see Chart 6, below) rose from 25.4 percent in 1970 to 34.3 percent by 2000. Despite the loss of 875,000 U.S. manufacturing jobs over this period, all of the 21 RTW states registered a net gain in manufacturing payrolls.

Once a manufacturing powerhouse, the Keystone State fared poorly even in relation to other non-RTW states, losing almost 40 percent (600,000 manufacturing jobs) of its manufacturing employment from 1970 to 2000. Only New York lost more manufacturing jobs over this period.

Chart 6 – RTW States' Share of U.S. Manufacturing Jobs



Source: U.S. Bureau of Labor Statistics

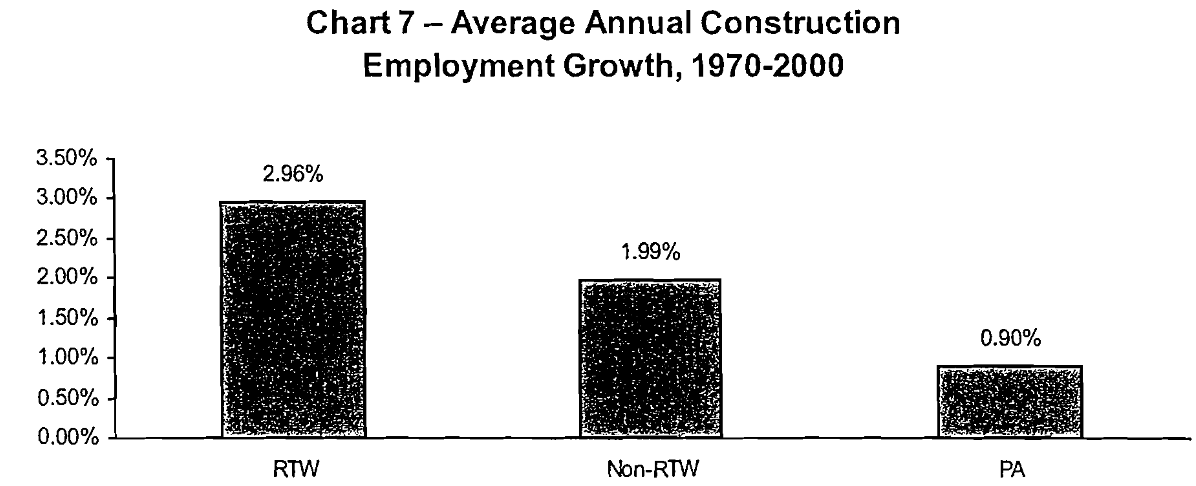
Construction Employment Growth

Not surprisingly, RTW states also had a 50 percent faster construction employment growth rate over this period. While non-RTW states had higher growth in this category during the 1980s (without Wyoming's 7.5 percent decline, RTW states would have had positive construction job growth), the RTW advantage quickly reasserted itself during the 1990s. Pennsylvania ranked 46th in the nation (from 1970-2000), averaging under 1 percent annual growth in construction employment. (See Chart 7, next page.)

Unemployment Rate

From 1978 through 2000, RTW states had lower average annual unemployment rates for all but 5 of 23 years. Right-to-work states also weathered the 1990-91 recession better, with unemployment rising only 0.43 percentage points (from 1990-91) compared to a 1.13 percentage point rise for non-RTW states.

The unemployment gap between RTW and non-RTW states dissipated during the 1990s, reflecting a national trend toward tighter labor markets (and full employment) in most states. This phenomenon produced labor shortages, which were more acute in RTW states.

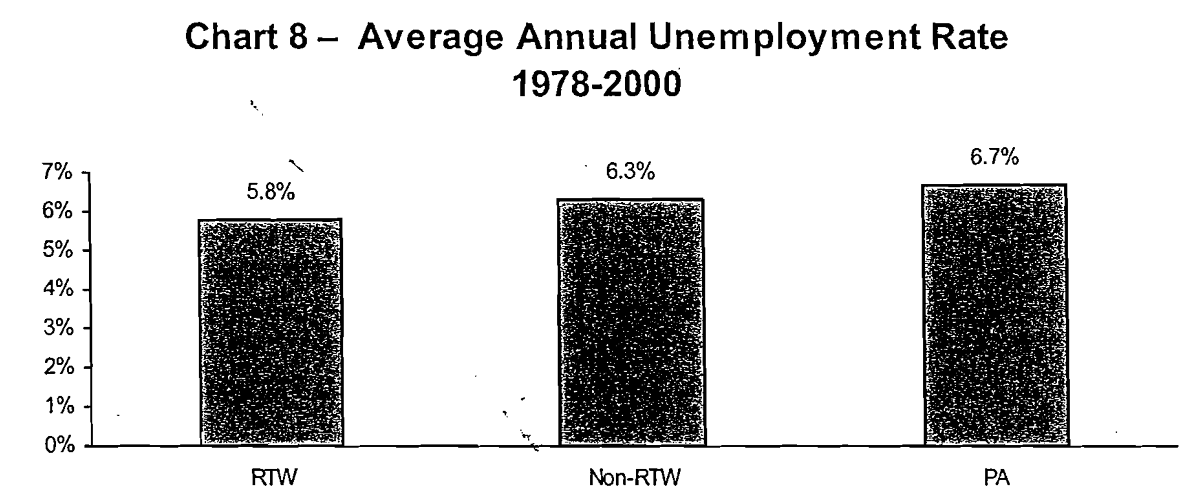


Source: U.S. Bureau of Labor Statistics

Pennsylvania's unemployment rate averaged 6.7 percent from 1970-2000, higher than the 5.8 and 6.3 percent average for RTW and non-RTW states, respectively. While Pennsylvania's average rate did fall toward the national average during much of the 1990s, this was more a consequence of slower growth in Pennsylvania's workforce (i.e., fewer eligible workers), not faster employment growth.

Per-Capita Disposable Income Growth

Critics of RTW legislation have often acknowledged the faster employment growth in RTW states, but counter that it comes at the expense of much lower wages and incomes. Organized labor's mantra, the "right-to-work for less" or the "right-to-starve," has resonated strongly both inside and outside union circles.

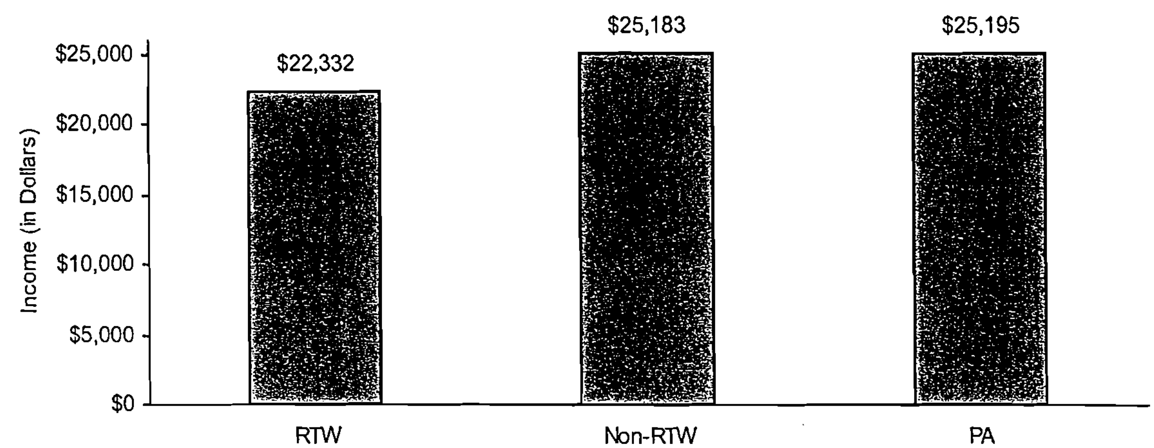


Source: U.S. Bureau of Labor Statistics

Most economic studies have shown higher nominal or money income in non-RTW states. Chart 9 confirms that this is still the case. *Per-capita disposable income,* the per-person income available for spending and saving after paying taxes, was approximately 10 percent higher in non-RTW states in 2000.

But this gap in favor of the non-RTW states does not necessarily mean that purchasing power, or the standard of living, is higher in these states. Higher nominal incomes may simply reflect a higher cost-of-living. This is, in fact, precisely what recent research finds (see Bennett 1994 and Kendrick 2001). James Bennett, for example, found that a typical family in a RTW state had $2,852 *more* in after-tax purchasing power than the same family had in a non-RTW state (even though the non-RTW families had higher nominal incomes).[5]

Chart 9 – Per-Capita Disposable Income, 2000



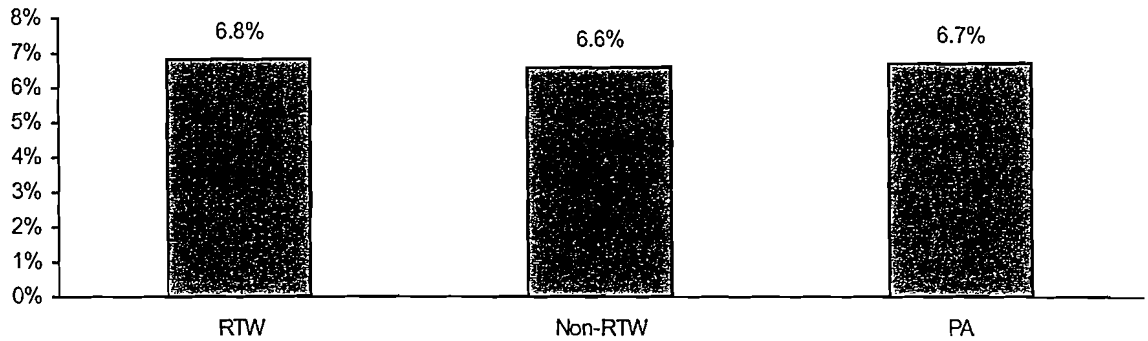
Source: U.S. Bureau of Economic Analysis

Besides evidence of greater purchasing power or higher living standards in the RTW states, there is also hard evidence that the nominal income gap between RTW and non-RTW states is narrowing. As shown in Chart 10 (next page) per-capita disposable income in RTW states grew at a rate 3 percent *faster* than in non-RTW states during the 1970-2000 period. So while non-RTW states have traditionally held a lead in nominal income, this gap continues to narrow.

Disposable income is growing faster in RTW states because they have a flexible work environment in which employers and employees can more easily respond to market incentives. This produces lower costs, higher productivity, and greater income and job growth. Businesses increasingly reject "top-down" management, relying instead upon employee participation in every aspect of a firm's decision-making process. This inevitably favors a work environment that is more responsive to the changing needs of both workers and employers.

Employees protected by RTW legislation can quit supporting a union without quitting their job. Reid and Faith (1987) find that unions in RTW states reward members more equally and are less concerned with day-to-day administration of complex bargaining agreements.

Chart 10 – Average Annual Growth in Per-Capita Disposable Income, 1970-2000



Source: U.S. Bureau of Economic Analysis

This makes collective job actions more difficult and prompts local union leaders to strive more for consensus among their members. Right-to-work legislation forces a union to bargain more in the immediate interest of all members because members can withdraw from a union at any time without cost to themselves.

Rigid union-negotiated employee contracts typically have the perverse effect of reducing the pay of the most productive workers while increasing compensation for less productive workers. Any system that grants union officials the legal power to impose unwanted union representation on its most productive workers, and then forces them to pay for it, ultimately lessens the income and standard of living of all its citizens.

Pennsylvania, ranking 11th in the nation in private-sector union membership (as a percent of the private workforce in 2001), had per capita disposable income growth of 6.7 percent over this period, ranking it 24th overall. Pennsylvania's growth ranking fell to 31st during the 1990s.

Unit Labor Costs

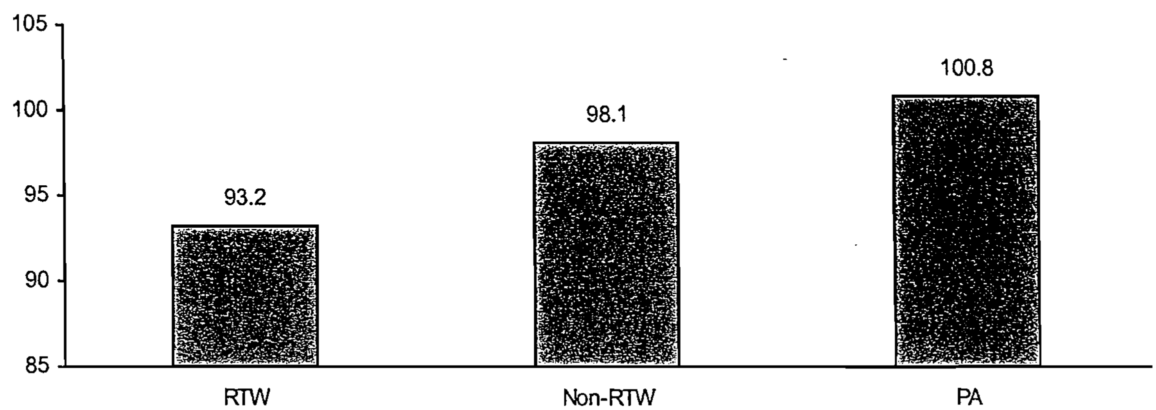
Unit labor costs measure labor compensation relative to labor productivity. Defined as compensation per unit of real output (see Appendix II for a detailed description of this index), unit labor costs are a better indication of business profitability than labor compensation alone, and are the most crucial component of the cost of doing business within a geographical region.

Labor compensation growth, over time, is directly linked to growth in labor productivity. A workforce that is producing more output per person (i.e., higher productivity) will experience higher growth in real earnings. This growth in real earnings will not jeopardize a region's business competitiveness when matched by commensurate productivity gains. Growth in labor compensation that is not matched by productivity gains, conversely, will result in higher unit labor costs and deteriorating business competitiveness.

Relative business costs have been a major factor affecting regional economic performance. As U.S. businesses find it increasingly difficult to raise prices due to greater competition from both home and abroad, relative business costs will likely play an increasingly important role in business location decisions. States or regions that maintain uncompetitive unit labor costs will see an exit of capital and business formation to more competitive regions.

Table VII in Appendix I shows the time series of unit labor costs for each state and the District of Columbia from 1990 through 2000. Not surprisingly, the results show a clear pattern of higher unit labor costs in non-RTW states during the past decade. According to Economy.com, only three RTW states in 2000—Florida, Utah and Virginia—had unit labor costs above the national average (U.S.=100) while 11 non-RTW states exceeded the average. In 2000, RTW and non-RTW states' unit labor costs averaged 93.2 and 98.1, respectively. Pennsylvania's unit labor costs fell below the national average during the first half of the decade before rising by decade's end, ranking it with the 12th highest unit labor costs in 2000.

Chart 11– Unit Labor Costs, 2000



Source: Economy.com

Poverty Rate

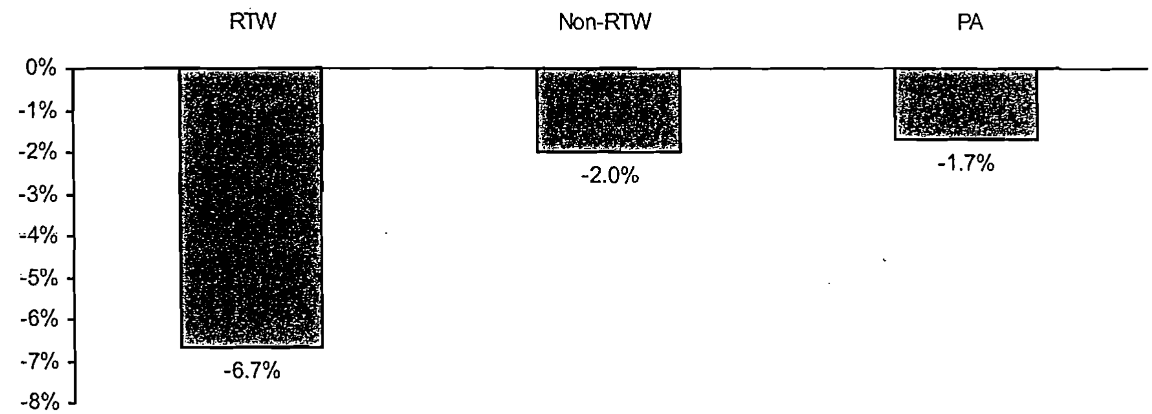
The U.S. Bureau of Labor Statistics defines the poverty rate as the percentage of people who live in households with cash incomes below the "poverty line." This line is not a fixed dollar amount but varies by family size and type. For example, the poverty line for a single person in 2001 was $9,044 and $18,104 for a typical family of four.

The U.S. poverty rate fell between 1949 and 1969, from 39.7 percent to 14.4 percent. The official poverty rate reached a historic low in 1973, then stopped falling. Between that year and 2000, the poverty rate rose from 11.1 percent to 11.3 percent.

While the poverty rate failed to drop nationwide over the past three decades, it showed a distinctly different pattern in the RTW states. In 1969, RTW states had much higher poverty rates (averaging 18.3 percent) than non-RTW states (averaging 12.2 percent), but by 2000 RTW states saw a sharp drop in their average rate to 11.6 percent, placing the poverty rate only 0.3 percentage points higher than the U.S. poverty rate. All 21 RTW states' (including Louisiana and Idaho) poverty rates have declined over the past 30 years. Based on the U.S. Bureau of Labor Statistics' decennial survey from the past four decades, the poverty rate declined 6.7 and 2.0 percentage points for RTW and non-RTW states, respectively, from 1969 to 2000 (see Table VIII, Appendix I for actual poverty rates).

Pennsylvania's poverty rate fell 1.7 percentage points—from 10.6 percent in 1969 to 8.9 percent by 2000—an overall change of 16 percent, while poverty rates in RTW states fell by 37 percent. This lackluster performance ranked it 31st in the nation in its poverty rate improvement over this period.

Chart 12 – Change in Poverty Rates, 1969-2000



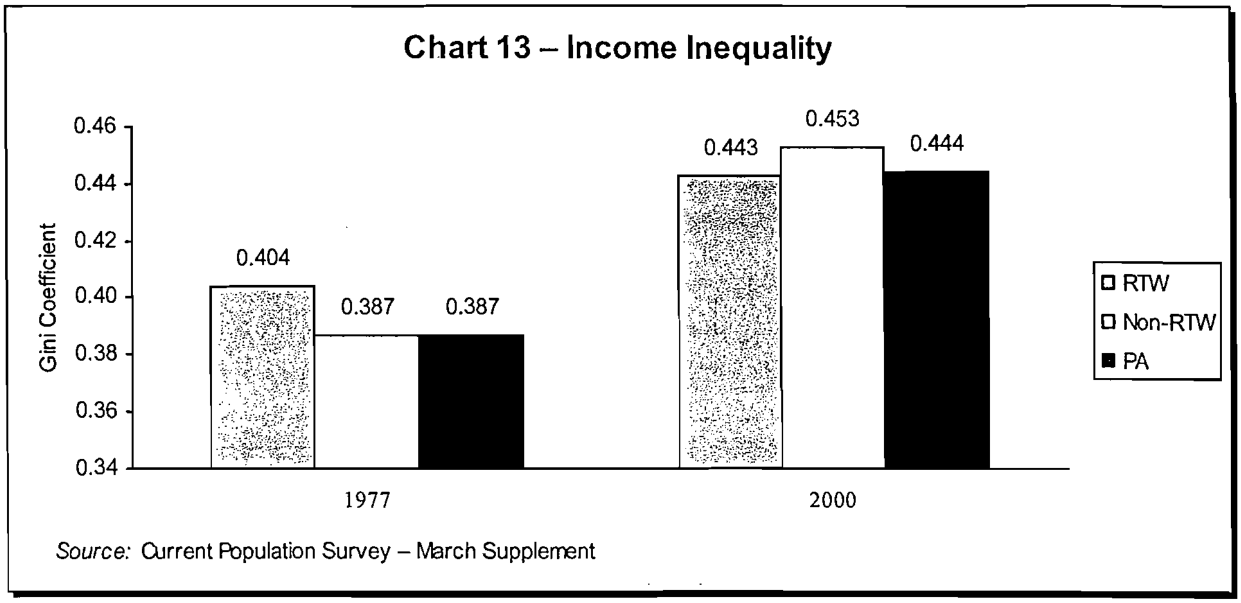
Source: U.S. Bureau of Labor Statistics

Income Inequality

In per-capita disposable income, RTW state grew faster than non-RTW states. In this section *income inequality* is examined to more accurately determine changes in the *distribution* of income.

Neither economic theory nor history suggests that a market economy should lead to an even distribution of earnings. In free markets, prices adjust to equate supply and demand. When demand for skilled workers outstrips supply, the wages of those at the top of the distribution grow faster than the wages of those at the bottom.

In other words, rising income inequality is not necessarily an unhealthy sign in a growing economy. Such a rise occurred in the second half of the 1800s, a period of strong economic growth and rising real incomes for most Americans. Falling income inequality, conversely, is not necessarily positive. Inequality remained relatively high going into the 20th century but declined rapidly during the Great Depression. Nevertheless, income inequality, examined in context with the other statistics, may yield some additional insight into the differences between RTW and non-RTW states.



Income inequality, as measured by the *Gini Coefficient* (see Appendix III), ranges from zero to one, with zero indicating perfect income equality (all income distributed equally to all households) and one indicating perfect income inequality (all income accruing to one household). The Gini Coefficients for RTW states, non-RTW states and Pennsylvania are shown in Chart 13 for 1977 (first year available) and 2000. See Table IX in Appendix I for the Gini Coefficient for the years 1977, 1985, 1993 and 2000.[6]

Like poverty rates, income inequality started significantly higher in RTW states.[7] While inequality rose for both over the past quarter century (as a trend, it has risen in the United States), it has risen significantly faster for non-RTW states. By 1992, the positions had reversed: RTW states had, on average, *lower* income inequality than non-RTW states.

Lower income inequality in the RTW states would have seemed unthinkable a generation ago. A quarter century of superior economic growth in the RTW states adds to the increasing evidence that economic growth is the best way to raise the incomes of all Americans.

Pennsylvania's Gini coefficient rose from .387 to .444 from 1977-2000, with most of the rise occurring during the 1980s and early 1990s. In 1977, the state ranked 18th in income inequality (i.e., 17 states had lower income inequality). By the turn of the millennium, its state ranking had fallen to 26th.

These results contradict the widely held belief that the presence of unions and the power of collective bargaining mitigate income inequality by distributing earnings more evenly. Although this may be true within individual unionized companies, it is not true for any state's economy as a whole. The favorable economic climate produced by RTW laws appears to be responsible for general income growth that benefits all workers and reduces income disparity.

Conclusion

Right-to-work laws were enacted by states primarily to attract and to promote economic growth. This study, employing a large cross-section of economic indices, finds a broad-based trend of superior economic development in RTW states over the past three decades.

The comparative statistics on income growth, unit labor costs and poverty rates are the most novel and interesting. Until now, organized labor has stressed the necessity of compulsory union support as a countervailing force against corporate power and rising income inequality. Although they have often derided RTW laws as "right-to-work for less," advocates of compulsory unionism have no economic basis upon which to support that claim.

The RTW economic growth advantage clearly accelerated during the 1990s. Poverty fell further; disposable income grew faster and manufacturing employment expanded in RTW states. There is a strong possibility that this widening gap in economic development will only continue in the future. Heightened competition, both at home and from abroad, has increased the importance for firms of finding regions with a flexible labor environment and lower cost structures. The advent of the Internet, advances in information technology, lower barriers to entry for most industries, and the increased mobility of financial capital all favor states with RTW legislation.

Table 2 summarizes Pennsylvania's ranking, vis-à-vis all 50 states, over the 1970-2000 period with a separate listing for the 1990s. The state rank is enumerated so that the higher the ranking, the better the economic performance. The 1990s were singled out to see whether the state's relative economic performance changed during the past decade.

Table 2 – Pennsylvania: A Final Look

Economic Variable	Year(s)	State Rank
Gross State Product	1977-1999	**41**
	1988-1999	**38**
Employment Growth	1970-2000	**49**
	1990-2000	**45**
Manufacturing Employment Growth	1970-2000	**46**
	1990-2000	**38**
Construction Employment Growth	1970-2000	**46**
	1990-2000	**42**
Unemployment Rate	1978-2000	**36**
	1990-2000	**34**
Per-Capita P.I. Growth	1970-2000	**24**
	1990-2000	**31**
Unit Labor Costs	2000	**39**
	1990	**42**
Poverty Rate Improvement	1969-2000	**31**
Income Inequality	1977	**18**
	2000	**26**

It would not be an exaggeration to characterize Pennsylvania's relative economic development during the past three decades as abysmal. Pennsylvania finished in the bottom quintile for four of the economic statistics (Gross State Product, manufacturing, construction and total employment growth) and in the next to last quintile for another three (unemployment rate, unit labor costs, poverty rate improvement).

While the 1990s brought some very modest improvement in Pennsylvania's relative standing, it was hardly a decade of economic superiority. The state continued its three-decade tradition of below-average growth in output, employment and income. Once a manufacturing powerhouse with a per-capita income well above the national average, the Keystone State failed to finish in the top half of any of the nine economic statistics.

Pennsylvania even fared significantly worse against its sister union shop states over the past three decades, experiencing slower GDP and employment growth and higher unit labor costs.

This study shows a clear correlation between economic growth and RTW status. Corroborated by a growing body of research conducted by many independent scholars, the compelling conclusion is that RTW laws increase state economic development and overall prosperity. Therefore, if Pennsylvania does not adopt a right-to-work policy it will continue to fall behind economically relative to other right-to-work and non-right-to-work states.

Endnotes

1. Bureau of Labor Statistics, *Current Population Survey* as reported in "Union Membership and Earnings Data Book" published by the Bureau of National Affairs.

2. Paragraph provided by the Bureau of Labor Statistics' *"Union Members Summary 2001."*

3. RTW and non-RTW summary statistics are weighted by the number of states in each category (typically 29 and 21 for non-RTW and RTW, respectively).

4. 1999 was the last year available as of this writing.

5. Lacking cost-of-living data by state, Bennett used Consumer Price Index data from a large number of metropolitan areas to compare RTW versus non-RTW states.

6. The Census Bureau's decennial survey data on *family* income starts in 1969 but the most recent survey (i.e. – 1999) is currently unavailable. The series from the *household* survey (used in the study), conversely, has data for 2000 but dates back only to 1977. The annual series from the Current Population Survey is not interchangeable because the series uses a different scale than the decennial survey.

7. The poverty gap between RTW and non-RTW states was even greater in earlier periods. The U.S. Census Bureau's 1969 decennial survey shows Gini coefficients of .372 and .348 for RTW states and non-RTW, respectively.

Appendix I: Summary Tables

Table I. Real Gross State Product Growth (1977-1999)

	RTW	Non-RTW	PA
1977-1988	3.10%	3.00%	2.00%
1988-1999	3.80%	2.80%	2.40%
1977-1999	3.40%	2.90%	2.20%

Table II. Employment Growth (1970-2000)

	RTW	Non-RTW	PA
1970-1979	4.40%	2.90%	1.10%
1980-1989	2.00%	1.90%	0.90%
1990-2000	2.60%	1.60%	1.00%
1970-2000	2.90%	2.00%	0.90%

Table III. Manufacturing Employment Growth (1970-2000)

	RTW	Non-RTW	PA
1970-1979	3.40%	1.20%	-1.10%
1980-1989	0.70%	-0.60%	-2.60%
1990-2000	1.00%	-0.60%	-1.00%
1970-2000	1.50%	-0.20%	-1.70%

Table IV. Construction Employment Growth (1970-2000)

	RTW	Non-RTW	PA
1970-1979	5.70%	2.80%	0.70%
1980-1989	-0.30%	2.40%	2.30%
1990-2000	4.40%	2.50%	1.00%
1970-2000	3.00%	2.00%	0.90%

Table V. Unemployment Rate (1980-2000)

	RTW	Non-RTW	PA
1980	6.20%	7.30%	7.80%
1990	5.20%	5.60%	5.40%
2000	3.80%	4.00%	4.20%

Table VI. Per-capita Disposable Income Growth (1970-2000)

	RTW	Non-RTW	PA
1970-1979	10.00%	9.40%	9.40%
1980-1989	6.70%	6.90%	7.10%
1990-2000	4.00%	3.80%	3.80%
1970-2000	6.80%	6.60%	6.70%

Table VII. Unit Labor Cost Index (1990-2000)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alaska	90.5	91.2	91	91.1	91.5	92.1	92.9	92.8	91.8	91	90.9
Alabama	93.9	94.9	94.7	94.7	95.5	96.2	96.6	96.7	97	96.8	96.7
Arkansas	88.7	88.4	88.5	87.8	87.5	87.8	87.8	88.2	88.8	89.8	90.5
Arizona	104.6	106	103.8	101.2	97.9	96.3	96.2	96.8	98	98.5	98.7
California	103	102.5	102.4	102.8	102.9	102.4	102.7	102.7	102.7	102.1	101.9
Colorado	104.1	104.3	104.5	103.9	103.3	103.3	104.2	103.8	103.3	103	103.7
Connecticut	107.1	105.9	105.6	105.6	105.4	105	105.6	106.5	106.6	106.5	106.1
District of Columbia	111.8	112.1	112.6	111.4	109.8	109.1	109.7	110.8	110.5	112.1	113.8
Delaware	89.7	88.3	87.3	86.5	87.2	88	89.3	90.7	92.9	94.7	95.7
Florida	101	101.4	101.7	101.5	101.5	101	100.8	100.4	100.9	101.1	101.3
Georgia	98.9	98.6	97.9	96.6	95.9	95.4	94.9	94.9	95.4	96	96.3
Hawaii	95.4	95.1	95.4	97.5	98.9	99.1	98.6	98.6	98.8	98.7	98.4
Iowa	81	80.8	81	82	82.7	83.7	83.1	82.2	82.6	85.1	88.1
Idaho	88.3	89.9	91.3	90.5	89.6	89.2	89.8	90.6	91.4	92.4	92.5
Illinois	100.7	100.6	100.8	101.5	101.3	102	101.3	101.6	101.7	102.6	103.5
Indiana	95.8	96.2	96.3	96.5	96.7	97.8	98.3	98.1	97.6	98.5	99.3
Kansas	87.4	87.2	87.6	89.7	91.2	93.1	93.6	94.1	93.8	94.2	94.5
Kentucky	86.3	87.1	88.3	88.9	89.2	89.5	90.1	90.9	91.5	92	92.3
Louisiana	85.2	85.6	87.3	90	91.6	90.6	89.9	89.7	91.3	91.9	92.4
Massachusetts	108.5	108.3	109.2	108.9	108.8	108.4	108.7	109.7	109.8	109.4	108.7
Maryland	98.7	99.2	100.2	101.3	102.3	103.1	103.6	104	103.7	103.4	103.1
Maine	99.4	99.8	99.8	98.8	99	98.4	98.6	98.1	98.6	99	99.5
Michigan	105.2	105	105.8	106.4	106.9	107.6	108.4	108.7	109.2	109.1	109.2
Minnesota	98	98.3	99.4	101	101.6	102.6	102.2	101.2	99.8	98.6	98.4
Missouri	96.2	96.3	96.4	97	97.7	98.1	97.3	96.8	96.5	97.1	97.6
Mississippi	84	84.7	84.6	84.7	85.4	86.6	87.5	88.6	90.5	92	92.8
Montana	86.2	85.2	85.5	85.9	87.1	88.2	89.7	89.8	89.7	89.5	89.6
North Carolina	94.2	94.1	95	95.6	96.1	96.2	96.8	96.8	97.2	96.1	95.5
North Dakota	87.3	85.7	84.9	87.3	88.1	90.4	89.5	90.6	90.1	92	92.5
Nebraska	85.9	84.5	84	84.9	85	84.6	81	80.2	80.1	82.2	82.5
New Hampshire	100.3	99.3	97.6	96.5	97.8	97.6	96.9	96.2	96.1	95.7	94.5
New Jersey	108.5	108.6	108.1	106.7	106.4	106.3	107.5	108.5	109.7	110.1	110.4
New Mexico	100.9	94.1	88.2	79.9	76.4	75.5	77.2	78.7	78.2	77	76.1
Nevada	93.8	94.1	94.5	94	93.7	92.9	93.5	94	94.8	96	96.6
New York	103.4	104.2	103.8	104	103.8	103.8	103.5	103.7	103.3	102.8	101.7
Ohio	98.1	97.1	96.7	97.8	98.4	99	98.4	97.9	97.5	97.3	97.4
Oklahoma	82.9	82.2	81.4	81.5	81.8	82.1	82.1	81.8	82.3	82.8	83.1
Oregon	99.8	100.4	100	99.8	99.9	99.5	98.1	97.1	96	96.5	95.5
PENNSYLVANIA	102.9	102.1	101.1	100.1	100.2	99.6	99.7	99.3	100.1	100.6	100.8
Rhode Island	99.5	97.4	95.9	93.8	94.2	94.5	94.4	91.3	91.1	90.2	90.7
South Carolina	95.6	96	96.9	96.9	97.1	96	96	96.3	97.2	97.9	98.6
South Dakota	68.4	67.6	66.8	65.8	65.8	66.1	66.7	67.6	68.4	70.4	71.9
Tennessee	96.5	96.9	95.8	94.2	94.1	95.4	96.9	98.3	98.6	98.5	98.4
Texas	93.6	94	94.7	94.7	94	93.5	94.2	94.5	95.5	95.8	96.7
Utah	101.9	101.6	101.5	103	105.1	105.4	102.7	100.5	99.3	100.4	100.2
Virginia	99.8	99.6	99.6	99.4	99.6	99.4	99.6	99.9	100.1	101.1	101.7
Vermont	91.9	92.2	92.3	92.5	93	94.4	95.7	96.1	96.3	96.6	97.2
Washington	94.5	94.9	96.1	96.6	97.6	98.3	100.6	102.6	103.8	104.2	103.6
Wisconsin	94.9	95.8	96.9	97.4	98.2	99	99.7	99.6	99	99.1	99
West Virginia	92.5	92.7	93.2	93.1	92.7	92.6	92.6	93	93.3	93.9	94.5
Wyoming	78.2	77.6	78.6	80	82.1	81.5	79.9	77.9	77.1	77.8	78.5

U.S. = 100

NOTE: Non-RTW states are in **bold**.

Source: Economy.com

Table VIII. Poverty Rate (1969, 1979, 1989, 2000)

	RTW	Non-RTW	PA
1969	18.30%	12.20%	10.60%
1979	14.20%	11.30%	10.50%
1989	14.90%	11.70%	11.10%
2000	11.60%	10.20%	8.90%

Table IX. Income Inequality (1977, 1985, 1993, 2000)

	RTW	Non-RTW	PA
1977	0.405	0.388	0.387
1985	0.416	0.406	0.403
1993	0.432	0.437	0.449
2000	0.443	0.453	0.444

Appendix II: Unit Labor Cost Calculation – Provided by Economy.com

The wage and output data for both the states and metropolitan areas come from the U.S. Bureau of Economic Analysis (BEA) and the U.S. Bureau of the Census, with missing data estimated by Economy.com. The labor compensation measure used is total wages and salaries by place of work, divided by total employment in each industry. Productivity per worker for metropolitan areas is estimated by applying the 1992 ratio of metropolitan to state level productivity to the gross state product release of the BEA. This ratio is calculated using data on revenues and costs obtained from the 1992 Economic Census.

Since relative regional economic growth is most influenced by enhancing local production of exportable goods and services, industries predominantly driven by local demand have been excluded from the analysis. These industries are primarily retail trade, construction, real estate, many service industries, and the government sector. In order to compare different regions properly, Economy.com constructed separate indices of worker productivity and earnings per worker for each metropolitan area, covering employment for each export industry at the three-digit Standard Industrial Classification level. However, a measure that used the aggregate output and earnings per worker would be biased by the region's industrial composition. Thus, the index of unit labor costs re-aggregates productivity and compensation per employee, using the national share of employment in each industry as the weights. This adjustment is necessary because certain industries have higher output per earnings ratios, due to the occupational mix of its employment and the capital structure of its operations. For example, productivity in the automotive industry is extremely high compared to other industries, whereas in the textile industry it is relatively low. As a result of these industry differences, a region with a high proportion of automotive manufacturing will appear to have lower unit labor cost than a region concentrated in textiles. However, by using the national share of employment in each industry to weight the productivity for each region, the index avoids this industry composition bias.

Employment composition is based upon SIC employment classifications. Economy.com uses three-digit SIC data in order to gauge the regional industry mix properly. However, since data in industries with a particularly small number of employees are subject to a higher degree of inaccuracy, a minimum size of 100 employees was imposed on the index. If the industry had fewer than the necessary 100 employees in the metropolitan area, then the relevant state labor cost measure was used.

The formula below is used to calculate Economy.com's wages and salary and productivity index for any level of aggregation, which weights each three-digit SIC equally for each area, with national employment share for each year serving as weights. This composition-adjusted aggregate is then indexed by the appropriate state earning or productivity measure. Labor costs are then calculated by dividing the earnings index by the analogous productivity index. The unit labor cost index was created for each year by dividing the region's unit labor cost index by the national unit labor cost index.

Definition of Relative Earnings or Productivity Indexes

$I^{St}{}_K = \{S_k\,(Y/Emp)^{St}{}_k * (Emp^{US}{}_k\,/Emp^{US}{}_K)\}/(Y/Emp)^{US}{}_K$

Where:
Y = Output or Earnings
St = State or Region
K = Total for all industries
k = Three-digit SIC industry

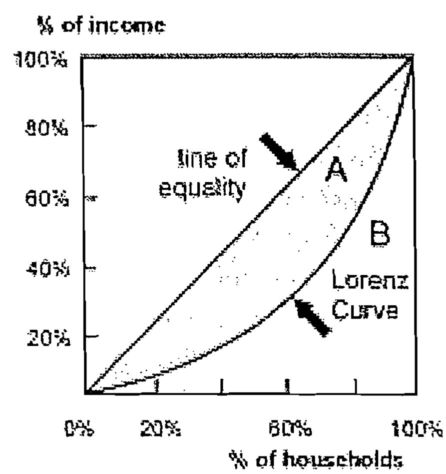
Appendix III: The Gini Coefficient

The Gini Coefficient is a summary measure that captures the deviation shown in the Lorenz curve. It is calculated as follows:

$$G=\frac{1}{2}\sum_{i=1}^{k}|x_i-y_i|$$

where x_i and y_i are the relative frequencies, rather than the cumulative frequencies, and k is the number of classes/groups.

The Gini Coefficient can be expressed graphically with the Lorenz curve, where: G = A/(A+B) , where A is the area between the line of equality and the Lorenz curve, and B is the area under the Lorenz curve.



A Lorenz Curve illustrates inequality.

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THE STANDARD OF LIVING IN RIGHT TO WORK STATES

by

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January 2005

prepared for and distributed by

NILRR

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Introduction

Twenty-two states now have Right to Work laws. In these states employees do not have to financially support a union with monopoly bargaining privileges at their work place in order to keep their jobs. In states that do not have Right to Work laws, an employee of a unionized firm must financially support the union in order to get or keep his or her job. Individual employees in these states are coerced into paying union dues, regardless of whether they desire union representation. Union officials often defend this coercion on the grounds that employees are better off in states without Right to Work laws. They point to evidence that money incomes are higher in the 28 forced-unionism states.

But to answer the question of whether employees are better off in forced-unionism states, we must look beyond money income. Just as money income varies across regions, so do other factors that influence individual well being. Other tangible factors vary across regions, such as cost of living and the burden of taxation. To ascertain whether employees are really better off in forced-unionism states, we must compare money income after adjusting for cost of living and taxes. It is this adjusted income measure that captures the real purchasing power of employees' disposable income in the different states. Intangible factors that influence individual well being, such as freedom from coercion, also vary across regions. In the present study, we approach this issue utilizing a new data base and a different methodology than that utilized in previous studies.

A Literature Review

Two early studies addressing this issue compared after-tax real income in Right to Work states with that in forced-unionism states.[i] These studies found that money income was higher in forced-unionism states. However, once money income was adjusted for the cost of living and taxes, after-tax real income was higher in Right to Work states.

One of the criticisms of these early studies is that a cost of living index is more difficult to determine for an entire state than for individual cities. For example, my own state of Colorado includes some cities with an extraordinarily high cost of living, e.g. Boulder; and many communities with a very low cost of living, e.g. communities in the San Luis Valley. Lumping such disparate communities together under a single cost of living index may bias the analysis.

A more recent study by James T. Bennett addressed this criticism by using data at the city level.[ii] The rationale is that cities across the country are likely to be more homogeneous than different communities within a state. Therefore, cost of living indexes calculated for individual cities are likely to be more comparable.

Bennett calculated adjusted household income, utilizing the data from *Places Rated Almanac*, by David Savageau and Ralph D'Agostino.[iii] *Places Rated Almanac* provides data for household income and cost of living indexes incorporating state and local taxes for 329 Standard Metropolitan Areas (SMSAs). Bennett found that, on average, it cost 15 percent more to live in an SMSA in a forced-unionism state than it did in a Right to Work state. The adjusted income for two-income households in SMSAs in Right to Work states averaged $64,070, compared to $62,085 in forced-unionism states, a difference of $1985.

Estimating the Standard of Living in Right to Work States and Forced-Unionism States

Clearly, it is crucial to use adjusted income, taking into account differences in cost of living and taxes, in comparing standards of living in Right to Work states and forced-unionism states. This study utilizes an approach similar to that in the Bennett study, comparing adjusted household income in SMSAs. However, the current study relies on a different data base, and introduces some refinements in methodology.

It is not possible to replicate earlier studies of this issue, such as the Bennett study, because of a lack of data. The U.S. Bureau of Labor Statistics no longer publishes the data series used in the early studies noted above. The last *Places Rated Almanac* was published in 2000, and there are no plans to publish an updated edition.

However, a new publication does provide the data necessary to calculate adjusted household incomes: *Cities Ranked and Rated*, by Bert Sperling and Peter Sanders.[iv] In that publication, the cost of living indexes take into account the cost of food, health care, transportation, recreation, utilities, property taxes, housing prices and rents, and state and local income taxes, property taxes, and sales taxes.

SMSAs in Right to Work States and in Forced-Unionism States

The SMSAs in the present study differ from those in the Bennett study for several reasons. There are four SMSAs in the present study that were not included in the Bennett study. Of these four SMSAs, two are in Right to Work states (Auburn-Obelika and Shreveport), and two are in forced-unionism states (Corvallis and Nassau-Suffolk). Since the Bennett study was published, one state, Oklahoma, has enacted a Right to Work law. Therefore, four Oklahoma SMSAs (Enid, Lawton, Oklahoma City and Tulsa) that were labeled as forced-unionism SMSAs in the Bennett study are included among the Right to Work SMSAs in the present study.

In the Bennett study, seven SMSAs were omitted from the analysis because part of the SMSA lies within a Right to Work state, and part lies within a forced-unionism state. Six of these SMSAs are omitted from the present study for the same reason: Clarksville-Hopkinsville, Davenport-Moline-Rock Island, Fargo-Moorehead, Grand Forks, Kansas City, and Washington, D.C. However. one of these SMSAs, Fort Smith, which lies in

Oklahoma and Arkansas, is included in the present study because both of these states are now Right to Work states.

Cost of Living

The Sperling/Sanders data for cost of living is divided into three different attributes: Indexes and Taxes, Housing, and Necessities. The following table illustrates the cost of living for San Luis Obispo-Atascadero-Paso Robles, California. The cost of living index is a composite of all attributes expressed as an index against the national average of 100.

Table 1. Sample Cost of Living Table from San Luis Obispo-Atascadero-Paso Robles, California

COST OF LIVING SCORE: 5
RANK: 312

INDEXES AND TAXES	AREA	U.S. AVERAGE
Cost of Living Index	155.1	100.0
Financial Progress Index	66.5	100.0
Income Tax Rate	6.00%	4.625%
Sales Tax Rate	7.250%	6.474%
Property Tax Rate	$11.1	$15.6
HOUSING	AREA	U.S. AVERAGE
Median Home Price	$380,130	$160,100
Home Price Appreciation	18.2%	7.1%
Median Rent	$917	$670
Homes Owned	52.9%	63.9%
Homes Rented	33.3%	25.3%
Housing Affordability	42.0%	54.5%
NECESSITIES	AREA	U.S. AVERAGE
Food Index	112.4	100.0
Housing Index	236.1	100.0
Utilities Index	116.6	100.0
Transportation Index	111.5	100.0
Healthcare Index	112.0	100.0
Miscellaneous Cost Index	103.2	100.0

Source: Bert Sperling and Peter Sander, *Cities Ranked and Rated,* Wiley Publishing, Inc., Hoboken, N.J., 2004, p.71.

Adjusted Household Income

In the following tables, the adjusted household income is calculated for Right to Work states and forced-unionism states. Table 2 lists alphabetically the 133 SMSAs in the Right to Work states and their related data. Table 3 lists the 158 SMSAs in forced-unionism states and their related data. For each SMSA, the following data are listed: typical household income (unadjusted income), the cost of living index (which includes state and local taxes), and adjusted household income. (Household incomes for both Right to Work and forced-unionism states in the following tables are significantly lower than in the Bennett study because the data furnished in *Cities Ranked and Rated* cover *all* households, and not just two-income households, as was the case with the Bennett study.)

Table 2. Adjusted Household Income in SMSAs in Right to Work States

Metropolitan Area	State	Household Income	Cost of Living Index	Adjusted Household Income
Abilene	TX	$37,944	75.7	$50,124
Albany	GA	$39,954	81.9	$48,784
Alexandria	LA	$33,022	80.4	$41,072
Amarillo	TX	$40,876	80.3	$50,904
Anniston	AL	$32,190	79.1	$40,695
Asheville	NC	$40,773	94.8	$43,009
Athens	GA	$37,878	95.4	$39,704
Atlanta	GA	$59,423	96.6	$61,514
Auburn-Opelika	AL	$30,615	89.2	$34,322
Augusta-Aiken	GA-SC	$40,794	84.7	$48,163
Austin-San Marcos	TX	$60,068	95.3	$63,030
Baton Rouge	LA	$42,753	95.0	$45,003
Beaumont-Port Arthur	TX	$38,803	80.0	$48,504
Birmingham	AL	$45,047	94.0	$47,922
Bismarck	ND	$43,662	88.8	$49,169
Boise	ID	$46,322	91.5	$50,625
Brownsville-Harlingen-San Benito	TX	$27,679	76.2	$36,324
Casper	WY	$45,555	86.7	$52,543
Cedar Rapids	IA	$54,695	91.6	$59,711
Charleston-North Charleston	SC	$42,473	100.0	$42,473
Charlotte-Gastonia-Rock Hill	NC-SC	$51,559	95.7	$53,876
Charlottesville	VA	$50,130	102.5	$48,907
Chattanooga	TN-GA	$41,671	87.1	$47,843
Cheyenne	WY	$45,478	92.5	$49,165
Columbia	SC	$48,503	89.5	$54,193
Columbus	GA-AL	$37,565	83.2	$45,150
Corpus Christi	TX	$39,789	80.3	$49,550
Dallas	TX	$59,153	95.0	$62,266
Danville	VA	$31,305	78.0	$40,135
Daytona Beach	FL	$35,521	86.5	$41,065
Decatur	AL	$40,227	82.1	$48,998
Des Moines	IA	$55,547	94.2	$58,967
Dothan	AL	$35,089	80.6	$43,535
Dubuque	IA	$44,603	88.8	$50,229
Duluth-Superior	MN-WI	$39,939	91.5	$43,649
El Paso	TX	$31,932	83.1	$38,426
Enid	OK	$34,287	76.8	$44,645
Fayetteville	NC	$42,175	87.4	$48,255
Fayetteville-Springdale-Rogers	AR	$40,370	82.0	$49,232
Flagstaff	AZ-UT	$40,572	102.9	$39,429

Florence	AL	$32,788	79.1	$41,451
Florence	SC	$39,026	84.0	$46,460
Fort Lauderdale	FL	$44,247	113.9	$38,847
Fort Smith	AR-OK	$37,488	76.4	$49,068
Fort Walton Beach	FL	$41,400	88.6	$46,727
Fort Worth-Arlington	TX	$55,157	85.9	$64,211
Gadsden	AL	$31,460	77.8	$40,437
Gainesville	FL	$34,900	91.1	$38,310
Goldsboro	NC	$35,942	81.8	$43,939
Greensboro-Winston-Salem-High Point	NC	$46,430	91.6	$50,688
Greenville	NC	$34,395	87.0	$39,534
Greenville-Spartanburg-Anderson	SC	$42,630	89.4	$47,685
Hattiesburg	MS	$32,581	80.9	$40,273
Hickory-Morganton-Lenoir	NC	$41,734	85.9	$48,584
Houma	LA	$37,128	88.3	$42,048
Houston	TX	$55,692	91.8	$60,667
Huntsville	AL	$49,596	87.1	$56,941
Iowa City	IA	$48,432	97.7	$49,572
Jackson	MS	$46,856	79.1	$59,236
Jackson	TN	$42,715	83.3	$51,279
Jacksonville	FL	$45,338	89.0	$50,942
Jacksonville	NC	$43,448	83.2	$52,221
Johnson City-Kingsport-Bristol	TN-VA	$32,897	79.9	$41,173
Jonesboro	AR	$36,436	77.5	$47,014
Killeen-Temple	TX	$38,754	80.5	$48,142
Knoxville	TN	$40,072	87.2	$45,954
Lafayette	LA	$32,755	81.4	$40,240
Lake Charles	LA	$40,197	80.6	$49,872
Lakeland-Winter Haven	FL	$35,584	87.9	$40,482
Laredo	TX	$29,892	77.3	$38,670
Las Vegas	NV-AZ	$48,723	103.1	$47,258
Lawrence	KS	$39,088	95.6	$40,887
Lawton	OK	$37,990	81.2	$46,786
Lincoln	NE	$50,530	93.9	$53,813
Little Rock-North Little Rock	AR	$45,421	83.4	$54,462
Longview-Marshall	TX	$36,536	76.0	$48,074
Lubbock	TX	$37,470	80.2	$46,721
Lynchburg	VA	$38,368	85.3	$44,980
Macon	GA	$42,106	85.9	$49,017
McAllen-Edinburg-Mission	TX	$25,726	74.2	$34,671
Memphis	TN-AR-MS	$46,253	89.2	$51,853
Miami	Fl	$39,604	108.8	$36,401
Mobile	AL	$37,313	87.3	$42,741
Monroe	LA	$35,118	85.6	$41,026
Montgomery	AL	$41,426	84.8	$48,851
Myrtle Beach	SC	$42,302	94.9	$44,575
Naples	FL	$57,326	123.0	$46,607
Nashville	TN	$51,379	92.3	$55,665
New Orleans	LA	$40,672	94.0	$43,268
Ocala	FL	$31,547	86.1	$36,640
Odessa-Midland	TX	$39,029	76.2	$51,219
Oklahoma City	OK	$40,347	84.3	$47,861
Omaha	NE-IA	$52,174	92.2	$56,588
Orlando	FL	$45,146	95.6	$47,224
Panama City	FL	$36,595	88.7	$41,257
Pensacola	FL	$36,969	88.0	$42,010
Phoenix-Mesa	AZ	$49,779	98.7	$50,435
Pine Bluff	AR	$33,714	79.1	$42,622
Pocatello	ID	$39,862	85.1	$46,841
Provo-Orem	UT	$51,599	101.8	$50,687
Punta Gorda	FL	$32,633	95.2	$34,278
Raleigh-Durham-Chapel Hill	NC	$56,436	103.6	$54,475
Rapid City	SD	$40,540	90.0	$45,044
Reno	NV	$54,011	111.2	$48,571

Richmond-Petersburg	VA	$52,306	94.1	$55,586
Roanoke	VA	$45,151	84.7	$53,307
Rocky Mount	NC	$32,401	85.3	$37,985
Salt Lake City-Ogden	UT	$56,636	97.3	$58,208
San Angelo	TX	$36,982	77.3	$47,842
San Antonio	TX	$43,228	82.8	$52,208
Sarasota-Bradenton	FL	$42,449	100.0	$42,449
Savannah	GA	$41,802	91.0	$45,936
Sherman-Denison	TX	$39,443	81.6	$48,337
Shreveport-Bossier City	LA	$38,129	78.5	$48,572
Sioux City	IA-NE	$42,492	84.5	$50,286
Sioux Falls	SD	$52,728	92.6	$56,942
Sumter	SC	$34,456	82.4	$41,816
Tallahassee	FL	$41,207	99.5	$41,414
Tampa-St. Petersburg-Clearwater	FL	$41,625	92.6	$44,951
Texarkana	TX-AR	$35,017	73.4	$47,707
Topeka	KS	$43,972	82.7	$53,170
Tucson	AZ	$40,683	98.0	$41,513
Tulsa	OK	$44,811	86.8	$51,626
Tuscaloosa	AL	$36,407	90.9	$40,052
Tyler	TX	$43,361	80.8	$53,665
Victoria	TX	$43,566	75.5	$57,703
Waco	TX	$39,295	78.3	$50,185
Waterloo-Cedar Falls	IA	$41,213	83.2	$49,535
West Palm Beach-Boca Raton	FL	$51,876	111.2	$46,651
Wichita	KS	$47,797	85.8	$55,707
Wichita Falls	TX	$36,732	76.9	$47,766
Wilmington	NC	$40,224	97.6	$41,213
Yuma	AZ	$31,911	88.5	$36,058
SUM		$5,543,543	11710.4	$6,293,575
AVERAGE		$41,681	88.0	$47,320

Table 3. Adjusted Household Income in SMSAs in Forced-Unionism States

Metropolitan Area	State	Household Income	Cost of Living Index	Adjusted Household Income
Akron	OH	$46,466	93.8	$49,537
Albany-Schenectady-Troy	NY	$48,861	110.0	$44,419
Albuquerque	NM	$45,403	94.6	$47,995
Allentown-Bethehem-Easton	PA	$48,157	99.2	$48,545
Altoona	PA	$37,387	81.4	$45,930
Anchorage	AK	$70,833	118.5	$59,775
Ann Arbor	MI	$62,119	110.3	$56,318
Appleton-Oshkosh-Neenah	WI	$52,817	89.1	$59,278
Atlantic City-Cape May	NJ	$45,694	103.1	$44,320
Bakersfield	CA	$36,457	95.0	$38,376
Baltimore	MD	$55,897	106.9	$52,289
Bangor	ME	$36,147	94.4	$38,291
Barnstable-Yarmouth	MA	$50,114	141.7	$35,366
Bellingham	WA	$41,931	106.6	$39,335
Billings	MT	$41,554	90.3	$46,018
Binghamton	NY	$38,750	84.7	$45,750
Bloomington	IN	$39,395	94.9	$41,512
Bloomington-Normal	IL	$54,304	94.4	$57,525
Boston	MA-NH	$63,784	162.9	$39,155
Boulder-Longmont	CO	$66,602	140.8	$47,303
Bremerton	WA	$47,689	108.1	$44,116
Bridgeport	CT	$79,096	136.8	$57,819
Buffalo-Niagara Falls	NY	$43,785	87.6	$49,983
Burlington	VT	$52,027	109.2	$47,644
Canton-Massillon	OH	$41,834	90.9	$46,022
Champaign-Urbana	IL	$40,856	92.1	$44,360
Charleston	WV	$38,723	84.9	$45,610

Chicago	IL	$63,096	119.8	$52,668
Chico-Paradise	CA	$34,282	116.1	$29,528
Cincinnati - Covington	OH-KY-IN	$50,023	93.0	$53,788
Cleveland-Lorain-Elyria	OH	$46,630	99.6	$46,817
Colorado Springs	CO	$52,276	103.1	$50,704
Columbia	MO	$44,112	89.5	$49,287
Columbus	OH	$50,334	95.8	$52,541
Corvallis	OR	$48,602	109.0	$44,589
Cumberland	MD-WV	$31,176	79.0	$39,463
Dayton-Springfield	OH	$45,798	87.7	$52,221
Decatur	IL	$44,896	77.4	$58,005
Denver	CO	$62,986	118.9	$52,974
Detroit	MI	$55,418	101.5	$54,599
Dover	DE	$41,631	96.0	$43,366
Eau Claire	WI	$43,031	92.1	$46,722
Elkhart-Goshen	IN	$49,970	87.3	$57,239
Elmira	NY	$38,514	81.8	$47,083
Erie	PA	$40,948	85.9	$47,669
Eugene-Springfield	OR	$39,250	99.0	$39,646
Evansville-Henderson	IN-KY	$43,944	81.1	$54,185
Flint	MI	$48,069	88.5	$54,315
Fort Collins-Loveland	CO	$52,465	116.3	$45,112
Fort Wayne	IN	$48,099	83.6	$57,535
Fresno	CA	$35,635	103.6	$34,397
Gary	IN	$47,700	97.6	$48,873
Glens Falls	NY	$39,879	95.6	$41,714
Grand Junction	CO	$39,565	99.3	$39,844
Grand Rapids-Muskegon-Holland	MI	$53,279	93.5	$56,983
Great Falls	MT	$36,389	86.3	$42,166
Greeley	CO	$42,835	106.2	$40,334
Green Bay	WI	$52,905	93.7	$56,462
Hagerstown	MD	$42,490	91.5	$46,437
Harrisburg-Lebanon-Carlisle	PA	$48,289	91.1	$53,007
Hartford	CT	$59,970	113.1	$53,024
Honolulu	HI	$60,112	152.7	$39,366
Huntington-Ashland	WV-KY-OH	$29,981	81.2	$36,922
Indianapolis	IN	$52,554	87.3	$60,199
Jackson	MI	$44,494	89.7	$49,603
Jamestown	NY	$33,311	84.6	$39,375
Janesville-Beloit	WI	$46,791	91.5	$51,138
Johnstown	PA	$30,250	79.7	$37,955
Joplin	MO	$36,904	74.2	$49,736
Kalamazoo-Battle Creek	MI	$42,578	88.5	$48,111
Kankakee	IL	$43,233	93.7	$46,140
Kenosha	WI	$49,238	98.0	$50,243
Kokomo	IN	$47,020	83.2	$56,514
La Crosse	WI-MN	$42,400	91.7	$46,238
Lafayette	IN	$43,472	86.3	$50,373
Lancaster	PA	$50,626	94.6	$53,516
Lansing-East Lansing	MI	$48,810	90.2	$54,113
Las Cruces	NM	$30,819	84.9	$36,300
Lewiston-Auburn	ME	$36,956	95.2	$38,819
Lexington	KY	$44,066	92.1	$47,846
Lima	OH	$40,804	86.3	$47,282
Los Angeles-Long Beach	CA	$50,203	139.3	$36,039
Louisville	KY-IN	$46,230	89.5	$51,654
Madison	WI	$54,655	105.3	$51,904
Manchester	NH	$59,976	115.5	$51,927
Mansfield	OH	$36,080	87.3	$41,329
Medford-Ashland	OR	$38,067	106.0	$35,912
Merced	CA	$31,368	111.7	$28,082
Milwaukee-Waukesha	WI	$53,304	106.8	$49,910
Minneapolis-St. Paul	MN-WI	$65,330	114.7	$56,957

Missoula	MT	$40,912	104.1	$39,301
Modesto	CA	$43,640	116.7	$37,395
Muncie	IN	$37,248	80.5	$46,271
New Haven-Meriden	CT	$68,472	116.9	$58,573
New York	NY	$52,380	161.0	$32,534
Newark	NJ	$68,961	140.5	$49,083
Oakland	CA	$71,689	179.3	$39,983
Olympia	WA	$46,826	104.5	$44,810
Owensboro	KY	$37,214	81.4	$45,717
Parkersburg-Marietta	WV-OH	$36,670	86.8	$42,247
Peoria-Pekin	IL	$46,992	83.9	$56,010
Philadelphia	PA-NJ	$55,192	105.2	$52,464
Pittsburgh	PA	$41,809	90.0	$46,454
Pittsfield	MA	$41,865	108.6	$38,550
Portland	ME	$52,418	112.4	$46,635
Portland-Vancouver	OR-WA	$54,290	109.7	$49,490
Providence-Fall River-Warwick	RI-MA	$47,646	118.4	$40,242
Pueblo	CO	$34,723	87.7	$39,593
Racine	WI	$52,627	95.6	$55,049
Reading	PA	$47,777	93.8	$50,935
Redding	CA	$33,940	105.3	$32,232
Riverside-San Bernardino	CA	$45,837	112.6	$40,708
Rochester	MN-WI	$62,051	102.7	$60,420
Rochester	NY	$49,179	90.5	$54,341
Rockford	IL	$48,069	91.4	$52,592
Sacramento	CA	$51,893	123.4	$42,053
Saginaw-Bay City-Midland	MI	$43,890	84.8	$51,757
Salem	OR	$45,688	100.4	$45,506
Salinas	CA	$59,292	169.5	$34,981
San Diego	CA	$54,972	157.7	$34,859
San Francisco	CA	$76,164	196.4	$38,780
San Jose	CA	$93,503	184.1	$50,789
San Luis Obispo-Atascadero-Paso Robles	CA	$48,421	155.1	$31,219
Santa Cruz-Watsonville	CA	$69,148	177.6	$38,935
Santa Fe	NM	$52,824	118.6	$44,540
Santa Rosa	CA	$61,423	177.3	$34,644
SantaBarbara-Santa Maria-Lompoc	CA	$51,277	173.6	$29,537
Scranton-Wilkes-Barre-Hazleton	PA	$34,708	86.4	$40,171
Seattle-Bellevue-Everett	WA	$69,730	123.0	$56,691
Sheboygan	WI	$50,326	91.0	$55,303
South Bend	IN	$43,880	82.4	$53,252
Spokane	WA	$42,105	89.4	$47,097
Springfield	IL	$45,936	81.6	$56,294
Springfield	MA	$43,948	104.5	$42,056
Springfield	MO	$40,086	83.1	$48,238
St. Cloud	MN	$43,220	98.2	$44,012
St. Joseph	MO	$37,598	81.3	$46,246
St. Louis	MO-IL	$51,803	89.0	$58,206
State College	PA	$38,383	92.5	$41,495
Stockton-Lodi	CA	$44,975	122.8	$36,625
Syracuse	NY	$44,748	88.4	$50,620
Tacoma	WA	$52,137	105.5	$49,419
Terre Haute	IN	$36,209	82.9	$43,678
Toledo	OH	$43,082	91.0	$47,343
Trenton	NJ	$69,514	113.0	$61,517
Utica-Rome	NY	$36,763	89.4	$41,122
Vallejo-Fairfield-Napa	CA	$63,508	149.1	$42,594
Vineland-Millville-Bridgeton	NJ	$40,867	91.9	$44,469
Visalia-Tulare-Porterville	CA	$36,518	94.1	$38,808
Wausau	WI	$49,498	89.8	$55,120
Wheeling	WV-OH	$32,899	84.8	$38,796
Williamsport	PA	$35,909	82.9	$43,316
Wilmington-Newark	DE-MD	$61,464	102.4	$60,023
Worcester	MA-CT	$54,294	114.3	$47,501

Yakima	WA	$37,597	92.8	$40,514
York	PA	$47,924	91.3	$52,491
Youngstown-Warren	OH	$36,916	82.9	$44,531
Yuba City-Marysville	CA	$34,857	109.4	$31,862
SUM		$7,519,124	16376.5	$7,348,029
AVERAGE		$47,589	103.6	$46,507

The average cost of living index for SMSAs in Right to Work states is 88, while that for SMSAs in forced-unionism states is 103.6. Thus, on average, it costs families almost 18 percent more to live in an SMSA in a forced-unionism state than it does to live in an SMSA in a Right to Work state. This differential means that each dollar goes much further for families in Right to Work states, and this is captured in our measure of adjusted household income.

The data for typical household income unadjusted for cost of living are consistent with the argument made by union advocates. The average household income in SMSAs with Right to Work laws is $41,681. The average household income in forced-unionism SMSAs is $47,589. The $5908 differential in typical household income supports the Organized Labor argument that families are better off living in states without Right to Work laws. However, this argument is not supported when we take into account cost of living to determine adjusted household income.

The average cost of living-adjusted household income in SMSAs in Right to Work states is $47,320. Average adjusted household income in SMSAs in forced-unionism states is $46,507. In terms of what their money income can buy, families living in SMSAs in Right to Work states are $813 better off than families living in SMSAs in forced-unionism states. This evidence refutes Organized Labor's argument that families are better off living in states without Right to Work laws.

Weighted Adjusted Household Income

An important refinement in the present study is to calculate a weighted adjusted household income. In the following tables, income in each SMSA is weighted for the number of households living in each SMSA. The number of households in each SMSA comes from census data provided on a CD ROM entitled *2004 MSA Profile* from Woods and Poole Economics in Washington, D.C.

Several adjustments were required to make the census data for the numbers of households comparable to the data from *Cities Ranked and Rated.* Data for number of households are not available for 34 of the SMSAs included in the *Cities Ranked and Rated* data set. Generally, these are smaller SMSAs, so their exclusion is not likely to bias the results. The definition of SMSAs in the *2004 MSA Profile* does not always correspond exactly to the definition of SMSAs in *Cities Ranked and Rated.* Other census data were then used to provide a better match-up to these SMSAs.

Table 4. Weighted Adjusted Household Income in SMSAs in Right to Work States

Metropolitan Area	State	Total Households	Household Income	Cost of Living Index	Adjusted Household Income	Weighted Adjusted Household Income
Abilene	TX	58.244	$37,944	75.7	$50,124	2919432.412
Albany	GA	58.396	$39,954	81.9	$48,784	2848783.619
Alexandria	LA	54.890	$33,022	80.4	$41,072	2254449.726
Amarillo	TX	87.558	$40,876	80.3	$50,904	4457062.027
Anniston	AL	45.463	$32,190	79.1	$40,695	1850131.441
Asheville	NC	159.332	$40,773	94.8	$43,009	6852788.646
Athens	GA	65.753	$37,878	95.4	$39,704	2610683.579
Atlanta	GA	1662.995	$59,423	96.6	$61,514	102298293.9
Auburn-Opelika	AL	47.304	$30,615	89.2	$34,322	1623556.009
Augusta-Aiken	GA-SC	188.689	$40,794	84.7	$48,163	9087814.718
Austin-San Marcos	TX	511.992	$60,068	95.3	$63,030	32271076.03
Baton Rouge	LA	262.632	$42,753	95.0	$45,003	11819269.36
Beaumont-Port Arthur	TX	142.020	$38,803	80.0	$48,504	6888502.575
Birmingham	AL	421.585	$45,047	94.0	$47,922	20203339.89
Bismarck	ND	38.583	$43,662	88.8	$49,169	1897084.399
Boise	ID	183.684	$46,322	91.5	$50,625	9299027.593
Brownsville-Harlingen-San Benito	TX	103.330	$27,679	76.2	$36,324	3753374.108
Casper	WY	27.277	$45,555	86.7	$52,543	1433222.301
Cedar Rapids	IA	96.446	$54,695	91.6	$59,711	5758858.046
Charleston-North Charleston	SC	214.851	$42,473	100.0	$42,473	9125366.523
Charlotte-Gastonia-Rock Hill	NC-SC	544.612	$51,559	95.7	$53,876	29341327.18
Charlottesville	VA	70.067	$50,130	102.5	$48,907	3426788.985
Chattanooga	TN-GA	193.336	$41,671	87.1	$47,843	9249718.09
Cheyenne	WY	32.572	$45,478	92.5	$49,165	1601415.585
Columbia	SC	253.768	$48,503	89.5	$54,193	13752524.36
Columbus	GA-AL	104.983	$37,565	83.2	$45,150	4740007.686
Corpus Christi	TX	143.242	$39,789	80.3	$49,550	7097703.534
Dallas	TX	1343.418	$59,153	95.0	$62,266	83649689.43
Danville	VA	45.243	$31,305	78.0	$40,135	1815810.404
Daytona Beach	FL	192.807	$35,521	86.5	$41,065	7917569.303
Decatur	AL	57.831	$40,227	82.1	$48,998	2833578.121
Des Moines	IA	196.918	$55,547	94.2	$58,967	11611681.68
Dothan	AL	53.610	$35,089	80.6	$43,535	2333897.382
Dubuque	IA	34.032	$44,603	88.8	$50,229	1709379.838
Duluth-Superior	MN-WI	113.443	$39,939	91.5	$43,649	4951693.964
El Paso	TX	216.893	$31,932	83.1	$38,426	8334328.852
Enid	OK	23.086	$34,287	76.8	$44,645	1030663.648
Fayetteville	NC	120.844	$42,175	87.4	$48,255	5831345.195
Fayetteville-Springdale-Rogers	AR	140.829	$40,370	82.0	$49,232	6933252.11
Flagstaff	AZ-UT	42.218	$40,572	102.9	$39,429	1664595.429
Florence	AL	58.640	$32,788	79.1	$41,451	2430705.841
Florence	SC	74.191	$39,026	84.0	$46,460	3446878.531
Fort Lauderdale	FL	691.935	$44,247	113.9	$38,847	26879761.15
Fort Smith	AR-OK	107.306	$37,488	76.4	$49,068	5265297.55
Fort Walton Beach	FL	69.008	$41,400	88.6	$46,727	3224527.314
Fort Worth-Arlington	TX	666.601	$55,157	85.9	$64,211	42802923.58
Gadsden	AL	41.760	$31,460	77.8	$40,437	1688649.871
Gainesville	FL	94.988	$34,900	91.1	$38,310	3638947.53
Goldsboro	NC	42.876	$35,942	81.8	$43,939	1883923.218
Greensboro-Winston-Salem-High Point	NC	528.874	$46,430	91.6	$50,688	26807445.22
Greenville	NC	61.306	$34,395	87.0	$39,534	2423701
Greenville-Spartanburg-Anderson	SC	320.656	$42,630	89.4	$47,685	15290341.48
Hattiesburg	MS	47.403	$32,581	80.9	$40,273	1909069.398
Hickory-Morganton-Lenoir	NC	137.750	$41,734	85.9	$48,584	6692501.164
Houma	LA	69.435	$37,128	88.3	$42,048	2919572.684

Houston	TX	1760.874	$55,692	91.8	$60,667	106826356
Huntsville	AL	140.261	$49,596	87.1	$56,941	7986664.243
Iowa City	IA	54.122	$48,432	97.7	$49,572	2682944.426
Jackson	MS	184.628	$46,856	79.1	$59,236	10936699.83
Jackson	TN	42.249	$42,715	83.3	$51,279	2166465.828
Jacksonville	FL	457.030	$45,338	89.0	$50,942	23281827.12
Jacksonville	NC	48.613	$43,448	83.2	$52,221	2538626.952
Johnson City-Kingsport-Bristol	TN-VA	201.918	$32,897	79.9	$41,173	8313512.448
Jonesboro	AR	43.332	$36,436	77.5	$47,014	2037219.035
Killeen-Temple	TX	115.609	$38,754	80.5	$48,142	5565603.958
Knoxville	TN	260.831	$40,072	87.2	$45,954	11986261.28
Lafayette	LA	91.491	$32,755	81.4	$40,240	3681557.377
Lake Charles	LA	72.460	$40,197	80.6	$49,872	3613740.223
Lakeland-Winter Haven	FL	194.227	$35,584	87.9	$40,482	7862768.564
Laredo	TX	54.906	$29,892	77.3	$38,670	2123221.413
Las Vegas	NV-AZ	569.926	$48,723	103.1	$47,258	26933564.01
Lawrence	KS	39.841	$39,088	95.6	$40,887	1628980.134
Lawton	OK	39.528	$37,990	81.2	$46,786	1849345.714
Lincoln	NE	109.119	$50,530	93.9	$53,813	5871973.45
Little Rock-North Little Rock	AR	247.781	$45,421	83.4	$54,462	13494557.32
Longview-Marshall	TX	98.439	$36,536	76.0	$48,074	4732325.4
Lubbock	TX	97.414	$37,470	80.2	$46,721	4551250.1
Lynchburg	VA	90.800	$38,368	85.3	$44,980	4084190.387
Macon	GA	85.819	$42,106	85.9	$49,017	4206629.586
McAllen-Edinburg-Mission	TX	170.340	$25,726	74.2	$34,671	5905885.229
Memphis	TN-AR-MS	461.195	$46,253	89.2	$51,853	23914408.45
Miami	Fl	806.377	$39,604	108.8	$36,401	29352715.72
Mobile	AL	151.333	$37,313	87.3	$42,741	6468142.301
Monroe	LA	64.582	$35,118	85.6	$41,026	2649521.818
Montgomery	AL	132.254	$41,426	84.8	$48,851	6460795.052
Myrtle Beach	SC	86.322	$42,302	94.9	$44,575	3847832.712
Naples	FL	114.031	$57,326	123.0	$46,607	5314586.265
Nashville	TN	530.014	$51,379	92.3	$55,665	29503347.03
New Orleans	LA	501.482	$40,672	94.0	$43,268	21698165.86
Ocala	FL	113.115	$31,547	86.1	$36,640	4144528.345
Odessa-Midland	TX	44.537	$39,029	76.2	$51,219	2281147.734
Oklahoma City	OK	443.228	$40,347	84.3	$47,861	21213428.37
Omaha	NE-IA	303.476	$52,174	92.2	$56,588	17173055.12
Orlando	FL	671.499	$45,146	95.6	$47,224	31710767.63
Panama City	FL	61.505	$36,595	88.7	$41,257	2537514.628
Pensacola	FL	160.360	$36,969	88.0	$42,010	6736760.045
Phoenix-Mesa	AZ	1292.754	$49,779	98.7	$50,435	65199596.12
Pine Bluff	AR	37.882	$33,714	79.1	$42,622	1614606.508
Pocatello	ID	29.893	$39,862	85.1	$46,841	1400228.867
Provo-Orem	UT	108.791	$51,599	101.8	$50,687	5514250.304
Punta Gorda	FL	67.620	$32,633	95.2	$34,278	2317902.794
Raleigh-Durham-Chapel Hill	NC	545.865	$56,436	103.6	$54,475	29735943.19
Rapid City	SD	44.792	$40,540	90.0	$45,044	2017630.756
Reno	NV	143.187	$54,011	111.2	$48,571	6954741.958
Richmond-Petersburg	VA	438.634	$52,306	94.1	$55,586	24381710.95
Roanoke	VA	120.573	$45,151	84.7	$53,307	6427380.783
Rocky Mount	NC	54.840	$32,401	85.3	$37,985	2083084.22
Salt Lake City-Ogden	UT	489.041	$56,636	97.3	$58,208	28465905.53
San Angelo	TX	40.179	$36,982	77.3	$47,842	1922250.683
San Antonio	TX	631.826	$43,228	82.8	$52,208	32986200.88
Sarasota-Bradenton	FL	277.392	$42,449	100.0	$42,449	11775013.01
Savannah	GA	114.289	$41,802	91.0	$45,936	5250009.646
Sherman-Denison	TX	44.410	$39,443	81.6	$48,337	2146646.605
Shreveport-Bossier City	LA	145.991	$38,129	78.5	$48,572	7091071.132
Sioux City	IA-NE	53.904	$42,492	84.5	$50,286	2710637.595
Sioux Falls	SD	75.817	$52,728	92.6	$56,942	4317147.706
Sumter	SC	38.310	$34,456	82.4	$41,816	1601953.107
Tallahassee	FL	129.332	$41,207	99.5	$41,414	5356164.547
Tampa-St. Petersburg-Clearwater	FL	1055.508	$41,625	92.6	$44,951	47446566.41

Texarkana	TX-AR	49.458	$35,017	73.4	$47,707	2359496.984
Topeka	KS	90.765	$43,972	82.7	$53,170	4826020.048
Tucson	AZ	349.085	$40,683	98.0	$41,513	14491658.22
Tulsa	OK	346.806	$44,811	86.8	$51,626	17904059.52
Tuscaloosa	AL	76.271	$36,407	90.9	$40,052	3054783.605
Tyler	TX	68.588	$43,361	80.8	$53,665	3680747.856
Victoria	TX	40.746	$43,566	75.5	$57,703	2351179.121
Waco	TX	80.891	$39,295	78.3	$50,185	4059529.815
Waterloo-Cedar Falls	IA	63.775	$41,213	83.2	$49,535	3159085.427
West Palm Beach-Boca Raton	FL	502.110	$51,876	111.2	$46,651	23423973.35
Wichita	KS	225.855	$47,797	85.8	$55,707	12581808.2
Wichita Falls	TX	55.977	$36,732	76.9	$47,766	2673793.451
Wilmington	NC	120.692	$40,224	97.6	$41,213	4974093.246
Yuma	AZ	65.143	$31,911	88.5	$36,058	2348902.003
sum		29401.365	$5,543,543	11710.4	$6,293,575	1486857994
average		221.063	$41,681	88.0	$47,320	$50,571

Table 5. Weighted Adjusted Family Income in SMSAs in Forced-Unionism States

Metropolitan Area	State	Total Households	Household Income	Cost of Living Index	Adjusted Household Income	Weighted Adjusted Household Income
Akron	OH	278.467	$46,466	93.8	$49,537	13794507.06
Albany-Schenectady-Troy	NY	336.508	$48,861	110.0	$44,419	14947379.44
Albuquerque	NM	301.662	$45,403	94.6	$47,995	14478181.59
Allentown-Bethehem-Easton	PA	294.768	$48,157	99.2	$48,545	14309619.53
Altoona	PA	51.245	$37,387	81.4	$45,930	2353681.591
Anchorage	AK	121.510	$70,833	118.5	$59,775	7263221.797
Ann Arbor	MI	130.819	$62,119	110.3	$56,318	7367493.618
Appleton-Oshkosh-Neenah	WI	140.825	$52,817	89.1	$59,278	8347872.082
Atlantic City-Cape May	NJ	98.228	$45,694	103.1	$44,320	4353472.582
Bakersfield	CA	219.756	$36,457	95.0	$38,376	8433309.992
Baltimore	MD	1000.715	$55,897	106.9	$52,289	52326441.87
Bangor	ME	59.005	$36,147	94.4	$38,291	2259378.957
Barnstable-Yarmouth	MA	98.285	$50,114	141.7	$35,366	3475973.529
Bellingham	WA	67.997	$41,931	106.6	$39,335	2674654.978
Billings	MT	57.535	$41,554	90.3	$46,018	2647629.446
Binghamton	NY	101.114	$38,750	84.7	$45,750	4625935.655
Bloomington	IN	69.802	$39,395	94.9	$41,512	2897628.862
Bloomington-Normal	IL	58.835	$54,304	94.4	$57,525	3384508.305
Boston	MA-NH	1711.538	$63,784	162.9	$39,155	67015800.98
Boulder-Longmont	CO	120.106	$66,602	140.8	$47,303	5681320.889
Bremerton	WA	88.720	$47,689	108.1	$44,116	3913939.019
Bridgeport	CT	330.699	$79,096	136.8	$57,819	19120590.72
Buffalo-Niagara Falls	NY	468.899	$43,785	87.6	$49,983	23436920.91
Burlington	VT	77.998	$52,027	109.2	$47,644	3716118.998
Canton-Massillon	OH	160.688	$41,834	90.9	$46,022	7395183.49
Champaign-Urbana	IL	84.781	$40,856	92.1	$44,360	3760925.663
Charleston	WV	128.684	$38,723	84.9	$45,610	5869293.913
Chicago	IL	2821.475	$63,096	119.8	$52,668	148600823.5
Chico-Paradise	CA	82.268	$34,282	116.1	$29,528	2429208.937
Cincinnati - Covington	OH-KY-IN	796.710	$50,023	93.0	$53,788	42853574.55
Cleveland-Lorain-Elyria	OH	858.157	$46,630	99.6	$46,817	40176567.18
Colorado Springs	CO	212.658	$52,276	103.1	$50,704	10782647.53
Columbia	MO	58.991	$44,112	89.5	$49,287	2907498.315
Columbus	OH	659.880	$50,334	95.8	$52,541	34670563.59
Corvallis	OR	30.697	$48,602	109.0	$44,589	1368748.251
Cumberland	MD-WV	40.147	$31,176	79.0	$39,463	1584332.749
Dayton-Springfield	OH	340.581	$45,798	87.7	$52,221	17785551.47
Decatur	IL	45.798	$44,896	77.4	$58,005	2656520.682
Denver	CO	886.588	$62,986	118.9	$52,974	46966048.59

Detroit	MI	766.728	$55,418	101.5	$54,599	41862593.4
Dover	DE	49.275	$41,631	96.0	$43,366	2136841.172
Eau Claire	WI	58.471	$43,031	92.1	$46,722	2731884.474
Elkhart-Goshen	IN	67.815	$49,970	87.3	$57,239	3881690.206
Elmira	NY	35.113	$38,514	81.8	$47,083	1653229.925
Erie	PA	106.889	$40,948	85.9	$47,669	5095332.68
Eugene-Springfield	OR	133.205	$39,250	99.0	$39,646	5281107.323
Evansville-Henderson	IN-KY	137.926	$43,944	81.1	$54,185	7473514.358
Flint	MI	173.039	$48,069	88.5	$54,315	9398657.278
Fort Collins-Loveland	CO	103.065	$52,465	116.3	$45,112	4649445.593
Fort Wayne	IN	154.456	$48,099	83.6	$57,535	8886577.923
Fresno	CA	265.219	$35,635	103.6	$34,397	9122663.19
Gary	IN	256.617	$47,700	97.6	$48,873	12541630.02
Glens Falls	NY	48.907	$39,879	95.6	$41,714	2040127.88
Grand Junction	CO	48.204	$39,565	99.3	$39,844	1920635.71
Grand Rapids-Muskegon-Holland	MI	469.386	$53,279	93.5	$56,983	26746969.73
Great Falls	MT	32.488	$36,389	86.3	$42,166	1369879.295
Greeley	CO	72.088	$42,835	106.2	$40,334	2907617.213
Green Bay	WI	112.110	$52,905	93.7	$56,462	6329967.503
Hagerstown	MD	89.472	$42,490	91.5	$46,437	4154825.443
Harrisburg-Lebanon-Carlisle	PA	253.206	$48,289	91.1	$53,007	13421585.66
Hartford	CT	456.141	$59,970	113.1	$53,024	24186362.31
Honolulu	HI	295.182	$60,112	152.7	$39,366	11620157.42
Huntington-Ashland	WV-KY-OH	117.489	$29,981	81.2	$36,922	4337977.474
Indianapolis	IN	617.527	$52,554	87.3	$60,199	37174700.98
Jackson	MI	59.367	$44,494	89.7	$49,603	2944788.515
Jamestown	NY	54.266	$33,311	84.6	$39,375	2136707.714
Janesville-Beloit	WI	59.709	$46,791	91.5	$51,138	3053381.223
Johnstown	PA	59.983	$30,250	79.7	$37,955	2276644.605
Joplin	MO	63.103	$36,904	74.2	$49,736	3138481.283
Kalamazoo-Battle Creek	MI	123.836	$42,578	88.5	$48,111	5957840.913
Kankakee	IL	38.756	$43,233	93.7	$46,140	1788194.395
Kenosha	WI	286.278	$49,238	98.0	$50,243	14383424.66
Kokomo	IN	41.517	$47,020	83.2	$56,514	2346309.30
La Crosse	WI-MN	50.026	$42,400	91.7	$46,238	2313088.768
Lafayette	IN	68.303	$43,472	86.3	$50,373	3440635.013
Lancaster	PA	176.855	$50,626	94.6	$53,516	9464546.755
Lansing-East Lansing	MI	176.025	$48,810	90.2	$54,113	9525255.266
Las Cruces	NM	61.449	$30,819	84.9	$36,300	2230620.413
Lewiston-Auburn	ME	42.744	$36,956	95.2	$38,819	1659293.345
Lexington	KY	168.192	$44,066	92.1	$47,846	8047284.117
Lima	OH	40.716	$40,804	86.3	$47,282	1925116.644
Los Angeles-Long Beach	CA	3244.118	$50,203	139.3	$36,039	116916335.9
Louisville	KY-IN	474.003	$46,230	89.5	$51,654	24483976.19
Madison	WI	211.508	$54,655	105.3	$51,904	10978128.91
Manchester	NH	149.658	$59,976	115.5	$51,927	7771331.782
Mansfield	OH	49.458	$36,080	87.3	$41,329	2044037.388
Medford-Ashland	OR	74.171	$38,067	106.0	$35,912	2663648.544
Merced	CA	68.741	$31,368	111.7	$28,082	1930409.748
Milwaukee-Waukesha	WI	596.306	$53,304	106.8	$49,910	29761699.46
Minneapolis-St. Paul	MN-WI	1176.002	$65,330	114.7	$56,957	66981875.03
Missoula	MT	39.697	$40,912	104.1	$39,301	1560118.793
Modesto	CA	157.398	$43,640	116.7	$37,395	5885902.931
Muncie	IN	47.330	$37,248	80.5	$46,271	2189997.317
New Haven-Meriden	CT	325.283	$68,472	116.9	$58,573	19052846.51
New York	NY	4276.413	$52,380	161.0	$32,534	139129511.1
Newark	NJ	767.856	$68,961	140.5	$49,083	37688339.94
Oakland	CA	898.931	$71,689	179.3	$39,983	35941697.97
Olympia	WA	86.397	$46,826	104.5	$44,810	3871412.366
Owensboro	KY	43.721	$37,214	81.4	$45,717	1998812.4
Parkersburg-Marietta	WV-OH	66.490	$36,670	86.8	$42,247	2808972.696
Peoria-Pekin	IL	144.193	$46,992	83.9	$56,010	8076182.903
Philadelphia	PA-NJ	2172.356	$55,192	105.2	$52,464	113970220.9
Pittsburgh	PA	996.654	$41,809	90.0	$46,454	46299007.8

Pittsfield	MA	55.801	$41,865	108.6	$38,550	2151113.135
Portland	ME	203.181	$52,418	112.4	$46,635	9475392.934
Portland-Vancouver	OR-WA	785.802	$54,290	109.7	$49,490	38888961.33
Providence-Fall River-Warwick	RI-MA	629.352	$47,646	118.4	$40,242	25326102.53
Pueblo	CO	56.961	$34,723	87.7	$39,593	2255252.911
Racine	WI	72.191	$52,627	95.6	$55,049	3974054.139
Reading	PA	145.550	$47,777	93.8	$50,935	7413584.595
Redding	CA	67.130	$33,940	105.3	$32,232	2163715.29
Riverside-San Bernardino	CA	1122.658	$45,837	112.6	$40,708	45700954.48
Rochester	MN-WI	65.211	$62,051	102.7	$60,420	3940027.031
Rochester	NY	401.703	$49,179	90.5	$54,341	21829118.05
Rockford	IL	126.127	$48,069	91.4	$52,592	6633259.04
Sacramento	CA	718.424	$51,893	123.4	$42,053	30211650.43
Saginaw-Bay City-Midland	MI	124.952	$43,890	84.8	$51,757	6467150.094
Salem	OR	129.616	$45,688	100.4	$45,506	5898302.598
Salinas	CA	125.410	$59,292	169.5	$34,981	4386908.389
San Diego	CA	1033.960	$54,972	157.7	$34,859	36042390.06
San Francisco	CA	681.491	$76,164	196.4	$38,780	26428248.74
San Jose	CA	585.464	$93,503	184.1	$50,789	29735274.52
San Luis Obispo-Atascadero-Paso Robles	CA	95.922	$48,421	155.1	$31,219	2994609.389
Santa Cruz-Watsonville	CA	91.077	$69,148	177.6	$38,935	3546054.277
Santa Fe	NM	55.130	$52,824	118.6	$44,540	2455469.747
Santa Rosa	CA	177.316	$61,423	177.3	$34,644	6142854.297
SantaBarbara-Santa Maria-Lompoc	CA	138.544	$51,277	173.6	$29,537	4092235.419
Scranton-Wilkes-Barre-Hazleton	PA	226.230	$34,708	86.4	$40,171	9087952.361
Seattle-Bellevue-Everett	WA	962.403	$69,730	123.0	$56,691	54559643.24
Sheboygan	WI	43.801	$50,326	91.0	$55,303	2422339.699
South Bend	IN	122.001	$43,880	82.4	$53,252	6496849.369
Spokane	WA	168.501	$42,105	89.4	$47,097	7935944.748
Springfield	IL	84.973	$45,936	81.6	$56,294	4783480.059
Springfield	MA	264.242	$43,948	104.5	$42,056	11112830.06
Springfield	MO	150.433	$40,086	83.1	$48,238	7256627.242
St. Cloud	MN	63.020	$43,220	98.2	$44,012	2773650.102
St. Joseph	MO	46.704	$37,598	81.3	$46,246	2159873.299
St. Louis	MO-IL	1075.524	$51,803	89.0	$58,206	62601539.07
State College	PA	50.755	$38,383	92.5	$41,495	2106085.584
Stockton-Lodi	CA	199.217	$44,975	122.8	$36,625	7296241.511
Syracuse	NY	255.232	$44,748	88.4	$50,620	12919820.74
Tacoma	WA	274.842	$52,137	105.5	$49,419	13582405.07
Terre Haute	IN	65.763	$36,209	82.9	$43,678	2872391.396
Toledo	OH	261.918	$43,082	91.0	$47,343	12399946.46
Trenton	NJ	129.636	$69,514	113.0	$61,517	7974793.72
Utica-Rome	NY	116.517	$36,763	89.4	$41,122	4791403.211
Vallejo-Fairfield-Napa	CA	136.795	$63,508	149.1	$42,594	5826677.975
Vineland-Millville-Bridgeton	NJ	49.874	$40,867	91.9	$44,469	2217846.309
Visalia-Tulare-Porterville	CA	114.983	$36,518	94.1	$38,808	4462220.185
Wausau	WI	48.369	$49,498	89.8	$55,120	2666112.207
Wheeling	WV-OH	61.374	$32,899	84.8	$38,796	2381065.125
Williamsport	PA	46.923	$35,909	82.9	$43,316	2032518.706
Wilmington-Newark	DE-MD	252.269	$61,464	102.4	$60,023	15142052.55
Worcester	MA-CT	293.426	$54,294	114.3	$47,501	13938120.07
Yakima	WA	75.224	$37,597	92.8	$40,514	3047625.784
York	PA	152.095	$47,924	91.3	$52,491	7983571.501
Youngstown-Warren	OH	237.262	$36,916	82.9	$44,531	10565457.17
Yuba City-Marysville	CA	49.768	$34,857	109.4	$31,862	1585706.742
sum		49820.013	$7,519,124	16376.5	$7,348,029	2307330599
average		315.317	$47,589	103.6	$46,507	$46,313

In the above two tables, the weighted adjusted family income is calculated for Right to Work states and forced-unionism states. Table 4 lists alphabetically the 133 SMSAs in the Right to Work states and their related data. Table 5 lists the 158 SMSAs in forced-unionism states and their related data. For each SMSA, the following data are listed: number of households, adjusted household income, and weighted adjusted household income. In the final column, the sum of weighted adjusted household incomes is divided by total number of households to estimate weighted average adjusted household income in Right to Work states and in forced-unionism states.

The weighted average adjusted household income in SMSAs in Right to Work states is \$50,571; the weighted average adjusted household income in SMSAs in forced-unionism states is \$46,313. This differential, \$4258, reveals a much greater gap in the standard of living between Right to Work states and forced-unionism states when we take into account the number of households living in each SMSA. The weighted adjusted household income in SMSAs in Right to Work states is \$3251 above the unweighted average adjusted household income in these SMSAs. In contrast, the weighted average adjusted household income in SMSAs in force-unionism states is \$194 below the unweighted measure for these SMSAs. In the following section we discuss some indirect evidence that differences in migration may account for these differences in standards of living in Right to Work states and forced-unionism states.

Migration and Adjusted Household Income

A fundamental hypothesis in the literature on migration is that differences in the cost of living will motivate people to migrate. As Savageau and D'Agostino argued:

We... flee living costs that have gotten so high we can't afford them. Metro areas attract people because of expanding job opportunities, sure. But people also vote with their feet by heading for metro areas where cost of living factors like income taxes and house prices look like bargains.[v]

Sperling and Sanders reach a similar conclusion in their more recent study.[vi]

Our evidence shows that while average money incomes are higher in SMSAs in forced-unionism states than in SMSAs in Right to Work states, the cost of living is also higher. When we take into account the differences in cost of living, the adjusted household income is higher in SMSAs in Right to Work states than in forced-unionism states. Therefore, we expect workers to migrate into these SMSAs in Right to Work states.

We do not have direct evidence on migration into these SMSAs. However, we do have indirect evidence that suggests that workers have been attracted into SMSAs in Right to Work states, consistent with our hypothesis.

In the final set of tables, we have compiled evidence on the weighted adjusted income for households in metropolitan areas with above average (real) incomes. Table 6 compiles this evidence for SMSAs in the Right to Work states, while Table 7 shows the same data for SMSAs in forced-unionism states.

Table 6. Weighted Adjusted Household Income for Upper Income Households in SMSAs in Right to Work States

Metropolitan Area	State	Total Households	Household Income	Cost of Living Index	Adjusted Household Income	Weighted Adjusted Household Income
Fort Worth-Arlington	TX	666.601	$55,157	85.9	$64,211	42802923.58
Austin-San Marcos	TX	511.992	$60,068	95.3	$63,030	32271076.03
Dallas	TX	1343.418	$59,153	95.0	$62,266	83649689.43
Atlanta	GA	1662.995	$59,423	96.6	$61,514	102298293.9
Houston	TX	1760.874	$55,692	91.8	$60,667	106826356
Cedar Rapids	IA	96.446	$54,695	91.6	$59,711	5758858.046
Jackson	MS	184.628	$46,856	79.1	$59,236	10936699.83
Des Moines	IA	196.918	$55,547	94.2	$58,967	11611681.68
Salt Lake City-Ogden	UT	489.041	$56,636	97.3	$58,208	28465905.53
Victoria	TX	40.746	$43,566	75.5	$57,703	2351179.121
Sioux Falls	SD	75.817	$52,728	92.6	$56,942	4317147.706
Huntsville	AL	140.261	$49,596	87.1	$56,941	7986664.243
Omaha	NE-IA	303.476	$52,174	92.2	$56,588	17173055.12
Wichita	KS	225.855	$47,797	85.8	$55,707	12581808.2
Nashville	TN	530.014	$51,379	92.3	$55,665	29503347.03
Richmond-Petersburg	VA	438.634	$52,306	94.1	$55,586	24381710.95
Raleigh-Durham-Chapel Hill	NC	545.865	$56,436	103.6	$54,475	29735943.19
Little Rock-North Little Rock	AR	247.781	$45,421	83.4	$54,462	13494557.32
Columbia	SC	253.768	$48,503	89.5	$54,193	13752524.36
Charlotte-Gastonia-Rock Hill	NC-SC	544.612	$51,559	95.7	$53,876	29341327.18
Lincoln	NE	109.119	$50,530	93.9	$53,813	5871973.45
Tyler	TX	68.588	$43,361	80.8	$53,665	3680747.856
Roanoke	VA	120.573	$45,151	84.7	$53,307	6427380.783
Topeka	KS	90.765	$43,972	82.7	$53,170	4826020.048
Casper	WY	27.277	$45,555	86.7	$52,543	1433222.301
Jacksonville	NC	48.613	$43,448	83.2	$52,221	2538626.952
San Antonio	TX	631.826	$43,228	82.8	$52,208	32986200.88
Memphis	TN-AR-MS	461.195	$46,253	89.2	$51,853	23914408.45
Tulsa	OK	346.806	$44,811	86.8	$51,626	17904059.52
Jackson	TN	42.249	$42,715	83.3	$51,279	2166465.828
Odessa-Midland	TX	44.537	$39,029	76.2	$51,219	2281147.734
Jacksonville	FL	457.030	$45,338	89.0	$50,942	23281827.12
Amarillo	TX	87.558	$40,876	80.3	$50,904	4457062.027
Greensboro-Winston-Salem-High Point	NC	528.874	$46,430	91.6	$50,688	26807445.22
Provo-Orem	UT	108.791	$51,599	101.8	$50,687	5514250.304
Boise	ID	183.684	$46,322	91.5	$50,625	9299027.593
Phoenix-Mesa	AZ	1292.754	$49,779	98.7	$50,435	65199596.12
Sioux City	IA-NE	53.904	$42,492	84.5	$50,286	2710637.595
Dubuque	IA	34.032	$44,603	88.8	$50,229	1709379.838
Waco	TX	80.891	$39,295	78.3	$50,185	4059529.815
Abilene	TX	58.244	$37,944	75.7	$50,124	2919432.412
Lake Charles	LA	72.460	$40,197	80.6	$49,872	3613740.223
Iowa City	IA	54.122	$48,432	97.7	$49,572	2682944.426
Corpus Christi	TX	143.242	$39,789	80.3	$49,550	7097703.534
Waterloo-Cedar Falls	IA	63.775	$41,213	83.2	$49,535	3159085.427
Fayetteville-Springdale-Rogers	AR	140.829	$40,370	82.0	$49,232	6933252.11
Bismarck	ND	38.583	$43,662	88.8	$49,169	1897084.399
Cheyenne	WY	32.572	$45,478	92.5	$49,165	1601415.585
Fort Smith	AR-OK	107.306	$37,488	76.4	$49,068	5265297.55
Macon	GA	85.819	$42,106	85.9	$49,017	4206629.586
Decatur	AL	57.831	$40,227	82.1	$48,998	2833578.121
Charlottesville	VA	70.067	$50,130	102.5	$48,907	3426788.985
Montgomery	AL	132.254	$41,426	84.8	$48,851	6460795.052
Albany	GA	58.396	$39,954	81.9	$48,784	2848783.619

Hickory-Morganton-Lenoir	NC	137.750	$41,734	85.9	$48,584	6692501.164
Shreveport-Bossier City	LA	145.991	$38,129	78.5	$48,572	7091071.132
Reno	NV	143.187	$54,011	111.2	$48,571	6954741.958
Beaumont-Port Arthur	TX	142.020	$38,803	80.0	$48,504	6888502.575
Sherman-Denison	TX	44.410	$39,443	81.6	$48,337	2146646.605
Fayetteville	NC	120.844	$42,175	87.4	$48,255	5831345.195
Augusta-Aiken	GA-SC	188.689	$40,794	84.7	$48,163	9087814.718
Killeen-Temple	TX	115.609	$38,754	80.5	$48,142	5565603.958
Longview-Marshall	TX	98.439	$36,536	76.0	$48,074	4732325.4
Birmingham	AL	421.585	$45,047	94.0	$47,922	20203339.89
Oklahoma City	OK	443.228	$40,347	84.3	$47,861	21213428.37
Chattanooga	TN-GA	193.336	$41,671	87.1	$47,843	9249718.09
San Angelo	TX	40.179	$36,982	77.3	$47,842	1922250.683
Wichita Falls	TX	55.977	$36,732	76.9	$47,766	2673793.451
Texarkana	TX-AR	49.458	$35,017	73.4	$47,707	2359496.984
Greenville-Spartanburg-Anderson	SC	320.656	$42,630	89.4	$47,685	15290341.48
SUM		18855.666	$3,186,700	6096.0	$3,651,505	1039159211
AVERAGE		269.367	$45,524	87.1	$52,164	$55,111

Table 7. Weighted Adjusted Household Income for Upper Income Households in SMSAs in Forced-Unionism States

Metropolitan Area	State	Total Households	Household Income	Cost of Living Index	Adjusted Household Income	Weighted Adjusted Household Income
Trenton	NJ	129.636	$69,514	113.0	$61,517	7974793.72
Rochester	MN-WI	65.211	$62,051	102.7	$60,420	3940027.031
Indianapolis	IN	617.527	$52,554	87.3	$60,199	37174700.98
Wilmington-Newark	DE-MD	252.269	$61,464	102.4	$60,023	15142052.55
Anchorage	AK	121.510	$70,833	118.5	$59,775	7263221.797
Appleton-Oshkosh-Neenah	WI	140.825	$52,817	89.1	$59,278	8347872.082
New Haven-Meriden	CT	325.283	$68,472	116.9	$58,573	19052846.5
St. Louis	MO-IL	1075.524	$51,803	89.0	$58,206	62601539.07
Decatur	IL	45.798	$44,896	77.4	$58,005	2656520.682
Bridgeport	CT	330.699	$79,096	136.8	$57,819	19120590.72
Fort Wayne	IN	154.456	$48,099	83.6	$57,535	8886577.923
Bloomington-Normal	IL	58.835	$54,304	94.4	$57,525	3384508.305
Elkhart-Goshen	IN	67.815	$49,970	87.3	$57,239	3881690.206
Grand Rapids-Muskegon-Holland	MI	469.386	$53,279	93.5	$56,983	26746969.73
Minneapolis-St. Paul	MN-WI	1176.002	$65,330	114.7	$56,957	66981875.03
Seattle-Bellevue-Everett	WA	962.403	$69,730	123.0	$56,691	54559643.24
Kokomo	IN	41.517	$47,020	83.2	$56,514	2346309.303
Green Bay	WI	112.110	$52,905	93.7	$56,462	6329967.503
Ann Arbor	MI	130.819	$62,119	110.3	$56,318	7367493.618
Springfield	IL	84.973	$45,936	81.6	$56,294	4783480.059
Peoria-Pekin	IL	144.193	$46,992	83.9	$56,010	8076182.903
Sheboygan	WI	43.801	$50,326	91.0	$55,303	2422339.699
Wausau	WI	48.369	$49,498	89.8	$55,120	2666112.207
Racine	WI	72.191	$52,627	95.6	$55,049	3974054.139
Detroit	MI	766.728	$55,418	101.5	$54,599	41862593.4
Rochester	NY	401.703	$49,179	90.5	$54,341	21829118.05
Flint	MI	173.039	$48,069	88.5	$54,315	9398657.278
Evansville-Henderson	IN-KY	137.926	$43,944	81.1	$54,185	7473514.358
Lansing-East Lansing	MI	176.025	$48,810	90.2	$54,113	9525255.266
Cincinnati - Covington	OH-KY-IN	796.710	$50,023	93.0	$53,788	42853574.55
Lancaster	PA	176.855	$50,626	94.6	$53,516	9464546.755
South Bend	IN	122.001	$43,880	82.4	$53,252	6496849.369
Hartford	CT	456.141	$59,970	113.1	$53,024	24186362.31
Harrisburg-Lebanon-Carlisle	PA	253.206	$48,289	91.1	$53,007	13421585.66
Denver	CO	886.588	$62,986	118.9	$52,974	46966048.59
Chicago	IL	2821.475	$63,096	119.8	$52,668	148600823

Rockford	IL	126.127	$48,069	91.4	$52,592	6633259.04
Columbus	OH	659.880	$50,334	95.8	$52,541	34670563.59
York	PA	152.095	$47,924	91.3	$52,491	7983571.501
Philadelphia	PA-NJ	2172.356	$55,192	105.2	$52,464	113970220.9
Baltimore	MD	1000.715	$55,897	106.9	$52,289	52326441.87
Dayton-Springfield	OH	340.581	$45,798	87.7	$52,221	17785551.47
Manchester	NH	149.658	$59,976	115.5	$51,927	7771331.782
Madison	WI	211.508	$54,655	105.3	$51,904	10978128.91
Saginaw-Bay City-Midland	MI	124.952	$43,890	84.8	$51,757	6467150.094
Louisville	KY-IN	474.003	$46,230	89.5	$51,654	24483976.19
Janesville-Beloit	WI	59.709	$46,791	91.5	$51,138	3053381.223
Reading	PA	145.550	$47,777	93.8	$50,935	7413584.595
San Jose	CA	585.464	$93,503	184.1	$50,789	29735274.52
Colorado Springs	CO	212.658	$52,276	103.1	$50,704	10782647.53
Syracuse	NY	255.232	$44,748	88.4	$50,620	12919820.74
Lafayette	IN	68.303	$43,472	86.3	$50,373	3440635.013
Kenosha	WI	286.278	$49,238	98.0	$50,243	14383424.66
Buffalo-Niagara Falls	NY	468.899	$43,785	87.6	$49,983	23436920.91
Milwaukee-Waukesha	WI	596.306	$53,304	106.8	$49,910	29761699.46
Joplin	MO	63.103	$36,904	74.2	$49,736	3138481.283
Jackson	MI	59.367	$44,494	89.7	$49,603	2944788.515
Akron	OH	278.467	$46,466	93.8	$49,537	13794507.06
Portland-Vancouver	OR-WA	785.802	$54,290	109.7	$49,490	38888961.33
Tacoma	WA	274.842	$52,137	105.5	$49,419	13582405.07
Columbia	MO	58.991	$44,112	89.5	$49,287	2907498.315
Newark	NJ	767.856	$68,961	140.5	$49,083	37688339.94
Gary	IN	256.617	$47,700	97.6	$48,873	12541630.02
Allentown-Bethehem-Easton	PA	294.768	$48,157	99.2	$48,545	14309619.53
Springfield	MO	150.433	$40,086	83.1	$48,238	7256627.242
Kalamazoo-Battle Creek	MI	123.836	$42,578	88.5	$48,111	5957840.913
Albuquerque	NM	301.662	$45,403	94.6	$47,995	14478181.59
Lexington	KY	168.192	$44,066	92.1	$47,846	8047284.117
Erie	PA	106.889	$40,948	85.9	$47,669	5095332.68
Burlington	VT	77.998	$52,027	109.2	$47,644	3716118.998
Worcester	MA-CT	293.426	$54,294	114.3	$47,501	13938120.07
Toledo	OH	261.918	$43,082	91.0	$47,343	12399946.46
Boulder-Longmont	CO	120.106	$66,602	140.8	$47,303	5681320.889
Lima	OH	40.716	$40,804	86.3	$47,282	1925116.644
Spokane	WA	168.501	$42,105	89.4	$47,097	7935944.748
Elmira	NY	35.113	$38,514	81.8	$47,083	1653229.929
Cleveland-Lorain-Elyria	OH	858.157	$46,630	99.6	$46,817	40176567.18
Eau Claire	WI	58.471	$43,031	92.1	$46,722	2731884.474
Portland	ME	203.181	$52,418	112.4	$46,635	9475392.934
SUM		27738.235	$4,104,593	7797.2	$4,158,992	1466023022
AVERAGE		351.117	$51,957	98.7	$52,645	$52,852

64 percent of households in the Right to Work states live in SMSAs with above average adjusted household incomes. The weighted average adjusted household income for this top group of families in SMSAs in Right to Work states is $55,111. There is a differential of 9 percent in the weighted average adjusted household income for this top group of households and that for all households living in SMSAs in Right to Work states.

56 percent of households in forced-unionism states live in SMSAs with above average adjusted family incomes. The weighted average adjusted household income for this top group is $52,852. There is a 14 percent differential in the weighted average adjusted household income for this top group of families compared to that for all households living in SMSAs in forced-unionism states.

We can make several inferences from this indirect evidence on migration. First, a larger share of families in Right to Work states have chosen to live in SMSAs with higher adjusted household income, compared to families in forced-unionism states. These families receive higher adjusted household incomes than their counterparts living in forced-unionism states. While these families receive higher adjusted household incomes in the Right to Work states, there is greater convergence between their incomes and those of the average family living in these states.

What this evidence suggests is not only that families living in Right to Work states receive higher adjusted household incomes, but also there is greater mobility of workers into SMSAs with higher adjusted household income. We expect that the higher adjusted household incomes in SMSAs in Right to Work states would attract more workers. We also expect that migration of workers into these SMSAs would tend to bring convergence between the adjusted household incomes earned in these SMSAs relative to that for all SMSAs in the Right to Work states.

In contrast, the evidence suggests that families living in forced-unionism states not only receive lower adjusted household incomes, but also, there is less evidence of mobility of workers into SMSAs with higher adjusted household incomes. Even though there is a greater differential between the average adjusted household income for the top group of SMSAs and that for all SMSAs, a smaller share of workers have chosen to live in the higher income SMSAs. The relative gap between the average adjusted household income in these top SMSAs and that for all SMSAs is much greater in the forced-unionism states. This suggests less mobility of workers into the higher income SMSAs, and correspondingly less convergence in adjusted household income between the top SMSAs and all SMSAs in the forced-unionism states.

Our analysis is consistent with the hypothesis that workers are motivated to migrate to SMSAs not just by money income, but also by the cost of living and real adjusted household income. Other factors may also influence the mobility of workers. One factor that reduces the mobility of workers is union restrictions on entry. Such restrictions reduce the probability that a worker can obtain a job by migrating to an SMSA with a higher adjusted household income. Even for workers who do land a job, union restrictions are likely to increase the time of the job search and the costs of migration. We expect these restrictions to be greater in the absence of Right to Work laws. This is consistent with the evidence for a lack of convergence between the average adjusted household income among the top group of SMSAs and that for all SMSAs in the forced-unionism states.

One cost that is not captured in our cost of living data is the cost of union dues, fees, and other assessments. Including these in the cost of living index would reduce the adjusted household income for those families who must pay these costs. Given the higher percentage of workers who incur these union costs in forced-unionism states, we would expect a greater reduction in adjusted household income in these states, compared to Right to Work states. This would also help to explain the lack of mobility of families in forced-unionism states.

Another cost that is not captured in our cost of living data is federal income taxes. Federal income taxes are levied on money incomes. This means that families living in SMSAs in forced-unionism states would pay more in federal income taxes, because their money incomes are higher on average than that for families living in SMSAs in Right to Work states. If we included federal income taxes in our cost of living index, we would find an even greater differential between the adjusted family incomes received in SMSAs in Right to Work states compared to that in forced-unionism states.

A final cost, which is impossible to measure let alone incorporate into a cost of living index, is what Amartya Sen refers to as "negative freedom."[vii] Positive freedom refers to the tangible aspects of individual well being. When families receive a higher adjusted household income, this enables them to purchase more goods and services to enhance their well being. But man does not live by bread alone. An important determinant of individual well being is the absence of coercion, or negative freedom. We value the freedom to make choices regarding how we spend our income, where we choose to work and live, etc. Union restrictions on entry reduce the range of choices open to us regarding where we choose to live and work. These restrictions not only distort labor markets; they restrict the range of choices open to employees and employers to enter into labor contracts. Mandatory union dues not only reduce the disposable income available to workers, they also infringe on the freedom of contract for dissenting workers. We cannot measure these intangible dimensions of negative freedom, but we should not discount the role they play in influencing the choices that individuals make, and their perceptions of well being. We expect a more ubiquitous exercise of coercion over a wider range of choices, with a corresponding diminution in individual well being, in forced-unionism states compared to Right to Work states.

[i] "World Report: Is Mississippi Richer than New York?" First Chicago Bank, Chicago, Il. , 1977; and James T. Bennett, "Does a Higher Wage Really Mean that You Are Better Off?" National Institute of Labor Relations Research, Springfield, VA, 1985.
[ii] James T. Bennett, "Right to Work—Prescription for Prosperity and Opportunity," National Institute for Labor Relations Research, Springfield, VA, 2000.
[iii] David Savageau and Ralph D'Agostino, *Places Rated Almanac*, IDG Books, Foster City, CA, 2000.
[iv] Bert Sperling and Peter Sander, *Cities Ranked and Rated*, Wiley Publishing, Inc. Hoboken, N.J., 2004.
[v] Savageau and D'Agostino, *Places Rated Almanac*, p. 42.
[vi] Sperling and Sander, p. xi.
[vii] Amartya Sen, *Commodities and Capabilities*, North Holland, Amsterdam, 1985.

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* * *

The National Institute for Labor Relations Research is an organization whose primary function is to act as a research facility for the general public, scholars and students. It provides the supplementary analysis and research necessary to expose the inequities of compulsory unionism.

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Nothing here is to be construed as an attempt to aid or hinder the passage of any bill before Congress.

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November 2010

Right to Work States Benefit From Faster Growth, Higher Real Purchasing Power – 2010 Update

Percentage Growth in Non-Farm Private-Sector Employees (1999-2009)	Right to Work States	+3.7%
	Forced-Unionism States	-2.8%
	National Average	-0.3%
	Source: Department of Labor, Bureau of Labor Statistics (BLS)	
Growth in Real Manufacturing GDP in Chained 2000 Dollars (2000-2008)	Right to Work States	20.9%
	Forced-Unionism States	6.5%
	National Average	10.4%
	Department of Commerce, Bureau of Economic Analysis (BEA)	
Percentage Growth in Real Personal Income (1999-2009)	Right to Work States	28.3%
	Forced-Unionism States	14.7%
	National Average	19.5%
	BEA; BLS	
Cost of Living-Adjusted Per Capita Disposable Personal Income (2009)	Right to Work States	$35,543
	Forced-Unionism States	$33,389
	National Average	$34,256
	Missouri Economic Research and Information Center (MERIC); BEA; Department of Commerce, Bureau of the Census (BOC)	
Aggregate "Tax Freedom Day"* (2010)	Right to Work States	April 6
	Forced-Unionism States	April 14
	National Average	April 9
	Tax Foundation; BEA	
Value Added by Manufacture Per Production Worker (2008)	Right to Work States	$261,239
	Forced-Unionism States	$253,162
	National Average	$256,327
	BOC	
Percentage Growth in Construction Employment (1999-2009)	Right to Work States	-6.0%
	Forced-Unionism States	-9.7%
	National Average	-7.8%
	BLS	

* The term "Tax Freedom Day," was coined and popularized by the nonpartisan, Washington, D.C. -based Tax Foundation. As the Tax Foundation has explained, it is "the day when Americans . . . finally have earned enough money to pay off their total [federal, state and local] tax bill for the year." (For simplicity's sake, the Tax Foundation assumes an equal amount of income is earned every day, and does not distinguish weekdays from weekends.)

(continued on page 2)

New Privately-Owned Single-Unit Housing Authorizations Per 1000 Residents (2009, first 11 months)	Right to Work States	1.9
	Forced-Unionism States.	0.9
	National Average . . . . BOC	1.3
Growth in the Number of People, Aged 25+, Who Have Completed a Bachelor's Degree (2000-2009)	Right to Work States	31.8%
	Forced-Unionism States.	24.0%
	National Average . . . . BOC	26.8%
Welfare (TANF) Recipients Per 1000 Residents (2009 Calendar Year Average)	Right to Work States	7.6
	Forced-Unionism States.	17.3
	National Average . . . . U.S. Administration for Children and Families; BOC	13.3
Percentage Growth in Number of People Covered by Private, Employment-Based Health Insurance (1999-2009)	Right to Work States	+0.9%
	Forced-Unionism States.	-6.9%
	National Average . . . . BOC	-4.0%
Percentage Growth in Number of People Covered by Any Form of Private Health Insurance (1999-2009)	Right to Work States	+1.0%
	Forced-Unionism States.	-5.7%
	National Average . . . . BOC	-3.1%

To obtain more detailed information about how any or all of the above comparative economic data were derived, contact Stan Greer -- e-mail stg@nrtw.org or call 703-321-9606.

NI LRR

Misdirection and Misrepresentation

Big Labor's Campaign Against an Indiana Right to Work Law

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March 2006

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About the Organization

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Nothing here is to be construed as an attempt to aid or hinder the passage of any bill before Congress or any state legislature.

Executive Summary

A recent paper by Jeff Vincent, research director of the Division of Labor Studies at Indiana University, grossly misrepresents the facts about Right to Work laws and the economic and moral arguments that have been made in support of enacting such a law in Indiana.

In seeking to undermine the powerful economic case for an Indiana Right to Work law, Vincent ignores the uncontroversial fact that living costs, both pre-tax and after-tax, are significantly lower in Right to Work states. Analyses from varied sources that account for living costs indicate that real earnings, household incomes, and disposable incomes are higher in Right to Work states than in non-Right to Work states. Data in a study by two U.S. Census Bureau researchers show that the aggregate real poverty rate is lower in Right to Work states than in non-Right to Work states.

Another key problem with Vincent's paper is that it downplays, almost to the point of ignoring altogether, the importance of economic dynamism in assessing business climate. By his bizarre assessment, it is the very non-Right to Work states that are suffering the biggest net losses of young job-seekers to out-migration to Right to Work states that have the best "business climates" in America.

Finally, Vincent's critique of the moral case for Right to Work laws ignores the fact that all Right to Work proponents seek is equal treatment under the law for employees who favor and employees who oppose unionization. Vincent apparently believes opponents of unionization deserve less freedom than proponents.

Introduction

Recently, a former union official, now the Bloomington-based research director of the Division of Labor Studies at Indiana University, named Jeff Vincent published a paper[1] that grossly misrepresents "The Economic Benefits of an Indiana Right to Work Law," a study I wrote in 2004 for the National Institute for Labor Relations Research.

My study[2] called attention to U.S. Census Bureau data showing that there is a sustained net outflow of millions of young employees and entrepreneurs and their family members from non-Right to Work states, including Indiana, to Right to Work states. It inferred from the data that "Indiana simply isn't creating enough good jobs either to keep its young adults from leaving or to lure in young adults from other states."

The study noted that, when adjusted for interstate differences in cost of living, per capita disposable income in 2001 was higher in Right to Work states as a group than in Indiana in particular or in forced-unionism states collectively. And it noted that, between 1992 and 2002, the number of people covered by employment-based health insurance in Right to Work states grew nearly twice as fast as in Indiana and half again as fast as in non-Right to Work states overall.

It also summarized the moral case for Right to Work laws, which bar the firing of employees for refusal to join or pay dues or fees to an unwanted union: "A worker's freedom *not* to affiliate with a labor union is no less deserving of protection than his or her freedom to affiliate with a union."

In his paper, which union officials have circulated among Indiana legislators and media, Vincent airily dismisses this study as "boilerplate" and "misleading," but fails even to give his readers a clear idea of what it says. At times, he rejects the evidence it furnishes without offering any factual or logical explanation why. Elsewhere, he ignores altogether what the study says and instead punches a straw man.

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[1] Jeff Vincent, "The 2006 Indiana Right to Work Campaign," Indiana University, Division of Labor Studies, January 2006. See http://www.union1.org/badforindiana/PDF%20Files/2006%20IN%20RTW%20Campaign.pdf to download a copy.

[2] See http://www.nilrr.org/INRTWstudv2.pdf to obtain a copy.

Vincent Ignores the Fact That, On Average, Living Costs Are Far Lower in Right to Work States

Vincent focuses primarily on current living standards in Right to Work states, while devoting relatively little attention either to economic-growth issues or to moral questions. Among the many serious defects in his paper, his failure to take into account interstate differences in the cost of living is perhaps the most obvious.

There is simply no controversy about the fact that the cost of living in the 22 states that now have Right to Work laws on the books is, on average, significantly lower than in the 28 forced-union-dues states. Scholars of widely varying ideological stripes have found that the cost of living in forced-union-dues states tends to be well above the national average.

For example, the most recent version of an interstate cost-of-living index created by researchers for the American Federation of Teachers union (AFT/AFL-CIO), published in July 2003, shows that the typical family in a non-Right to Work state must take in roughly 15% more in pre-tax nominal income to secure the same standard of living as a family in a Right to Work state.[3]

Right to Work states' cost-of-living advantage was noted in the Institute's 2004 study. It also noted that real average per capita disposable income in Right to Work states in 2001, as reported by the U.S. Commerce Department's Bureau of Economic Analysis[4] and adjusted according to the AFT's index, was $25,940, compared to $25,769 in Indiana and $25,641 in non-Right to Work states as a group.

In another publication, the Institute has pointed out that, when adjusted with the AFT's cost-of-living index, the average pre-tax earnings of full-time employees as reported by the Bureau of National Affairs[5] (BNA) are nearly $800 a year higher in Right to Work states than in non-Right to Work states.[6] And a study written by University of Colorado economist Barry Poulson, a past president of the North American Economics and Finance Association, and published by the Institute in 2005 looks at household

[3] F. Howard Nelson and Rachel Drown, "Survey and Analysis of Teacher Salary Trends 2002," American Federation of Teachers, Washington, D.C., 2003, p.13. The AFT survey and the Institute's analysis of the data can be downloaded from http://www.aft.org/salary/2002/download/SalarySurvey02.pdf and http://www.nilrr.org/Real%20Earnings%20PDF%20masterupdate%20Feb04.pdf ("Real Earnings Remain Higher in Right to Work States: Fresh Evidence from the AFL-CIO"), respectively.

[4] U.S. Department of Commerce, *Statistical Abstract of the United States*, 122nd Edition (2002), p. 427.

[5] Barry T. Hirsch and David A. Macpherson, *Union Membership and Earnings Data Book: Compilations from the Current Population Survey*, 2002 Edition, Bureau of National Affairs, Inc., Washington, D.C., 2002, pp. 30-35.

[6] "Real Earnings Remain Higher in Right to Work States," Footnote 3, *supra*.

incomes, using income and comparative-living-cost data from a 2004 book by prominent business consultant Peter Sander and journalist Bert Sperling.[7]

With additional help from data in a CD ROM entitled *2004 MSA Profile*, compiled by Woods and Poole Economics in Washington, D.C., Poulson compared adjusted household incomes for 133 metropolitan areas in Right to Work states and 158 metro areas in forced-union-dues states. He found that, when the number of households in each metro area is factored into the equation, the average cost of living-adjusted household income in Right to Work state metro areas in 2002 was $4258 higher than in non-Right to Work state metro areas.[8]

Similarly, data furnished in a 2003 study by two Census Bureau staff members show that, when adjusted for cost of living, the share of the total population in poverty is 2.4% lower in Right to Work states than in non-Right to Work states. The same study shows the share of 5-17 year-olds in poverty is 3.8% lower in Right to Work states than in non-Right to Work states.[9]

Union Officials Know Cost of Living Matters a Lot, But Ignore It When Attacking Right to Work Laws

Vincent never attempts in any way to refute the Sander-Sperling, AFT union, Commerce Department, BNA, or Census Bureau data or the analysis of them by Poulson and the Institute. Instead, he concludes his paper with a series of charts that completely ignore the cost-of-living factor, but purport to show that wages and family incomes are lower and poverty is higher in Right to Work states than in forced-union-dues states.

It's unlikely this is a mere oversight on his part.

Before becoming an academic, Vincent was an officer of United Food and Commercial Workers union Local 1444 and AFT Local 2254. Union officials frequently deal with regional cost-of-living issues in contract negotiations. In fact, AFT staffer F. Howard Nelson's motive for creating the AFT's "Interstate Cost-of-Living" index in 1989 was undoubtedly to bolster the union's bargaining position in high-cost states and localities.

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[7] *Cities Ranked and Rated*, Wiley Publishing, Inc., Hoboken, N.J., 2004.
[8] Barry Poulson, "The Standard of Living in Right to Work States," National Institute for Labor Relations Research, Springfield, Va., 2005, p. 16. See http://www.nilrr.org/Poulson%20SOL%20Study.pdf.
[9] Charles Nelson and Kathleen Short, "The Distributional Implications of Geographic Adjustment of Poverty Thresholds," U.S. Census Bureau, Washington, D.C., 2003, pp. 25-26, 29-30. The study may be obtained at http://www.census.gov/hhes/poverty/povmeas/papers/geopaper.pdf. The Institute analyzed this study in "Right to Work States Benefit from Faster Growth, Higher Real Purchasing Power – 2004 Update," http://www.nilrr.org/NILRR%20Fact%20Sheet%20RTW%20States%20Benefit%202004.pdf.

Similarly, in 2002 officers of International Brotherhood of Electrical Workers (IBEW) union Local 1245 prevailed upon executives of Pacific Gas & Electric to establish a "Joint Cost-of-Living Education Committee" to document the economic problems of and propose solutions for unionized employees in high-cost California (a non-Right to Work state). Union officials have proposed a "cost-of-living/housing premium" to enable their members in the Bay Area and other extraordinarily expensive areas of the state to own their own homes.[10]

Like other forced-unionism propagandists, Vincent seems to be operating under the unstated assumption that regional cost-of-living differences must be addressed in contract negotiations in high-cost areas, but should be overlooked when discussing the Right to Work issue. This won't wash.

Vincent Wrongly Downplays Importance of Economic Dynamism

Another fundamental error Vincent makes is to downplay the importance of job and real income growth in evaluating a state's economic success. No one disputes Vincent's contention that "counting jobs" alone is "an insufficient measure of economic health." But he goes to the opposite extreme, and effectively contends that job creation isn't important at all. Instead, he indicates, one should only look at current, nominal wage and salary levels, current total economic output, and other factors that tell you nothing about economic growth.

But examining current nominal earnings, incomes and production without looking at growth will frequently give you a grossly distorted picture of a state's economic success. The importance of accounting for comparative cost of living has already been discussed. And there is another major problem, which can be illustrated with the following, admittedly greatly simplified, example:

Take a hypothetical state. Back in 1994, 60% of its employees made $50,000 a year, and 40% made $30,000 a year. The average employee thus earned $42,000 a year. Over the course of the next decade, half of the $30,000-a-year earners found jobs in another state that paid $40,000 a year (in constant dollars), so they quit and moved. Assuming no new employees were hired, and the remaining employees' pay just kept up with inflation, by 2004 the average constant-dollar earnings in our first hypothetical state would have increased to $45,000.

No rational observer would say that a $3000-a-year increase in average real earnings achieved in this way is a sign of economic success.

But analyses that ignore dynamism repeatedly fail to reflect reality and instead

[10] Eric Wolfe, "Confronting the High Cost of Living," *ILCA Online*, February 16, 2005, http://ilcaonline.org/print.php?sid=1829.

depict analogous, albeit more complex, state economies as far less anemic than they really are.

While a total state employment decline over a 10-year period may only be a hypothetical problem, Indiana and other slow-growth states' net loss of millions of young employees and entrepreneurs and their family members to other, faster-growing states over the years is all too real.

Official Census Bureau data show that, between 1994 and 2004, the total number of Americans aged 25-34 fell by 3.2%, from 41.35 to 40.03 million. The overall decline was a result of the "baby bust" of the seventies, and it would have been far greater but for the immigration of millions of young people from abroad.

But despite the overall decline, the number of 25-34 year-olds *increased* by 6.5%, or nearly a million, in the 21 states that had Right to Work laws throughout the 1994 to 2004 period. (Oklahoma, which became the 22nd Right to Work state in 2001, is excluded.)

In non-Right to Work states, meanwhile, the number of 25-34 year-olds plummeted by 8.6%, or nearly 2.3 million. Indiana alone lost a net of 5.9%, or 52,000, of its residents in this age group. [11]

There is no discrepancy in 1970's birth rates to explain the wide gap between Right to Work and non-Right to Work states. And were it not for immigrants, who disproportionately located in non-Right to Work states,[12] the gap would be even wider. The explanation is simple: By 2004, a net total of more than two million Americans who were born in a non-Right to Work state between 1970 and 1979 had moved to a Right to Work state.

While important, Right to Work status is not the only factor in determining domestic migration trends. Heavily rural states, for example, whether Right to Work or non-Right to Work, have tended to suffer a net loss of young people. But youth out-migration appears to be more closely correlated with the pervasiveness of compulsory unionism than it is with any other single factor.

And with national unemployment remaining generally low over the past decade, it's obvious the vast majority of young employees moving out of non-Right to Work states haven't done so because they couldn't get *any* job where they were. They did so because they could get a *better* job, by their lights, in a Right to Work state.

In his attempt to rebut pro-Right to Work literature from the Institute and other sources, Vincent completely fails to address this point, despite the fact that the Institute's 2004 Indiana study emphasized it.

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[11] *Statistical Abstract*, 115th Edition (1995), p. 33; 126th Edition (2006), p. 25.
[12] See, e.g., *ibid*, 126th Edition, p. 12, for 2003 state-by-state immigration data.

'There's an Exodus of Young People . . . We Need to Reverse It'

Instead, Vincent cites a deeply flawed study[13] by three union-friendly University of Massachusetts researchers who select six states that young employees are collectively fleeing in droves as having the best "work environments" in the U.S.

In an e-mail message to the co-authors last fall, I noted that the six "best" states in the study – Delaware, New Hampshire, Minnesota, Vermont, Iowa and Connecticut (all non-Right to Work except for Iowa) – suffered an overall 14.0% decline in their 25-34 year-old population between 1993 and 2003, nearly three times as severe as the nationwide decline for that period.

How can these states have such good working environments when young employees are overwhelmingly voting against them with their feet?

When asked to account both for the huge net outflow of young employees from his study's "good" states and the substantial net inflow of young employees to his study's "bad" states, co-author Robert Pollin lamely replied:

> You raise some interesting issues. We had thought about these issues in a general way in developing our methodology and indicators. As a general methodological consideration, we were concerned in constructing an index to keep it as simple as possible. . . . We think we do provide a reasonably accurate measure of job opportunities. But it may be that we should refine our technique further in subsequent work on this topic. We are always looking to improve it, and we have been thinking through this particular issue a lot.[14]

As admirably "simple" as professional Big Labor apologist Pollin's work-environment index may be, it isn't even "reasonably" reflective of reality, and businesses, job seekers, and state politicians who have to deal with reality in order to get reelected see things very differently.

The *New York Times* recently reported, for example, that Vermont (with the fourth "best" work environment in the U.S., according to Pollin and his co-authors) "is losing young people at a precipitous clip." A key factor in the out-migration, the *Times*

[13] James Heintz, Jeannette Wicks-Lim, Robert Pollin, "Decent Work in America: The State by State Work Environment Index," Political Economy Research Institute, Amherst, Mass., 2005.
[14] Robert Pollin, e-mail message to the National Institute for Labor Relations Research, November 2, 2005.

explained, is the Green Mountain State's loss of "many good-paying jobs, driving away many well-educated young people and further discouraging businesses." The article quoted a 21-year-old Shaftsbury, Vt., native who had searched unsuccessfully for a job in Burlington, the state's largest city: "Vermont just doesn't offer many opportunities. For someone who's young and trying to make a name for himself, it's just not really the best environment."

In stark contrast to Pollin's rosy assessment, which Vincent eagerly swallows whole, Vermont's GOP Gov. Jim Douglas has recognized the state is in grave peril: "There's an exodus of young people. It's dramatic. We need to reverse it. The consequences of not acting are severe."[15]

While Indiana's economic problems are not yet as severe as those of Vermont, which lost 20.5% of its 25-34 year-old population between 1994 and 2004, Hoosiers have no cause to be complacent. And understanding the nature of the problem is the first step toward correcting it.

Why Shouldn't Right to Join And Right Not To Join a Union Be Equally Protected?

In addition to fumbling the economic facts about Right to Work states, Vincent gives a garbled account of what Right to Work laws do.

According to Vincent, Right to Work activists "insist that individual preferences always supersede majority rule." Wrong. Right to Work supporters simply believe that the individual employee's right not to join a union deserves just as much protection under the law as his or her right to join.

In both Right to Work and non-Right to Work states, current federal law protects the individual worker's right to join and pay dues to a union, regardless of whether or not a majority of the employees at the business or in the "bargaining unit" want a union. No worker can be barred from being a full union member and bankrolling all types of union activities, both bargaining and non-bargaining, simply because a majority of workers in the shop have voted against unionization.

Right to Work proponents agree a pro-union employee's unrestricted freedom to join a union shouldn't be contingent on what other employees think. I'm sure Vincent agrees. But Vincent thinks there should be a different standard for an individual employee who doesn't want a union. His or her freedom not to join, according to Vincent, can be restricted if a majority favor unionization. In that case, a union nonmember should be forced to pay union agency fees in lieu of union dues.

[15] Pam Belluck, "Vermont Losing Prized Resource as Young Depart," *New York Times*, March 4, 2006.

But Vincent doesn't explain why there should be a double standard. Either your fellow employees shouldn't be able to dictate to you which private organizations you support, or they should – unless you don't believe in equal protection under the law. If Vincent's real position is that workers who support unionization deserve more freedom than workers who oppose unionization, he should say that plainly, instead of obfuscating.

Vincent also assumes that no sane worker in a union shop could sincerely prefer to be union-free, because "union workers earn more than their non-union counterparts."

This is wrong in a variety of ways. First of all, in certain key sectors nonunion workers earn, on average, more than unionized workers. For example, according to the BNA, in 2004 the average hourly pay for a nonunion manufacturing employee was \$19.24, \$1.29 more than the average for a union manufacturing employee.[16] Second, even in sectors where the *average* union wage is higher, many nonunion employees may correctly believe that, based on their skills and experience, they could negotiate better pay as individuals than they can through a union monopoly-bargaining agent. Third, employees may reasonably believe that, regardless of the impact a union has on their pay, it hampers their employer's competitiveness and thus increases unacceptably their risk of getting laid off. Between 1999 and 2004, the number of unionized U.S. manufacturing jobs plummeted by 31.8% – double the decline in nonunion manufacturing jobs. Meanwhile, in driver/sales and truck driving, unionized jobs fell by 20.9%, but nonunion jobs *increased* by 2.1%.[17]

Polls Indicate Most Union Members Support the Right to Work Principle

Finally, it is illogical to suggest that only economic considerations should be relevant in a worker's decision to join or not join a union. American union officials typically wield a large chunk of the dues money they take in to assist their favored political candidates and promote a wide array of controversial political and ideological causes. Workers should have the right to refuse to bankroll a union whose political and ideological agenda they oppose, regardless of how they believe the union's economic activities affect their pocketbooks.

Union-label Indiana legislators who hope that Vincent's paper will provide them with political cover for voting against Right to Work legislation[18] had better think again.

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[16] Barry T. Hirsch and David A. Macpherson, *Union Membership and Earnings Data Book: Compilations from the Current Population Survey*, 2005 Edition, Bureau of National Affairs, Inc., Washington, D.C., 2005, p. 24.
[17] *Ibid*, pp. 48-49, 66, 89-90, 107.
[18] The Indiana House of Representatives defeated a Right to Work amendment to another piece of legislation this February 28 in a 65-31 vote. Grass-roots opponents of forced unionism were pleased to get virtually all incumbent legislators on the record, one way or the other, and are now mobilizing pro-Right to Work citizens around the state to contact incumbent representatives and their electoral challengers about the vote.

Union officials across America have loudly been making similar arguments against Right to Work laws for years, and have failed to make a dent in public opinion. Nationwide surveys show three-quarters or more of politically active citizens support the Right to Work principle.[19]

Even rank-and-file union members, who are inundated with the most Big Labor propaganda of all, overwhelmingly support Right to Work. A 2004 survey by world-renowned pollster John Zogby found that, by a 63% to 32% margin, union household members agreed "it is unfair for a worker to lose their job if he or she refuses to pay dues to, or support, a union."[20]

In the end, there is no significant constituency for compulsory unionism except for union officials themselves and their diehard apologists in academia and journalism. Vincent's dreary attempt to shore up opposition to Right to Work in Indiana will do nothing to broaden Big Labor's base of support.

[19] For example, a 2004 nationwide survey by veteran pollster Del Ali, president of Research 2000, found that 79% of Americans who "always or almost always vote" in statewide elections support a person's right to hold a job "regardless of whether or not he or she belongs to a union."

[20] Zogby International, "Checking the Premises of 'Card Check,'" in *Michigan Education Report*, Mackinac Center for Public Policy, Midland, Mich., 2005, Question 20, http://www.educationreport.org/print.asp?ID=6704.

NILRR

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THE PROBLEM

Organized labor has had a profound economic and political impact on the institutions of American power. Yet the far-reaching ramifications of that impact are largely unknown to the public. Academic interest in labor unions and labor relations is at its lowest point in decades.

While there has been a notable proliferation of private interest groups in recent years, none has exposed the excesses of America's union establishment from an academic perspective. Consequently, not enough light has been shed on one of the few remaining forms of tyranny left in America: compulsory unionism.

THE NEED

Labor policy in America has not reflected the will of its citizenry for decades because Big Labor's support in the academic community has allowed it to control debate. As a result, labor unions have not been subjected to the same degree of scrutiny as their counterparts in the corporate world.

In many cases, the interests and concerns of Americans who support the right to work without compulsion are ignored for lack of an academic support structure. Freedom of association has diminished because its proponents frequently are without the analysis and research necessary to effectively make their case.

Obviously, there is an urgent need for an organization that will draw together scholars and economists to perform objective and revealing research into the practices of America's labor unions. The National Institute for Labor Relations Research is such an organization.

THE PROGRAM

1. The Institute's primary function will be to act as a research facility for the general public, scholars and students. It will provide the supplementary analysis and research necessary to expose the inequities of compulsory unionism.

2. It will publish monographs, brochures and briefing papers designed to stimulate research and discussion with easy-to-read summaries of current events. The Institute will also conduct nonpartisan analysis and study for the benefit of the general public.

3. It will render aid gratuitously to individuals suffering from government over-regulation of labor relations and will provide educational assistance to those individuals who have proved themselves worthy thereof.

It is high time that self-interested union officials be confronted with the facts on how their brand of unionism has failed to improve general conditions for workers. With an intensive program of study and education, the National Institute for Labor Relations Research intends to do just that.

Contributions to NILRR Are Tax Deductible

The Institute is classified by the Internal Revenue Service as a Section 501(c)(3) educational and research organization. Contributions and grants are tax deductible under Section 170 of the Code and are welcome from individuals, foundations, and corporations. The Institute will provide documentation to substantiate tax-deductibility of a contribution or grant, upon request.

Exhibit B
Interim Study Committee on
Employment Issues
July 26, 2011 Meeting #1

What's Wrong with "Right to Work"?

Prof. G. Lafer
University of Oregon
July, 2011

Key Findings

- RTW laws lower wages by $1,500 per year – for both union and non-union workers alike.

- RTW decreases the odds of getting health insurance or a pension through your job, for both union and non-union employees.

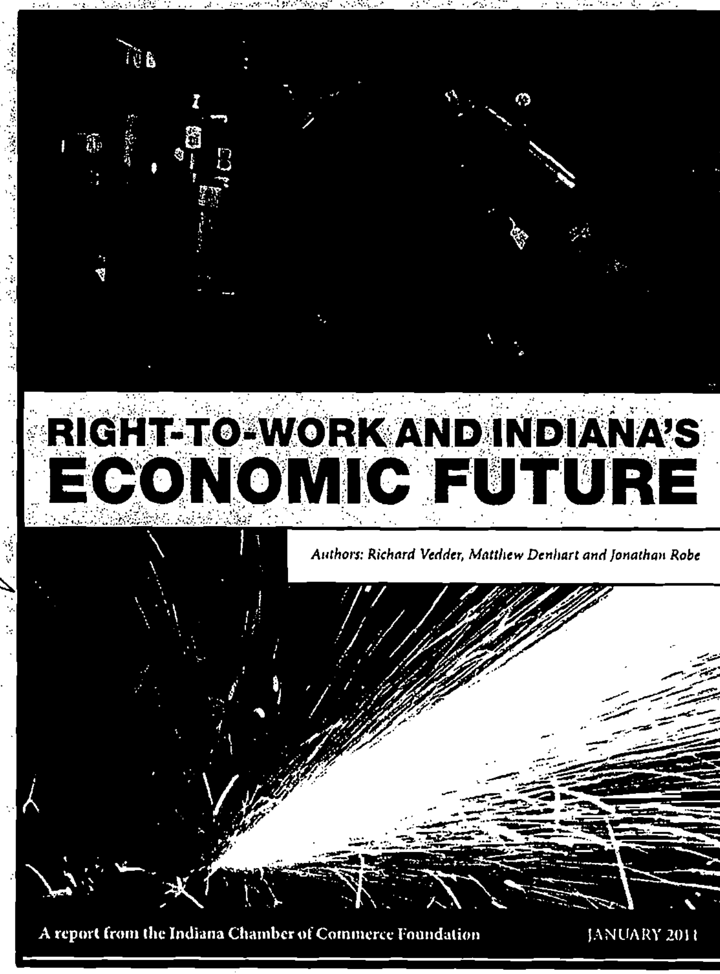
- RTW has no impact whatsoever on improving job growth.

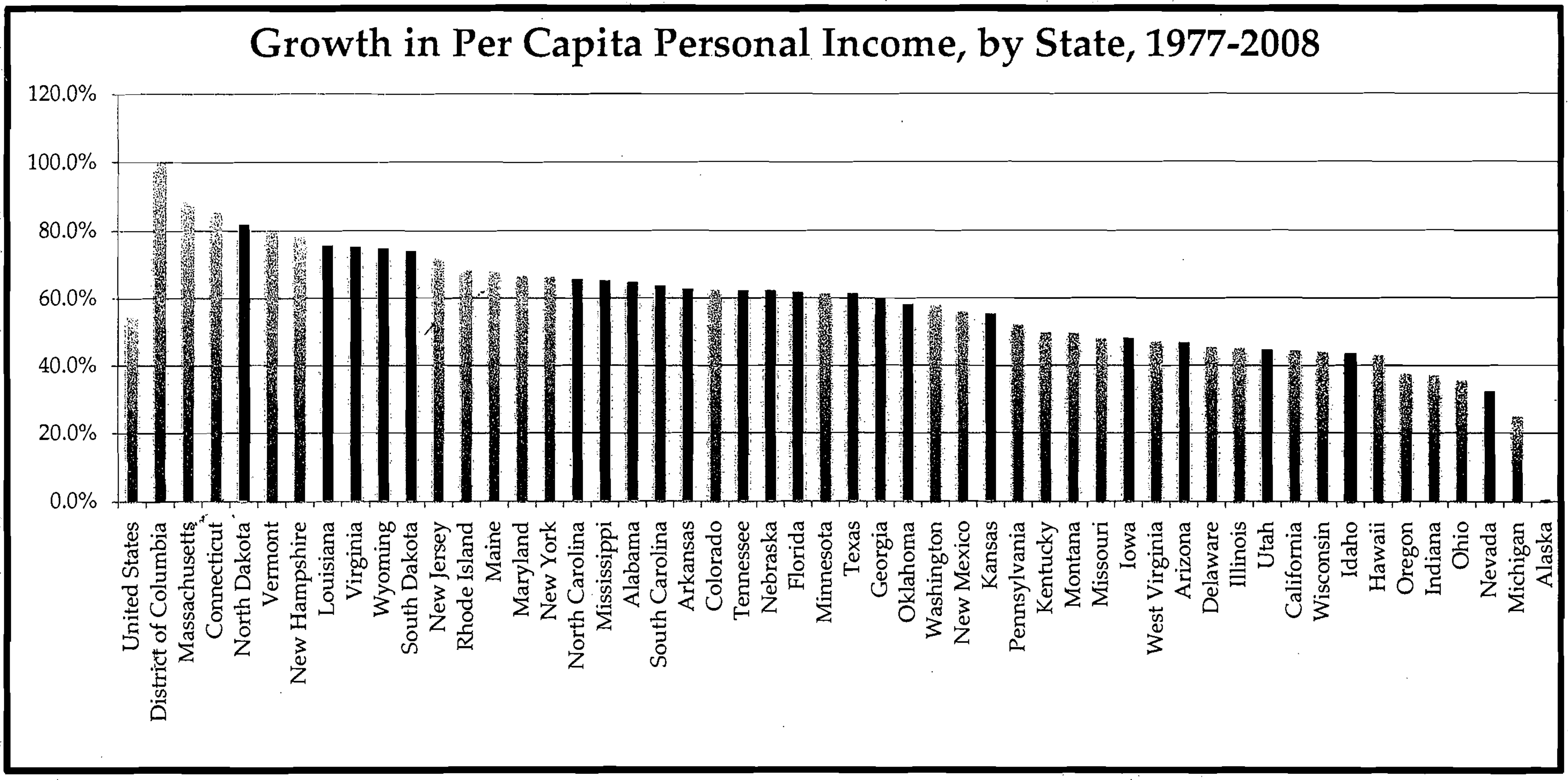
What is "Right to Work"?

RTW makes it illegal for any group of employees to negotiate an agreement with their employer that requires everyone who benefits from a union contract to pay their share of the costs of administering that contract.

Misleading Claims

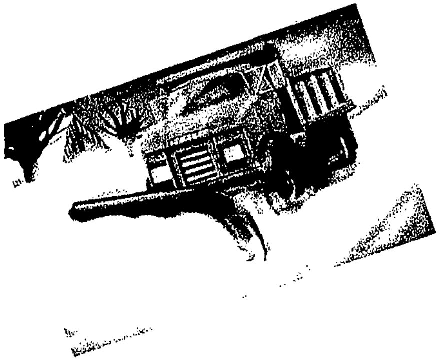
"States with RTW laws have experienced above average economic growth, while states without such laws have seen below average growth."

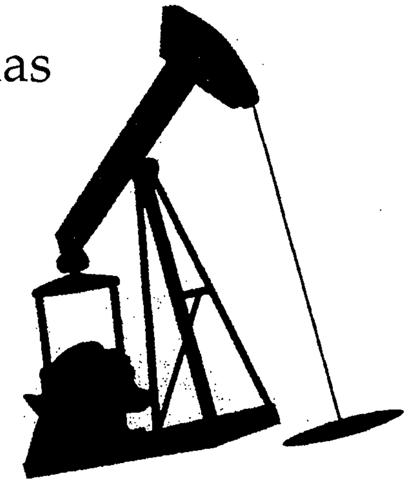




Data underlying Chamber of Commerce analysis shows no relationship between RTW laws and economic growth

Explanations for Economic Growth?





- Indiana has 25 snow days a year; Texas has two, Florida none.

- Texas boasts 300,000 jobs in oil & gas; Indiana has less than 6,000.

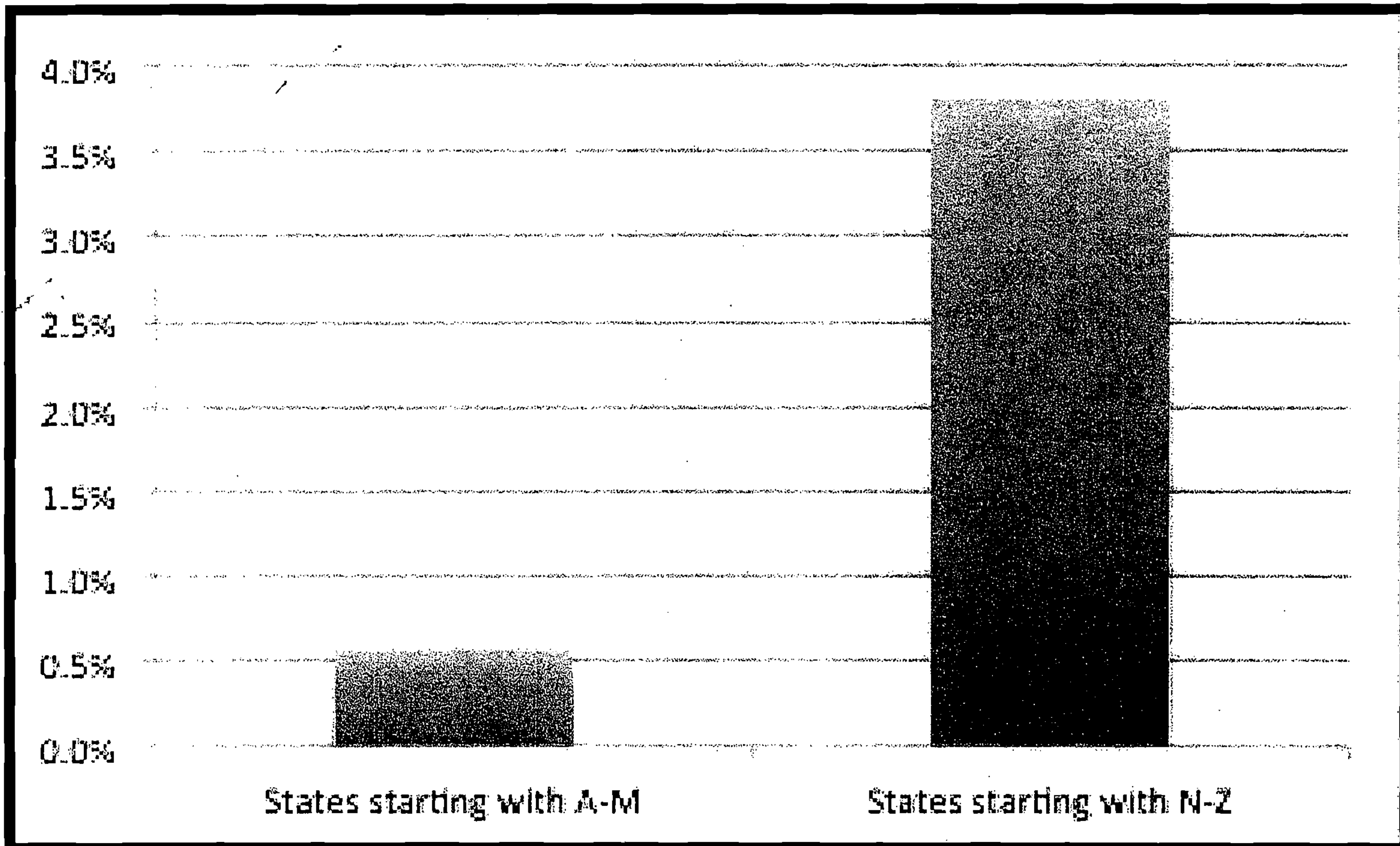
- College tuition is $9,000 in Indiana; just $5,000 in Florida.

- Texas and Florida both have over 2 million containers a year moving through their ports; Indiana has none.

- Indiana's gas tax is 43¢ per gallon; Florida's is just 36¢ and Texas' is just 26¢.

Why Averages Can't Tell You Much:

Job growth by state name, 2000-09



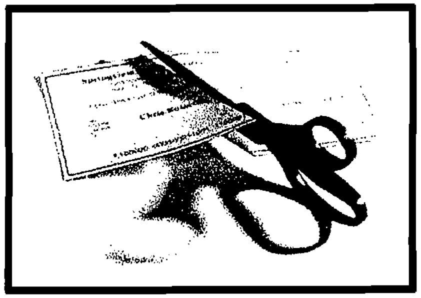
Average job growth, 2000-09. Source: US Bureau of Labor Statistics.

"Junk Science" versus Rigorous Analysis

Variables Controlled For in Estimating Impact of "Right to Work" Laws

	EPI (2011)	Chamber/ Vedder (2011)
Demographics		
Right to work indicator	x	x
Union indicator	x	
Race/Ethnicity		
White non-Hispanic	x	
Hispanic	x	
Asian	x	
Other race/ ethnicity	x	
Gender	x	
Education		
Some high school	x	
Some college	x	
Associates degree	x	
College degree	x	x
Advanced degree	x	x
Age	x	
Age Squared	x	
Married	x	
Hourly worker	x	
Full-time worker	x	
Metro area	x	
Industry		
Agriculture, forestry, fishing, hunting	x	
Mining	x	
Construction	x	
Manufacturing	x	x
Transportation and utilities	x	
Information	x	
Financial activities	x	
Professional and business services	x	
Educational and health services	x	
Leisure and hospitality	x	
Other services	x	
Public administration	x	
Occupation		
Management, business and financial occcupations	x	
Professional and related occupations	x	
Service occupations	x	
Sales and related occupations	x	
Farming, fishing, and forestry occupations	x	
Construction & extraction occupcations	x	
Installation, maintenance and repair occupations	x	
Production occupations	x	
Transportation & material moving occupations	x	
Macro variables		
Unemployment rate	x	
Employment to population ratio		x
Population growth		x
Cost of living (PERI)	x	
Cost of living (Missouri)	x	
Age of state		x

Impact of RTW on wages & benefits



- RTW lowers wages by an average of $1,500 a year, after accounting for cost of living – for both union and non-union workers.

- RTW worsens the odds of getting employer-supported health insurance by 2.6% -- for both union and non-union employees.

- RTW decreases the chance of getting an employer-supported pension by 4.8% -- for both union and non-union employees.

Since RTW was adopted, over 100 Oklahoma firms have closed their doors due to low-wage competition abroad.

Oklahoma manufacturing before and after "Right to Work"

RTW LAW TOOK EFFECT 2003

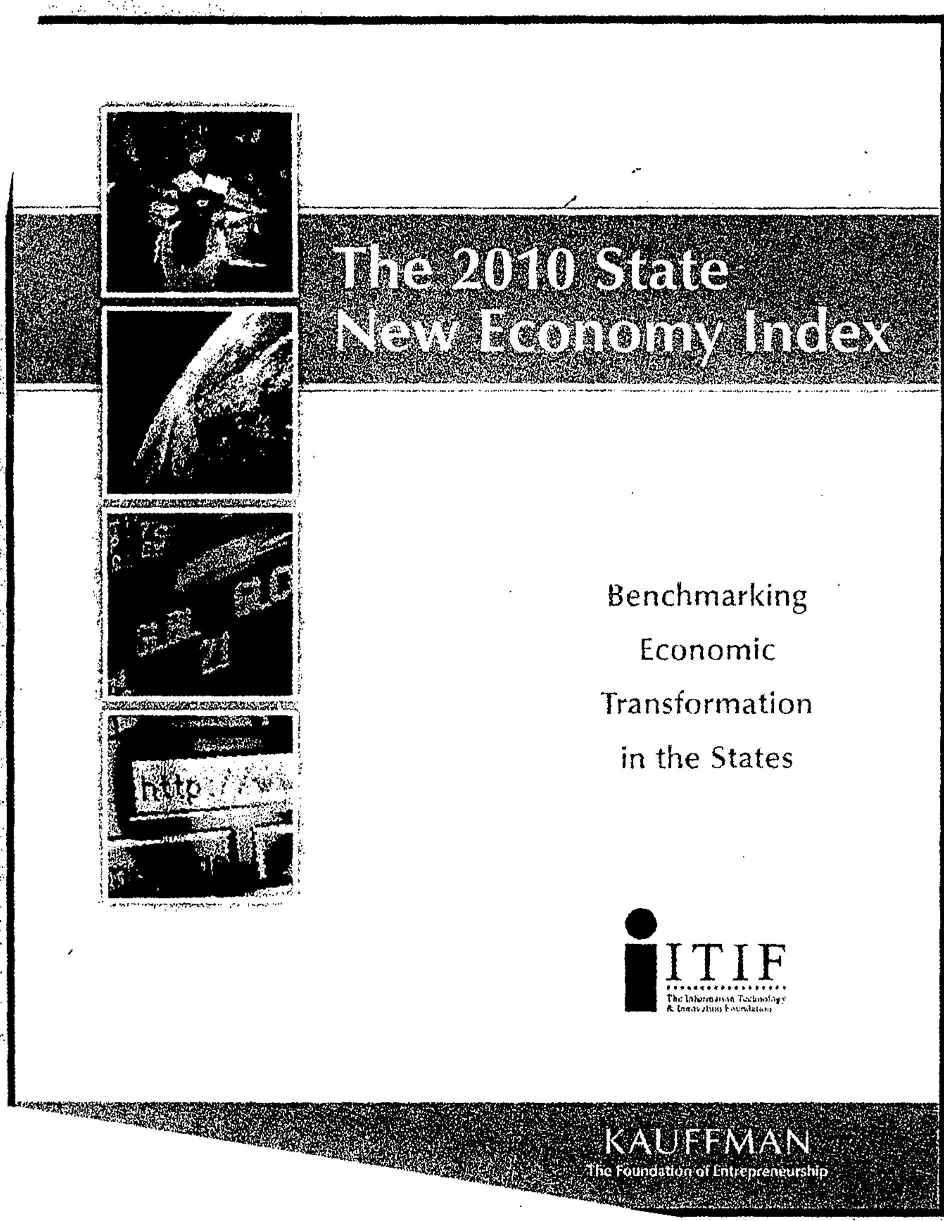
Announced Openings of New Manufacturing and Service Facilities
Oklahoma, 1990-2010

	Manufacturers		Service Industries		Total, Mfg & Services	
Year	Plants	Jobs	Facilities	Jobs	Facilities	Jobs
1990	62	2,461	15	795	77	3,256
1991	45	2,424	17	2,563	62	4,987
1992	50	3,066	11	1,717	61	4,783
1993	38	1,899	8	1,160	46	3,059
1994	45	4,211	21	4,917	66	9,128
1995	20	2,353	12	5,940	32	8,293
1996	37	1,926	23	5,612	60	7,538
1997	23	2,207	15	3,233	38	5,440
1998	24	1,399	19	3,797	43	5,196
1999	30	3,347	15	5,267	45	8,614
2000	13	1,806	18	6,055	31	7,861
2001	19	1,612	9	1,200	28	2,812
2002	23	1,865	8	1,510	31	3,375
2003	32	2,506	7	1,454	39	3,960
2004	24	2,629	12	3,841	36	6,470
2005	26	2,722	15	3,641	41	6,363
2006	30	5,106	12	2,251	42	7,357
2007	21	2,253	14	2,665	35	4,918
2008	9	388	7	1,855	16	2,243
2009	10	861	6	640	16	1,501
2010	16	1,657	19	1,780	35	3,437
Annual Average, Various Periods						
1991-2000	33	2,464	16	4,026	48	6,490
2001-2010	21	2,160	11	2,084	32	4,244
2001-2005	25	2,267	10	2,329	35	4,596
2006-2010	17	2,053	12	1,838	29	3,891

Source: Oklahoma Department of Commerce
Announced New and Expanded Manufacturers and Services, 2010 Annual Report, January 2011.

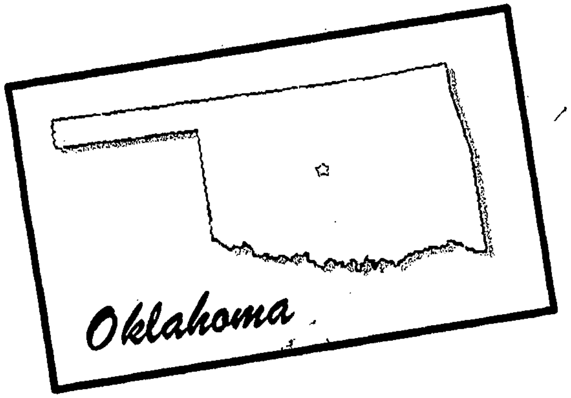
The number of new firms coming to Oklahoma each year has fallen by one-third since the state passed RTW.

Top 10 states for high-tech companies

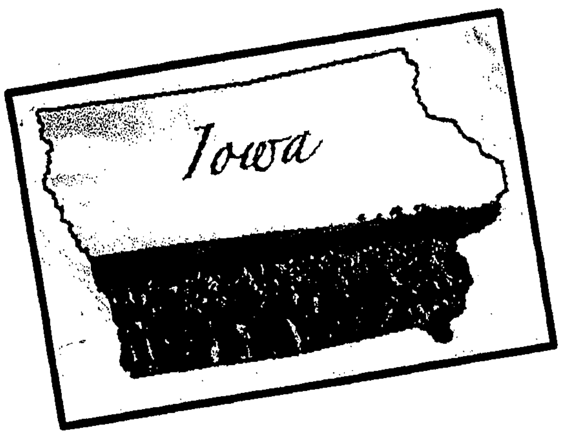


- Massachusetts
- Washington
- Maryland
- New Jersey
- Connecticut
- Delaware
- California
- Virginia
- Colorado
- New York

Marketing strategies for "RTW" states



- "Oklahoma's central location and easy, affordable access to domestic and international markets, low business costs and taxes, comprehensive transportation system ... cutting-edge incentives, and a technologically skilled workforce."



- Iowa's "key economic advantages" are low corporate and property taxes, low rates for workers' compensation and UI, and generous R&D tax credit.

Every $1 million in wage cuts results in an additional six jobs lost in the local economy.

Rights not supported by Chamber of Commerce

- Whistleblower rights for coal miners worried about safety.
- Protection for repetitive motion injuries.
- Sick leave for food service workers with H1N1.
- Paid family leave.
- Not being forced to attend one-sided meetings on politics or religion, on work time, if they conflict with your personal beliefs.
- Not being fired for having a bumper sticker supporting a candidate your employer opposes.

Rights Gained Through Unions

- Right to elect representative leaders and to vote on proposals for changing workplace policy.
- Right to voice your political and religious views without fear of retaliation.
- Right to be promoted if you prove you have the qualifications.
- Right to complain about safety conditions without fear of punishment.
- Right to retirement security.

Exhibit C
Interim Study Committee on Employment Issues
July 26, 2011 Meeting #1

EPI BRIEFING PAPER

ECONOMIC POLICY INSTITUTE • MARCH 1, 2011 • BRIEFING PAPER #300

DOES 'RIGHT-TO-WORK' CREATE JOBS?

Answers from Oklahoma

BY GORDON LAFER AND SYLVIA ALLEGRETTO

As the country strives to recover from the worst recession since the Great Depression, lawmakers in several states are being told that the key to solving their state's unemployment woes is adopting so-called "right-to-work" statutes.

Misleadingly named right-to-work (RTW) laws do not, as some unfamiliar with the term may assume, entail any guarantee of employment for those ready and willing to work. Rather, they make it illegal for a group of unionized workers to negotiate a contract that requires each employee who enjoys the benefit of the contract to pay his or her share of the costs of negotiating and policing it. By making it harder for workers' organizations to sustain themselves financially, RTW laws aim to restrict the share of state employees who are able to represent themselves through collective bargaining, and to limit the effectiveness of unions in negotiating higher wages and benefits for their members. Because it lowers wages and benefits, weakens workplace protections, and decreases the likelihood that employers will be required to negotiate with their employees, RTW is advanced as a strategy for attracting new businesses to locate in a state.

Right-to-work laws have been implemented in 22 states, predominantly in the South and Southwest, starting as far back as 1947. But what is their actual track record in spurring employment growth? And what is the likelihood that, in today's economy, a state deciding to adopt the 23rd right-to-work statute would see its job market improve?

This report examines the track record of right-to-work laws in boosting employment growth. In particular,

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The track record of right-to-work and job creation 2
Shrinking impact of right-to-work over time? 5
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Did right-to-work help Oklahoma? 7
Oklahoma jobs outsourced to lower-wage countries 13
Listening to employers 14
Economic development officials do not treat right-to-work as a significant selling point 15
Does right-to-work harm job growth? 15
Conclusion: learning from Oklahoma 16

www.epi.org

we examine in depth the experience of Oklahoma, which in 2001 became the most recent state to adopt an RTW law. The majority of RTW states enacted their laws more than 30 years ago; the second-most recent statute adopted is that of Idaho, passed in 1985. Because economic conditions have changed greatly in the past decades, and because better data are available for more recent years, the case of Oklahoma is particularly illuminating regarding the potential impact of such laws on states considering them.

Despite ambitious claims by proponents, the evidence is overwhelming that:

- Right-to-work laws have not succeeded in boosting employment growth in the states that have adopted them.
- The case of Oklahoma – closest in time to the conditions facing those states now considering such legislation – is particularly discouraging regarding the law's ability to spur job growth. Since the law passed in 2001, manufacturing employment and relocations into the state reversed their climb and began to fall, precisely the opposite of what right-to-work advocates promised.
- For those states looking beyond traditional or low-wage manufacturing jobs – whether to higher-tech manufacturing, to "knowledge" sector jobs, or to service industries dependent on consumer spending in the local economy – there is reason to believe that right-to-work laws may actually harm a state's economic prospects.

Right-to-work claims and the problem with averages

In promoting new right-to-work laws as the answer to the jobs crisis, the National Right to Work Committee trumpets the fact that "in the past decade, non-agricultural employment in Right to Work states grew twice as fast compared to that in non-Right to Work states."[1] This statement is statistically true, but only in the same way that it is true that if Bill Gates walks into a bar, everyone in the bar is suddenly, on average, a multimillionaire. The problem with averages, in the absence of standard deviations, is that they create the misleading impression that all members of the group are more or less close to the average. In the case of RTW states, nothing could be further from the truth.[2] And the radical disjuncture between high- and low-performing right-to-work states makes it clear that it is not the law itself but rather other factors in the local economy that explain these states' economic fortunes.

The past decade saw a huge discrepancy in the relative performance of states with and without right-to-work codes.[3] For example, while right-to-work Arizona saw employment grow by almost 19% from 2000-09, RTW Alabama saw its employment shrink by more than 8%. Employment growth over the decade was 9.5% in non-RTW New Mexico, more than triple the rate of its RTW neighbor, Oklahoma.

When examining the variation among the individual states that make up the National Right to Work Committee's average, it becomes clear that the statistic is highly misleading – driven by a handful of high-growth states such as Nevada, Florida, Arizona, and Texas, while much of the rest of the pack saw quite modest growth or even declines. Indeed, the non-RTW states of Washington, Alaska, and New Mexico each saw jobs grow faster than 17 of the 22 RTW states. By the end of 2010, both the highest and lowest state unemployment rates were found in right-to-work jurisdictions.[4]

If states with right-to-work laws can experience either dramatic growth or steep declines, and if both right-to-work and non-right-to-work states can foster booming job markets, then it is clear that something else in these states' economies, demographics, or policies must be driving job growth, while right-to-work laws account for little if anything in these trends.

When one examines the facts underlying the averages, it appears that recommending right-to-work as a solution to unemployment is on par with suggesting that one's personal wealth can increase by having a beer in Bill Gates' favorite watering hole.

The track record of right-to-work and job creation

Proponents of so-called right-to-work make ambitious claims on behalf of the policy. The National Institute for Labor Relations Research, an anti-union advocacy group, argues that the law in and of itself has profound and transformative effects on a state's economy, single-handedly determining where employment grows and where it stays flat or shrinks, where companies locate and where they don't, where manufacturing plants open and where they close, and where income growth stagnates and where it accelerates.[5]

Scholars have spent many years examining the validity of these claims. Right-to-work proponents assert that the policy has particularly strong effects in boosting employment in manufacturing.[6]

Unlike service-sector industries such as health care and education, which have no choice but to locate where their customers are, manufacturers often can locate plants wherever they choose and then ship to their customers around the country or across the globe. Thus, manufacturers constitute the primary target of economic development policies aiming to attract new firms into a given state. In addition, the lower value-added end of manufacturing requires relatively unskilled labor; for these employers, a modest reduction in labor costs may be sufficient to influence location decisions.

For all these reasons, analyses of right-to-work laws traditionally have focused on how the laws have affected manufacturing employment in particular, in addition to a state's overall employment level.

It is notoriously difficult to separate the impact of a single government policy from myriad competing economic factors, statutes, and regulations that help shape a state's economy. The fact that states that share a common attribute have stronger average growth rates cannot be taken as evidence that the attribute in question is the cause of that growth. To use an extreme example as illustration, in 2000-09 the states whose names started with the letters N-Z had an average employment growth rate almost nine times higher than states whose names start with A-M.[7] Yet no one would suggest that Indiana and Kentucky could improve job growth by changing their names.

Anti-union advocates sometimes advance their cause by pointing to the fact that, since the inception of right-to-work laws in 1947, employment has grown dramatically faster in states with such statutes than in those without them. This argument is particularly unsound, even beyond the problem of averages.

Right-to-work states are concentrated in the South, and the decades since 1947 have brought a host of fundamental changes that have transformed the economies of these states.[8] Among these are the revolution in agricultural productivity, which freed up large numbers of Southern agricultural workers to go into manufacturing; the construction of the interstate highway system and the use of standard containers in shipping, making it possible to locate manufacturing facilities away from the country's central railroad depots; the invention and popularization of air conditioning; the civil rights movement, which enabled a significant and previously disenfranchised segment of these states' populations to participate fully in all sectors of the economy; and massive federal investments in these states' education systems. Any one of these factors is more likely than right-to-work to account for the more rapid growth of manufacturing in Southern states.

Southern officials themselves generally point to education – not labor law – as the key to transforming their states' economies over the past few decades. A recent in-depth study of the economy in non-RTW Kentucky, for example, examined the root causes of that state's poor economic performance by comparing the state's policies with those of four Southern neighbors – Alabama, Georgia, North Carolina, and Tennessee, all RTW states.[9] The authors found that by far the most important cause of Kentucky's plight was the shortage of skilled workers.

"Every site location expert we spoke with," the study authors report, "indicated the primary limitation to firms locating or expanding in Kentucky is the lack of training and poor education of the workforce."

By contrast, right-to-work laws were found to have no statistically significant impact in explaining Kentucky's fortunes compared to those of more prosperous Southern states. Indeed, the economic development officials of those states did not point to right-to-work as a determining factor. Rather, "every economic development official in the competing states with whom we spoke indicated the single most important reason for their economic growth over the previous three to four decades was an emphasis on education and workforce development."

Thus, the mere fact of a state having a right-to-work law tells us nothing about the extent to which that law explains the state's economic trajectory. Clearly, what both sides of this debate must aim to discover is how right-to-work impacts a state's job growth, all other things being equal. The methodological difficulty lies in defining what "all other things" means. Noticing, for instance, that a given right-to-work state has experienced faster growth than a given non-RTW state, one might wonder if the difference is due not to the discrepancy in labor laws but rather the difference in the educational level of the work-force, the proximity of transportation hubs, the cost of real estate, the state's inheritance tax, its natural resources, the quality of its school system, or the quality of its state universities. The list gets very long quickly.

The history of right-to-work scholarship entails successive efforts to account for more and more of these variables, and to separate out as completely as possible the impact of RTW laws from all the other factors that influence a state's employment growth. Over time, as scholars have developed more sophisticated and more comprehensive means of holding "all other things" equal, the measured impact of right-to-work laws has grown smaller and smaller, with recent studies finding it has no impact whatsoever.[10]

One of the most commonly cited studies is that of Thomas Holmes, who compared manufacturing employment on the borders of right-to-work and non-right-to-work states. Using county-level data, Holmes found that, when crossing into a right-to-work state from a non-right-to-work state, one was likely to find both an increased share of employment concentrated in manufacturing and a history of higher growth rates for manufacturing employment in the period from 1947 through the mid-1990s.

There are two caveats to Holmes' study, however: First, using the manufacturing share of overall employment to define the success of a law may be an unreliable measure. In states where service employment is growing, for instance, the manufacturing share of overall employment will decrease without reflecting any failing in the local economy or government. Second and even more importantly, Holmes made no claim whatsoever that right-to-work laws themselves accounted for the differences he noted. Instead, he explicitly used right-to-work laws as a proxy for a wide array of other policies.

"Right-to-Work states," Holmes explained, "historically have pursued a number of other smokestack-chasing policies, such as low taxes, aggressive subsidies, and even, in some cases, lax environmental regulations. Thus, my results do not say that it is right-to-work laws that matter, but rather that the 'pro-business package' offered by right-to-work states seems to matter."[11]

The experience of Idaho, the most recent state to adopt right-to-work prior to Oklahoma, is likewise often invoked as evidence of the policy's positive impact. The primary study of the Idaho law, which went into effect in 1987, compares the state's pre- and post-law economy with that of its neighboring states.[12] The comparison between Idaho and its neighbors was intended as a means of holding "all other things" equal, assuming that underlying economic trends should be similar in nearby states. Yet, as with Holmes, the authors failed to account for dynamics within the Idaho economy that seem more likely than right-to-work to account for the state's employment trends – and thus overstated the impact of the statute.

The authors report that the decade following passage saw dramatically lower unionization rates and significantly higher manufacturing employment than in the preceding decade, and that the state's post-adoption manufacturing sector grew significantly more rapidly than those of neighboring states.

Here too, however, the inability to separate the impact of this one specific law from the myriad other factors shaping the state's economy leave the authors unable to draw any definitive conclusion. Indeed, when one looks more closely at the Idaho case, the impact of right-to-work is much less plausible than its proponents claim. For one thing, both the dramatic decline in the state's unionization rate and the upsurge in employment growth *preceded* the adoption of right-to-work by several years. The state's unionization rate fell from 22% to 9% in 1981-84, *before* the right-to-work law was adopted, but coinciding with President Reagan's promotion of strike breaking in the PATCO showdown in 1981. It also coincided with a steep decline in the state's traditionally well-organized timber industry.

Similarly, the post-law boom in manufacturing employment primarily was driven by the high-tech industry, which in the 1990s became the single largest manufacturing sector in the state.[13] Since this industry has never seen any significant percentage of unionization in any state, it seems implausible that high-tech manufacturers chose Idaho in order to avoid collective bargaining. The ultimate disproof of the right-to-work thesis is that, while high-tech firms expanded employment in Idaho after 1987, they also did so in non-RTW states.[14] Clearly, whatever led them to invest in Idaho had nothing to do with this recently adopted law.

One attempt to more fully separate the impact of RTW laws from other aspects of a state's economy is the 2006 analysis of Kalenkoski and Lacombe.[15] Following Holmes' lead, they compared the manufacturing share of overall employment in states with and without right-to-work statutes. Rather than simply comparing neighboring jurisdictions, however, the authors controlled for county-level demographic data such as the age, gender, race, ethnicity, and education level of the local population. By comparing geographic areas with similar demographic profiles, they hoped to control for general features of both the local economy and political climate.

Their research finds that the impact of right-to-work on the manufacturing share of a locality's overall employment is only one-third as great as that estimated by Holmes, and they conclude that previous studies without such controls "dramatically overstate the positive relationship between RTW legislation and manufacturing employment."[16]

Yet even this study may misstate the impact of right-to-work, for several reasons. First, while it controls for some aspects of local economies, it still fails to control for many others – including, as in Holmes, the presence of other state policies that may influence location decisions. Second, as described in the Idaho case, using the manufacturing share of overall employment to define the impact of a law can be an unreliable measure. Indeed, Kalenkoski and Lacombe's methodology produced some curious and unexplained findings, suggesting that the measure they used is less than fully reliable.[17]

When scholars are most rigorous about separating the impact of right-to-work laws from other factors, the evidence suggests that right-to-work has no effect whatsoever on a state's employment. One of the most recent and ambitious studies estimates the impact of RTW laws while controlling for a wide range of variables, including general economic features of the state economy such as the share of gross state product concentrated in manufacturing and the average wages and educational level of the workforce; state policies such as personal and corporate tax rates; and a range of labor-specific policies including state minimum wage, workers' compensation, and unemployment insurance rates. This study effectively answers the question posed by Holmes, who noted that it was impossible to tell if the differences he recorded reflected the impact of right-to-work itself or other policies and economic features of the states that had also adopted right-to-work laws. When these various strands of the question are separated out, the authors report that "right to work laws...seem to have no effect on economic activity."[18]

One of the most recent studies similarly aimed to control for the factors that Holmes left unexplored, and it, too, concludes that right-to-work has no impact on employment growth. Stevans (2009) compared states with and without RTW laws, but controlled for a broader array of economic variables.[19] Most importantly, the author controls for a state's general business climate, in order to separate the impact of RTW laws from other economic policies of the state. When the question is thus refined, Stevans reports that right-to-work laws, in and of themselves, have no statistically significant impact whatsoever on either the rate of job growth or the number of new businesses opened in a state.

"An increase in the probability that a state is right-to-work," Stevans concludes, "has no influence on employment, is associated with a decrease in per-capita personal income and wages/salaries, is associated with an increase in proprietors' income, and has no effect on economic growth."[20]

Thus, the history of right-to-work studies has a clear trajectory. The more scholars are able to hold "all other things" equal, the more it becomes clear that these laws have little or no positive impact on a state's job growth. The most recent and most methodologically rigorous studies conclude that the policy has no statistically significant impact whatsoever.

Shrinking impact of right-to-work over time?

It's not clear that right-to-work laws, in themselves, ever have had a significant impact on employment growth.

To the extent that they may have, however, there is good reason to believe that any such impact would be much smaller today than it would have been in the past.

In one part, this is the simple logic of competition. To the extent that right-to-work is a draw for manufacturers, its effect would be greatest on the first state to adopt such a statute. If 49 states protected union security and only one was right-to-work, employers to whom this policy mattered would all be drawn to that location. The prospect of becoming the 23rd right-to-work state in the country is much different. Any competitive advantage a state might realize, at this point, would have to be sufficiently powerful enough to draw footloose employers to that state not only over the non-RTW states but also over the other 22 states with identical labor laws.

In addition, to the extent that RTW laws helped draw northern unionized manufacturing firms into lower-wage and less-organized jurisdictions in the South, this dynamic has long since played itself out. Any measure of comparative job growth over the past several decades captures the de-industrialization of the Northeast and upper Midwest and the mass relocation of firms to the South starting in the 1960s, whether in search of cheaper wages, cheaper land, lower crime, or less regulation. That wave of relocation may show up in the long-term employment growth of Southern states, but at this point it's done.

There is no such ongoing wave of relocation from which states newly adopting RTW laws might hope to benefit. Thus, one in-depth examination of Southern economic development measured how the effect of RTW laws evolved over time, and concluded that the policy's impact reached its statistical peak in the 1950s and shrank to statistical insignificance by the 1970s.[21] A state newly adopting right-to-work today, according to these findings, would receive absolutely no benefit in job growth.[22]

Finally, the past 15 years have brought technological and legal changes that have made it much easier for manufacturers to relocate to lower-wage locales abroad. The same manufacturers that once fled the North for the South have now, in many cases, gone to Mexico or China.

For all these reasons, Oklahoma – the most recent state to enact a right-to-work law – provides the most instructive case for states newly considering adoption of right-to-work statutes. By focusing on the experience of a state that went through the transition from one labor regime to another in economic times close to the present, and by drawing on a history sufficiently recent that there is a wealth of data readily available, Oklahoma provides the clearest possible lessons for states now engaged in legislative debates over the impacts of so-called "right-to-work."

The adoption of right-to-work in Oklahoma

For the past 20 years, Oklahoma's unemployment rate has largely tracked that of the nation as a whole, rising when national unemployment increased and falling when it declined. While trending in the same directions, however, the state's actual unemployment rate has been consistently lower than the national average for at least the past 20 years. This may reflect Oklahoma's concentration of employment in the oil and gas industries and in government and military service.[23]

To the extent that demand for energy and funding for military and other government functions are relatively inelastic, the prevalence of these sectors in the state's economy may provide a source of stability that helps sustain the job market in tough times.

To the extent that Oklahoma has attracted new companies over the past 20 years (including the past 10 under its right-to-work regime), it does not appear to reflect the impact of right-to-work. Noting that Oklahoma has attracted about 600 new companies over the past 20 years, *Newsweek* magazine reports that "the secret to the shift" was not labor law but something much simpler – cash. In the early 1990s, Oklahoma adopted a unique policy of rebating 5% of payroll costs – in cash, no strings attached – to employers who created new jobs. In 2009, the state established a double incentive – 10% cash back on payrolls for companies that create high-paying jobs. Boeing's decision to move 550 jobs from California to Oklahoma, for instance, was driven not by labor law but by these incentive payments.[24]

Whatever the cause, Oklahoma's economic strength long preceded its adoption of right-to-work. As a non-RTW state, Oklahoma's employment grew by 22% in the 1990s, well ahead of the national average. The manufacturing sector was particularly impressive compared with national trends, growing by 11% during the decade, compared with 4% growth for the country as a whole. By the year 2000, the state's unemployment rate stood at 3%, not only well below the national average but also lower than 18 of the then-21 right-to-work states.[25] It is clear, then, that whatever the sources of Oklahoma's economic success in the 1990s, they had nothing to do with right-to-work.

The state's turn to right-to-work policy was not based on expert opinion, nor on the experience of state government officials. The year before the referendum, the Oklahoma League of Economists reported that its members ranked education reform as the single most promising policy the state could pursue, and that a strong majority believed right-to-work would have no positive impact on the state's economy.[26]

Similarly, while then-Governor Frank Keating was a staunch supporter of the initiative, his position stood in direct contradiction to the advice of his predecessor. Gov. David Walters, who served until 1995, entered office as a right-to-work supporter but became convinced that such a law would be ineffective in attracting new jobs. In discussions with scores of companies, he reported, not a single one ever mentioned the lack of right-to-work as a significant consideration on whether or not to locate in Oklahoma."[27]

Nevertheless, in the lead-up to Oklahoma's 2001 vote, corporate lobbyists and supportive officials made repeated and dramatic claims regarding the necessity of adopting a right-to-work statute in order to safeguard the state's economic future. Passage of the law "will lay the foundation for Oklahoma's golden age," promised Rep. Hopper Smith in the legislative debate.[28]

"Oklahomans understand that right to work is one of the single most important reforms our state can make," asserted House Republican Leader Rep. Fred Morgan. "Right to work will bring prosperity and promise to our state."[29]

Many advocates voiced arguments based on the same type of misleading averages discussed earlier in this report. The editor of the *Tulsa World*, for instance, called on readers to vote in favor of the initiative because "right-to-work states are doing better in terms of growth and development than Oklahoma."[30]

As in other states, Oklahoma's law primarily was promoted as a strategy for attracting more manufacturing firms to the state.

"If state economic expansion includes targeting manufacturing growth," argued one widely circulated policy brief, "addressing the problem of Right-to-Work is a prerequisite."[31]

Above all, proponents insisted that right-to-work would vastly expand the number of firms considering Oklahoma as a location for their facilities. One prominent supporter, invited to testify before the Oklahoma State Senate, insisted that the state would see "eight to 10 times as many prospects if right to work passes."

"When companies start looking for a relocation site," explained consultant Elizabeth Morris, "the second most important criteria they list is whether a state is a right-to-work state....If the answer is 'no,' then they won't even consider that state. This means that you are cut off from 90 percent of the relocating companies."[32]

Though Morris did not present statistical survey data to back up this assertion, her claims were repeated in the press, in think-tank policy briefs, and by elected officials on the floor of the state legislature. Representative Mike Wilt repeated Morris' claim in legislative debate, concluding that with the state's existing labor laws, "we're not even being considered" by out-of-state companies.[33]

"If we don't pursue right to work," Governor Keating agreed, "we are redlined."[34]

Did right-to-work help Oklahoma?

Unfortunately for Oklahomans, so-called "right-to-work" never delivered on its promise. The law was promoted, above all, as a strategy for boosting manufacturing employment by convincing out-of-state production facilities to locate in Oklahoma.

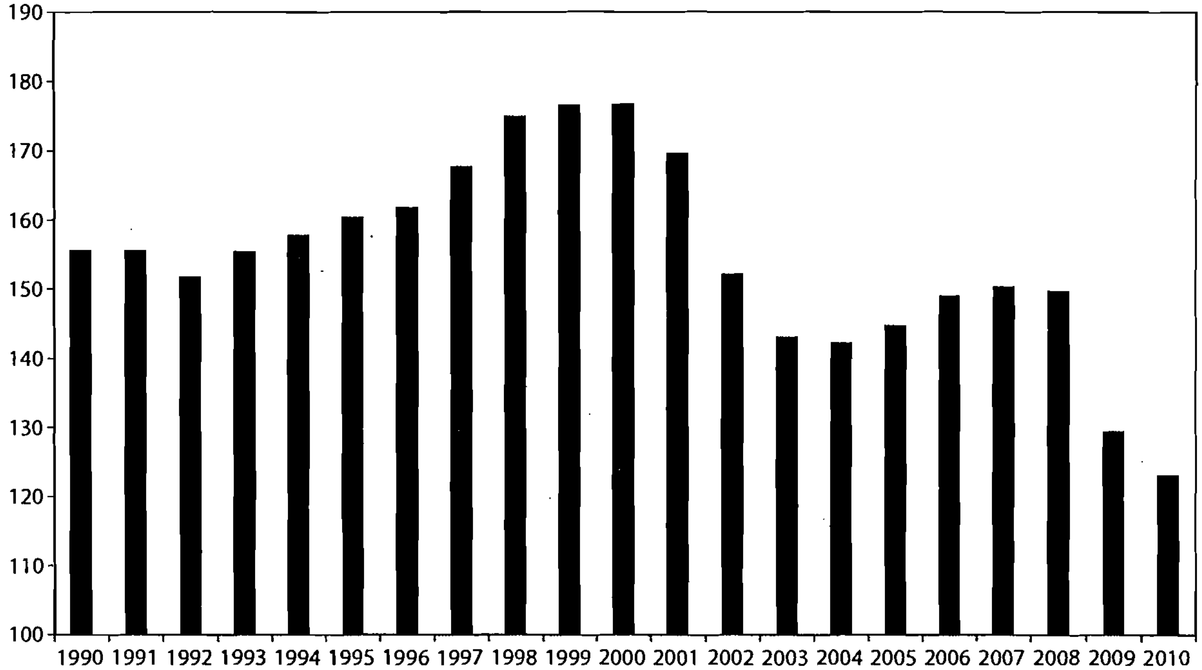
"If state economic expansion includes targeting manufacturing growth," argued one conservative think-tank policy brief widely circulated in the lead-up to the state's vote, "addressing the problem of Right-to-Work is a prerequisite."[35]

Yet the facts show the exact opposite of what right-to-work supporters predicted. Not only has manufacturing employment failed to rise in Oklahoma, but, after increasing steadily the previous 10 years, it has fallen steadily in every year since right-to-work was adopted.

The state's manufacturing sector grew from 155,000 jobs in 1990 to a peak of nearly 177,000 in 2000

FIGURE A

Oklahoma manufacturing employment (thousands), 1990-2010



SOURCE: Bureau of Labor Statistics, current employment statistics: employment and hourly earnings of state and metro areas (seasonally adjusted).

(**Figure A**). In the decade following adoption of the new law, however, manufacturing employment declined sharply and has never regained its pre-right-to-work level. Oklahoma ended the decade with 123,000 residents employed in manufacturing, nearly 50,000 less than when the law was voted in.[36] This does not mean that right-to-work in itself caused a decline in the state's manufacturing employment. Rather, it suggests that right-to-work had no positive impact on the manufacturing sector and, in the face of broader forces undermining the sector, right-to-work was simply impotent.

Nor did right-to-work lead to lower unemployment rates for Oklahoma residents. In 2000, the year before the law was adopted, Oklahoma's unemployment rate was just above 3%; by the end of 2010 it stood at 6.86% (**Figure B**).

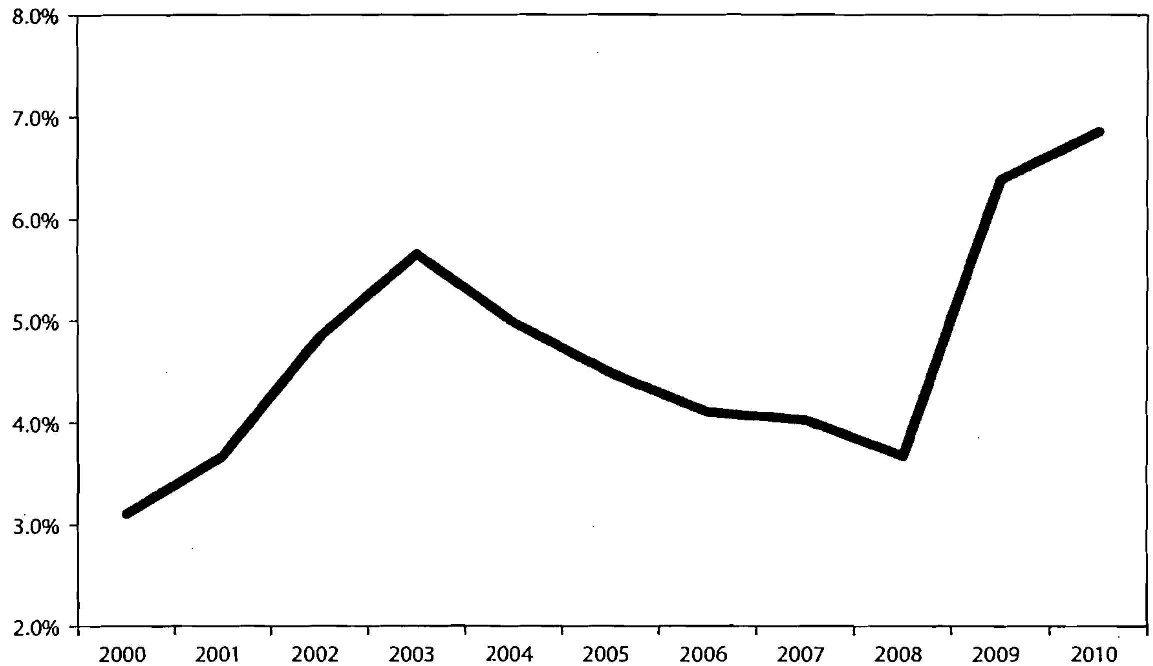
Oklahoma's decline was part of the country's overall employment crisis in 2001-03 and again in the past two years, and so the more relevant question is how the state's economic performance compared to others.

A rough means of measuring the state's relative performance is to compare its track record to those of neighboring states (**Figure C**). As discussed above, a comparison with neighboring states does not control for all the variables that affect economic development, but it does provide a reasonable first glimpse at a state's comparative performance.

Oklahoma is bordered by six states – three right-to-work and three union security states – and it started off the decade with an unemployment rate lower than any of them. If right-to-work had a positive impact, then Oklahoma's advantage over its neighbors should have grown even more pronounced. But this is not the case. When the right-to-work initiative was adopted, Oklahoma's unemployment rate was nearly nine-tenths of

FIGURE B

Oklahoma unemployment rate, 2000-10



SOURCE: Authors' analysis of data from Moody's Analytics.

a point better than the average of its six neighbors. The size of this gap narrowed and then widened during the rest of the decade, but was mostly smaller than where it started.

Taken together, Oklahoma's advantage over its neighbors averaged just under eight-tenths of a point during the years 2002-10 – slightly less than at the decade's start.[37] Thus, neither the state's actual unemployment rate nor its comparative performance relative to neighboring states provides any evidence of right-to-work having effectively boosted the state's employment.

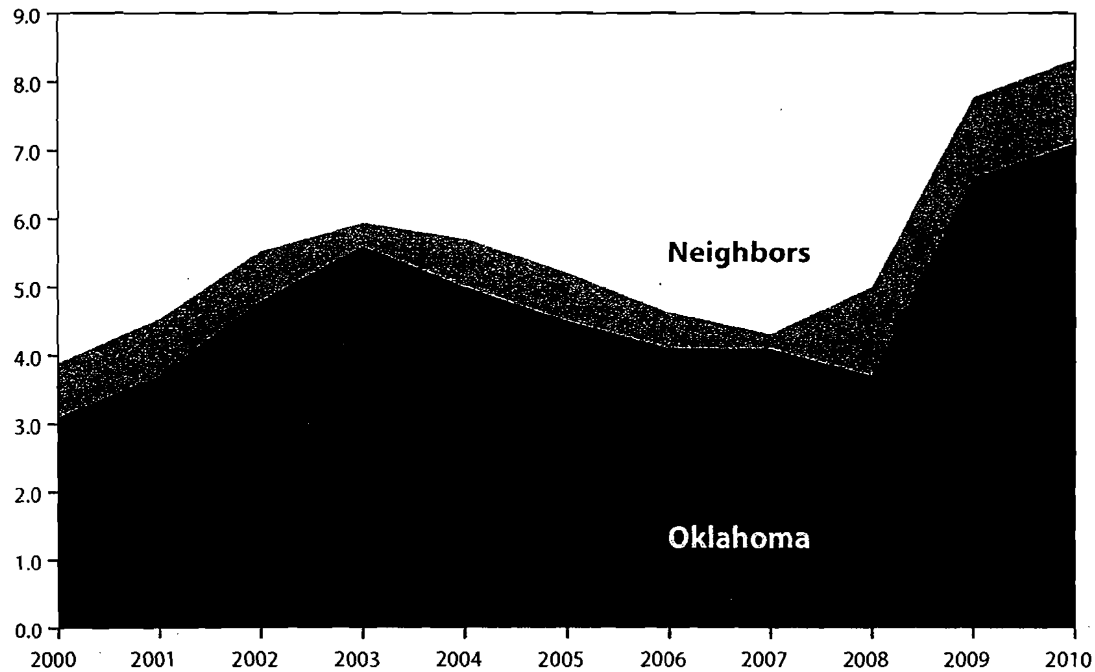
Nor did Oklahoma's experience accelerate employment growth compared with its neighbors. As illustrated in **Figure D**, in the years following adoption of right-to-work, Oklahoma's rate of job growth was unremarkable compared with nearby states – at times near the bottom of the pack and at other times closer to the top; it performed significantly worse than both non-right-to-work New Mexico and right-to-work Texas.[38]

To test the extent to which right-to-work may have given Oklahoma some advantage not captured in the simple trends of job growth or unemployment, we constructed a new statistical model to measure how Oklahoma's adoption of right-to-work impacted its economic performance relative to that of its neighbors. Our analysis follows Holmes' work in focusing on job growth in counties and is based on employment data that is directly reported (as opposed to projected or estimated) for 98% of the workforce.[39]

From 1996 to 2006 – a period covering five years before and five years after Oklahoma's adoption of right-to-work – we measured employment trends in manufacturing and in the economy as a whole. Holmes' assumption in comparing RTW and non-RTW counties that bordered each other was that the proximity of the counties would generally mean that the two counties were broadly similar in the demographics of their populations, price of land, extent of urbanization, and other core features of the local

FIGURE C

Unemployment rate, Oklahoma and average of neighboring states



Neighboring States: Ark., Colo., Kan., Mo., N.M., Texas

SOURCE: Authors' analysis of data from Moody's Analytics.

economy. By comparing neighboring counties, Holmes aimed to isolate the impact of public policy as distinct from underlying economic dynamics.

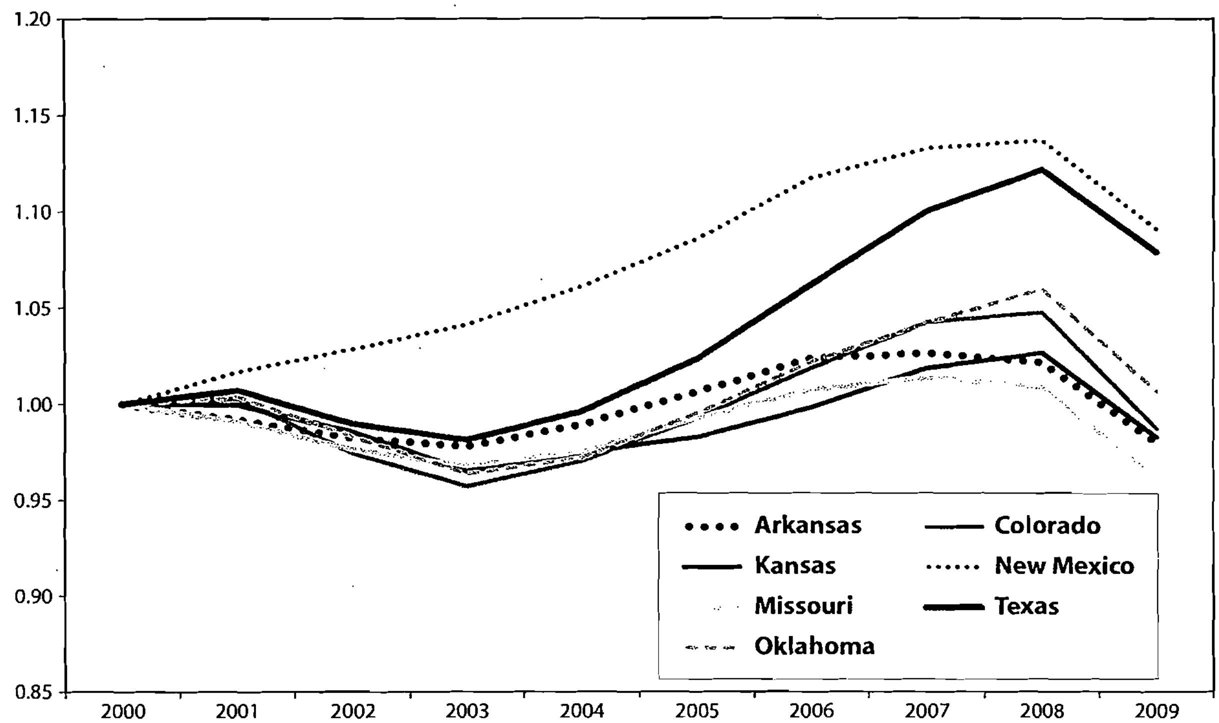
Our analysis builds on Holmes' instinct, but contains additional controls aimed at more narrowly isolating the impact of right-to-work. In the course of a series of regression analyses, we controlled for population, unemployment rates, and both time and county fixed effects. In addition, while Holmes' study compared the average performance of all RTW border counties with that of all non-RTW border counties, we examined the relative performance of each individual pair of counties that straddle Oklahoma's border with its neighbors.[40] This more-focused analysis should provide a more exact measure of the impact of Oklahoma's policy shift.

If right-to-work proponents are right about the employment benefits of the policy, then employment in the state should have improved relative to its neighbors (both the three RTW states and the three non-RTW states) and to the country as a whole. We tested for this impact in nearly every way imaginable.[41] We compared all the counties in Oklahoma with all counties in neighboring states and with all counties in the United States. We compared only the Oklahoma border counties, paired with the exactly adjacent county in a neighboring state. We compared average employment levels for the period before Oklahoma's adoption of right-to-work with those in the period following it. We tracked the shift in Oklahoma's relative performance for each individual year leading up to and following the adoption of right-to-work.

No matter how we analyzed the data, the result was always the same: The adoption of right-to-work in Oklahoma had no significant positive impact whatsoever on employment.[42] In every instance, the effect of the law

FIGURE D

Employment growth, Oklahoma and neighboring states



SOURCE: Authors' analysis of data from Moody's Analytics.

was either insignificant or, more often, significant and negative. When we tracked year-by-year changes, the data show Oklahoma improving relative to its neighbors in the years leading up to adoption of right-to-work— strongly suggesting that factors other than right-to-work are driving the state's employment trends.

The years following the law's adoption are overwhelmingly associated with negative employment effects. The sample that compares all counties in Oklahoma with all counties in its neighboring states gives the most robust estimates due to the larger sample size.[43] Here too, the data suggest that Oklahoma's employment declined by 1-3%, relative to its neighbors, in the years following adoption of right-to-work.

Finally, the failure of right-to-work to produce job growth is confirmed by a pair of scholars who in 2010 employed a newly developed technique to compare Oklahoma's track record with that of a statistical control group; this method enables the authors to control for a wide range of variables.[44] Rather than rely on Oklahoma's neighbors, the authors constructed a composite comparison by drawing on a variety of states whose profiles most closely mirror that of Oklahoma prior to 2001.

In the case of Oklahoma, the comparison was made up of weighted averages of New Mexico, Colorado and Vermont, states which each matched certain aspects of Oklahoma's economic and demographic profile prior to its adoption of right-to-work. Oklahoma's experience following adoption was then measured against that of this imaginary control group. This novel methodology creates a statistically sound measure of what Oklahoma would have been like had it not adopted right-to-work but had otherwise retained its most salient economic and political characteristics. Comparing these two scenarios, the authors measure the impact of right-to-work. They find that, while the law did decrease the share of Oklahomans represented in collective bargaining, it had no impact whatsoever on the state's manufacturing employment share.

The single most important evidence of the impotence of right-to-work laws may be exactly what advocates focused on during the 2001 debate: the number of out-of-state firms choosing to open plants in Oklahoma. Recall that one of the law's backers predicted to the legislature that the number of outside companies considering locating in Oklahoma would increase by "eight to 10 times" if the right-to-work law passed.[45] While the Oklahoma Department of Commerce does not report data on the number of companies that express potential interest in relocating, it does compile annual reports on the number of companies who actually open new facilities in the state.[46] Assuming that there's been no change in

TABLE 1

Announced openings of new manufacturing and service facilities Oklahoma, 1990-2010

	Manufacturers		Service industries		Total, mfg & services	
Year	*Plants*	*Jobs*	*Facilities*	*Jobs*	*Facilities*	*Jobs*
1990	62	2,461	15	795	77	3,256
1991	45	2,424	17	2,563	62	4,987
1992	50	3,066	11	1,717	61	4,783
1993	38	1,899	8	1,160	46	3,059
1994	45	4,211	21	4,917	66	9,128
1995	20	2,353	12	5,940	32	8,293
1996	37	1,926	23	5,612	60	7,538
1997	23	2,207	15	3,233	38	5,440
1998	24	1,399	19	3,797	43	5,196
1999	30	3,347	15	5,267	45	8,614
2000	13	1,806	18	6,055	31	7,861
2001	19	1,612	9	1,200	28	2,812
2002	23	1,865	8	1,510	31	3,375
2003	32	2,506	7	1,454	39	3,960
2004	24	2,629	12	3,841	36	6,470
2005	26	2,722	15	3,641	41	6,363
2006	30	5,106	12	2,251	42	7,357
2007	21	2,253	14	2,665	35	4,918
2008	9	388	7	1,855	16	2,243
2009	10	861	6	640	16	1,501
2010	16	1,657	19	1,780	35	3,437
Annual average, various periods						
1991-2000	33	2,464	16	4,026	48	6,490
2001-10	21	2,160	11	2,084	32	4,244
2001-05	25	2,267	10	2,329	35	4,596
2006-10	17	2,053	12	1,838	29	3,891

SOURCE: Source: Oklahoma Department of Commerce, "Announced New and Expanded Manufacturers and Services," 2010 Annual Report, January 2011, accessed Jan. 22, 2011 at http://www.okcommerce.gov/Libraries/Documents/2010-Annual-Report-Announced-N_3224.pdf.

the success rate of Oklahoma economic development staff in converting potentially interested firms into actual new openings, an eight- or ten-fold increase in the number of firms considering Oklahoma should translate into an equally large increase in the number of new facilities opened per year.

As shown in **Table 1**, however, the state's data do not bear this prediction out. Not only was there no dramatic increase in the number of new firms moving into the state, but the rate of new arrivals actually *decreased* following the adoption of right-to-work. In the decade preceding right-to-work, Oklahoma welcomed an average of 48 new firms per year, creating a total of nearly 6,500 new jobs each year during the 1990s. In the 10 years that the state has operated under its right-to-work law, however, the average number of firms and jobs brought into the state has been one-third lower (averaging 4,244 from 2001 to 2010) than when Oklahoma was a non-RTW state. This drop does not simply reflect the recession of the past few years. While the numbers were worse in the latter part of the decade, even in the early 2000s they remained well below the average rate of the non-right-to-work years.

Two years after passage of Oklahoma's right-to-work law, the National Institute for Labor Relations Research – a business-backed think tank advocating right-to-work laws around the country – insisted that the law had already turned around the state's fortunes.

"The numbers don't lie," said institute director Stan Greer, pointing to higher job growth in 2002 as evidence of the law's impact.[47] The alleged improvement in Oklahoma's economy eluded the state's residents, however. One year after the adoption of right-to-work, more than 60% of Oklahomans told pollsters that they thought the law had no impact on the state economy.[48]

With a full decade of experience under the new law, it is now clear that the everyday experience of residents reflected more truth than did the calculations of advocates. Having sought to gauge the impact of right-to-work by a wide diversity of methods, none of the measures examined – the state's unemployment rate, the number of manufacturing jobs, relative job growth and unemployment compared to neighboring states, relative growth compared with a statistical control group, the change in employment at the state's borders, the number of firms relocating into the state – provides any evidence whatsoever that right-to-work has increased job growth in Oklahoma (see **Table 2**).

Oklahoma jobs outsourced to lower-wage countries

As described above, whatever advantage manufacturers may have once sought by locating in a right-to-work state has been undercut by the increasing ease of locating facilities in even-cheaper jurisdictions abroad. On the eve of Oklahoma's referendum, one scholar of location decisions warned that "right-to-work laws are a welcome mat for companies who care most about low-wage, unskilled labor and who are committed to a region only until they are able to relocate someplace where the laws protecting workers are even weaker."[49] Not only did right-to-work

TABLE 2

Measuring the success of right-to-work in boosting Oklahoma employment

Change in unemployment rate	Negative
Change in manufacturing employment	Negative
Number of new firms choosing to locate in Oklahoma	Negative
Change in unemployment rate, compared with neighbors	No impact
Employment growth, compared with neighbors	No impact
Economic growth compared with non-right-to-work neighbors, comparing counties on the border	No impact
Job growth compared with statistical control group	No impact

fail to bring manufacturers into the state, it also failed to keep them there.

In the years since right-to-work was adopted, more than 160 Oklahoma employers announced mass layoffs, and more than 100 facilities have closed their doors in the face of lower-wage competition abroad.[50] It is estimated that, from 2001 to 2008, trade with China alone reduced the number of Oklahoma jobs by more than 20,000.[51]

When the Imation Corporation announced in late 2002 that it planned to construct a data storage manufacturing plant in Oklahoma, the move was hailed as early evidence of the impact of right-to-work.[52] Four years later, however, the company eliminated a significant share of its local workforce in order to shift production to Mexico.[53] As the decade progressed, the lure of right-to-work proved no competition for the attraction of much-lower-paid workers abroad. Over the course of a few months in 2006, the state lost 4,500 manufacturing jobs. Bridgestone/Firestone, citing "fierce competition from low-cost producing countries," laid off 1,400 employees, closed its Oklahoma City factory, and moved production to Costa Rica.[54]

During the same year, General Motors laid off 2,400 workers in Oklahoma City; in addition to the direct job losses, the closure eliminated an estimated 5,000 additional jobs in local suppliers and related industries.[55] Neither a union proposal to cut labor costs by 20% nor the state's offer of $200 million to upgrade the plant swayed the company.[56] The Oklahoma City shutdown was part of a national trend that saw GM shutter multiple plants in the United States while simultaneously investing billions of dollars in new facilities in Mexico, where auto worker wages are less than one-tenth of even their non union counterparts' wages north of the border.[57]

"We're getting hit in the manufacturing sector over and over again," complained Oklahoma City Mayor Mick Cornett in mid-2006.[58]

Indeed, by 2006 the Oklahoma Department of Commerce began working on economic development strategies that are more traditionally associated with unionized Rust Belt states: not bold plans to attract new employers, but financial incentives to prevent the closure of those already in town.[59] The state's renewed efforts to retain local firms continued to prove insufficient, however. In 2008, the Nautilus Corporation, a company with deep roots in Oklahoma, announced it was closing shop and laying off 150 Tulsa employees in favor of producing its fitness equipment in China.[60]

Thus, as skeptics predicted, the core strategy of right-to-work – lowering wages and workplace regulations in order to attract out-of-state manufacturers – appears to be increasingly impotent in the face of the global economy.

Listening to employers

The failure of so-called "right-to-work" to attract more employers to Oklahoma is unsurprising when one listens to what employers themselves actually say regarding location decisions. While there are no comprehensive data on the factors determining location choice for the economy as a whole, the survey data that are available (as opposed to anecdotal accounts offered by advocates) strongly suggest that right-to-work has little if any impact on the decision making of most corporations.

Site Selection magazine reports that the best locations for the type of high-tech industries that are now a priority of most states' recruitment efforts are uniformly found in non-RTW states. The 2010 State New Economy Index – measuring each state's economic dynamism, technological innovation, digital transformation, knowledge jobs, and integration into global trade – ranked non-right-to-work Massachusetts, Washington, Maryland, New Jersey, and Connecticut as the most desirable and best positioned locations for the globally competitive industries of the 21st century.[61]

Similarly, a Brookings Institution study of large corporations' location decisions, based in part on interviews with prominent corporate location consultants, found that RTW laws figured nowhere in the typical decision process.[62] A host of factors related to particular business functions – the cost of real estate, availability of certain skill sets, proximity to transportation and markets – shaped corporate decisions for each of their specific functions. Even where labor cost is an important consideration in location decisions, such as for call centers and some back-office operations, right-to-work is not looked to as either a key predictor of or controller for labor costs.

Even small manufacturers – those thought most likely to base location decisions on low wages and the absence of unions – don't identify right-to-work as an important criterion in deciding where to locate plants. *Area Development* magazine conducts an annual survey, asking primarily small manufacturers to rank the factors that most influence their decisions about where to locate facilities. Not only is right-to-work not the controlling factor in their decisions, it's not even close. In 2009, it was ranked 14th in importance, below such factors as highway accessibility, available land, and construction costs. Indeed, in the years for which *Area Development* reports data, right-to-work has never made it into the top 10 most important factors shaping location decisions.[63]

Even many of the executives who may in principle wish they could enforce right-to-work laws for their companies do not ultimately make location decisions based on this sentiment. In the 2009 survey, for instance, nearly three quarters of executives stated that right-to-work is either "important" or "very important" for location decisions; yet it appears that a majority of the new plants actually opened by these companies were located outside of right-to-work states. Thus it appears that, while right-to-work may represent a heartfelt ideological desire for some members of the business community, when it comes time to actually pick a winning business strategy, more fundamental factors shape the choice of location.

Economic development officials do not treat right-to-work as a significant selling point

The views of employers, as described above, are clearly reflected in the actions of state economic development officials, who bear direct responsibility for recruiting new companies to their states. If right-to-work were a powerful draw for out-of-state firms, it would figure prominently in the promotional material of every right-to-work state's commerce department. This is not the case, however.

In Oklahoma, 10 years after having adopted right-to-work, the state government does not promote the policy as a key attraction for out-of-state companies. Indeed, the state's marketing materials never mention right-to-work, focusing instead on "Oklahoma's central location and easy, affordable access to domestic and international markets, low business costs and taxes, comprehensive transportation system...cutting-edge incentives, and a technologically skilled workforce...."[64] This is what one would expect: a focus on the core business needs that actually drive companies' location choices. It offers stark confirmation that even those states that have instituted a right-to-work law don't regard it as a significant draw for employers.

A similar dynamic has recently been highlighted in Iowa, a state often promoted as a model for other Midwestern states currently being encouraged to adopt right-to-work laws. In January 2011, Republican members of the state legislature introduced HF3, a bill that would require the phrase "Iowa Is a Right to Work State" to be placed on the state's promotional, tourism, and business recruitment materials. Presumably, the Iowa Department of Economic Development, whose staff bear front-line responsibility for recruiting business, have a finely tuned understanding of what factors are most likely to draw employers to their state. And clearly, they have concluded that right-to-work does not figure in that list. In recruiting materials for out-of-state firms, the department lists Iowa's "key economic advantages" as low corporate and property taxes, low rates for workers' compensation and unemployment insurance, and a generous research and development tax credit.[65]

It's possible that next year's brochure will add right-to-work to the current list, if HF3 is voted into law. But it doesn't speak well of the policy's market appeal if its promotion has to be mandated by legislative fiat. Here again, right-to-work appears to have greater support as an ideological principle than as a realistic strategy for economic development.

Does right-to-work harm job growth?

The evidence presented thus far suggests that right-to-work is ineffective as a strategy for increasing a state's employment. But can right-to-work actually harm a state's prospects for job growth?

There is no clear statistical data with which to answer this question. But there are at least two reasons to worry about the potential negative impacts of the policy on state job growth.

First, to the extent that right-to-work succeeds in weakening unions and thus lowering wages and benefits, it also results in lower tax revenues for local and state government, forcing concomitant cuts in public services. Economists have long recognized that spending on public services, particularly education and infrastructure, are important components of an economic development strategy.[66] These services, however, are put at risk when states adopt a development strategy based on attracting low-wage employers; the approach produces lower revenues at a time when many states are already confronting fiscal crises.

Secondly, while the right-to-work strategy of economic development aims at attracting lower-wage manufacturers whose location is mobile, the sectors that promise the greatest growth in most state's economies are increasingly concentrated in construction and service industries that are rooted in local communities and dependent on local demand.

As noted in a recent Indiana Chamber of Commerce report, the central purpose of right-to-work laws is to lower wages by undercutting union bargaining strength. By lowering wages and benefits, right-to-work is trumpeted as a strategy for attracting new businesses to locate in one's state.[67] Recent evidence does show, in fact, that RTW laws result in lower wages – for both unionized and nonunion employees.[68] In a competitive labor market, stronger wages and benefits for union members create pressure on employers to improve compensation for nonunion workers as well. Similarly, when RTW laws lower union wages, they also result in reduced compensation for nonunion workers.

Throughout the unemployment crisis of 2009-10, as economists looked to ignite job growth, both policy makers and business leaders pointed to consumer demand as the key prerequisite for companies to start creating more jobs. Business Roundtable Chairman Terry McGraw explained in 2009 that "behind all these diverse and depressing numbers is one central driving fact: demand has collapsed....To find a path out of today's economic quagmire, [we] must jump start that demand."[69]

As we look to support growing sectors of the economy, it is clear that the future depends largely on an economy driven by consumption. Nationally, the top 10 occupations projected to add the greatest number of jobs in the coming decade are almost entirely dependent on either government revenue or consumer spending, including jobs in food service, retail sales, health care, and education.[70]

If states rely on wage-cutting right-to-work laws as a strategy for attracting outside manufacturers, there is a danger that, by undermining wage standards in both manufacturing and other industries, they will inadvertently hamstring job growth by restricting aggregate demand in their local economies.[71]

For every $1 million in wage cuts to workers, $850,000 less is spent in the economy.[72] Assuming that most of this would have been spent on rent, food, clothing, and other family needs in local retail and services industries, this is a significant loss of spending at exactly the time when state economies need it most. A loss of $850,000 in local spending translates, on average, into a loss of six jobs in the local community. In this way, weakening union wage standards in order to attract mobile manufacturers raises a concern that job growth might be undermined in the much larger industries that have come to dominate most states' economic growth plans.

Conclusion: learning from Oklahoma

The data presented in this report are neither secret nor confidential. Given that multiple sources make clear that the misleadingly named "right-to-work" offers little if any encouragement to states now struggling through the recession, why do advocates continue to devote such extensive energy and resources to promoting it?

In some cases, supporters may be motivated by political goals unrelated to labor law per se. One conservative pundit, for instance, recently celebrated the 25th anniversary of Idaho's right-to-work law by trumpeting the statute's impact in "diminishing of the Democratic Party's power" by eliminating union political action funds.[73]

In other cases, anti-union zealots may promote such policies out of a commitment to the principle of restricting collective bargaining, independent of the law's economic impacts. Right-to-work proponents often emphasize the moral importance of allowing employees to earn union-scale wages and benefits without paying for the costs of contract negotiation and enforcement.

"This is about freedom to choose for employees," asserted one Oklahoma state representative in that state's 2001 debate.[74]

But the most steadfast and generous backers of right-to-work policies are corporate employers, not individuals who typically spend their waking hours devoted to the defense of employee rights.[75] Moreover, even those advocates who articulate a libertarian insistence that one should be able to work where one wants without any dues requirement seem to limit this principle to the case of unions. Right-to-work devotees are not engaged in parallel projects to declare a "right to live" where one wants – insisting on the freedom to live in a gated community without having to pay homeowner association dues – or a "right to practice law" – demanding that, as long as one passes the bar exam, lawyers should not be required to be dues-paying members of the bar association in order to represent clients in court. But if the principle of freedom from dues is only about the workplace, it seems likely to be driven primarily by anti-union animus rather than any broader principle or economic strategy.

It is, of course, perfectly legitimate for advocacy organizations to promote anti-union policies simply out of hostility to collective bargaining. But for state legislators, it is important to distinguish between passionate advocacy and economic reality.

Hailing the "Oklahoma Model" as a prescription for depressed job markets, the National Right to Work Committee insists that "the experience of Oklahoma… furnish[es] strong evidence that economically troubled states could greatly accelerate their job and income growth by passing Right to Work legislation."[76]

It is unclear what evidence the Right to Work Committee believes establishes this fact. The volume of evidence examined in this report, both from previous scholarly research and from direct analysis of the data from Oklahoma, all points to the opposite conclusion: No matter what measure one uses, there is simply no evidence that right-to-work has increased job opportunities for Oklahomans. With declining manufacturing, a slowdown in firms coming into the state, and an acceleration of those abandoning the state for Mexico or China, Oklahoma provides no evidence-based model for economic regeneration.

The right-to-work strategy seems particularly ill-suited to the type of higher-skill, higher-wage industries that Oklahoma and others are now aiming to recruit. As it has become more difficult to keep low-wage manufacturers in the United States, policymakers have focused greater attention on developing "high road" industries that are less susceptible to offshoring. Such industries, however, are the least likely to be influenced by laws aimed at undermining union bargaining power.

Both the *State New Economy Index* and the Kentucky study finding education to be the single most important factor in Southern economic development point to the fact that if right-to-work has an impact at all, it will be in attracting lower-wage employers, whose business model relies on narrow profit margins and less-skilled labor. The better employers – offering jobs with higher pay and benefits – look for educated employees with advanced skills. They are operating on a different business model, which assumes they will pay employees relatively well in return for a workforce that produces much higher value.

As economist Robert Lynch noted, "Firms are more willing to pay $20 per hour to an employee who generates $30 worth of output than $6 per hour to an employee who generates $7 worth of output."[77]

Of course, every employer would like to hire staff at the lowest possible wage, but the business model of higher-end employers does not depend on low wages as essential to their profit strategy.

That right-to-work is particularly irrelevant to such higher-wage employers is evident in the fact that Oklahoma recently found it necessary to double its cash-back incentive – now offering a refund equal to 10% of payroll costs – in order to attract higher-wage employers to the state.[78]

As states look to attract and retain employers, and particularly to expand the opportunities for state residents to land middle-class jobs, the hard statistical evidence suggests that so-called "right-to-work" laws have no role to play in this revival. Where states with such laws have done well, all signs – including the data, in-depth analyses of state economies, and the statements of economic development officials themselves – point to other causes for this success. It is understandable that, in times of trouble, state legislators would look to any possible avenue in hope of finding a way out of the current crisis. But having reviewed the track record of the state with the most recent and best-documented experience, it seems clear that legislators would do better to focus their energy in other, more productive, policy directions.

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*—The authors would like to thank **Mary Gable, Jennifer Smith, Jaxon Love,** and **Arin Dube** for research assistance and helpful comments on this research. We are particularly grateful to Ozkan Eren and I. Serkan Ozbeklik for permission to cite their forthcoming work prior to its formal publication.*

Endnotes

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2. Data are from "States and Selected Areas: Employment Status of the Civilian Noninstitutional Population, 1976 to 2009 Annual Averages," U.S. Bureau of Labor Statistics, www.bls.gov.

3. Data are from "States and Selected Areas: Employment Status of the Civilian Noninstitutional Population, 1976 to 2009 Annual Averages," U.S. Bureau of Labor Statistics, www.bls.gov.

4. In November 2010, the highest state unemployment rate was Nevada's, at 14.3%, while the lowest was North Dakota's, at 3.8%. Reported in "Oklahoma Economic Indicators, December 2010," Oklahoma Employment Security Commission, http://osec.ok.gov, accessed 1/21/11.

5. National Institute for Labor Relations Research, "Right to Work Laws Keep Good Jobs in U.S.," May 20, 2005; NILRR, "Since 2001, Right to Work States Lead in Job Growth, Five-to-One," April 10, 2007; NILRR, "Right to Work Law Is Helping Oklahoma Turn Into an Economic Leader," May 30, 2007; NILRR, "Right to Work States Benefit From Faster Growth, Higher Real Purchasing Power – 2006 Update," October 2006.

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8. This point is made by Raymond Holger, among others, in Holger, "The Historical Misconception of Right-to-Work Laws in the United States," *Hofstra Labor and Employment Law Journal* 23(101), Fall 2005.

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10. A review of earlier studies is provided by Boston Federal Reserve Bank analyst Robert Tannenwald, "State Regulatory Policy and Economic Development," *New England Economic Review*, March/April 1997, pp. 83-107. Tannenwald examined eight studies that each reported positive correlations between right-to-work laws and economic growth, but reported that methodological problems in these studies made it difficult to draw any firm conclusions from their analyses. At times, Tannenwald's work has been mischaracterized as an endorsement of anti-union policy. Right-to-work proponent W. Robert Reed, for instance, cited Tannenwald in an influential policy report issued by the Oklahoma Council for Public Affairs in early 2001. (W. Robert Reed, *Does Right to Work Boost Economic Development?* Oklahoma Council for Public Affairs, February 21, 2001). Where Reed cites the existence of these eight studies as Tannenwald's "conclusion," however, Tannenwald's actual article questions both the methodology and findings of these studies.

11. Thomas J. Holmes, "The Location of Industry: Do States' Policies Matter?" *23 Regulation* 47, 50, 2000.

12. Emin M. Dinlersoz and Ruben Hernandez-Murillo, "Did 'Right to Work' Work for Idaho?" Federal Reserve Bank of St. Louis, *Review*, May/June 2002. Idaho's law was adopted in November 1986 and went into effect in 1987.

13. Office of the Governor, Division of Financial Management, *Idaho Economic Forecast* 26(3), July 2004, accessed 1/27/11 at http://dfm.idaho.gov/Publications/EAB/Forecast/2004/July/COVER0704.pdf. Dinlersoz and Hernandez-Murillo (2002) report that the state's unionization rate fell from 22% to 9% in 1981-84, before the right-to-work law was adopted, but coinciding with President Reagan's encouragement of anti-unionism and with a steep decline in the traditionally unionized Idaho timber industry.

14. For instance, Hewlett-Packard is one of the companies cited by the state of Idaho as having increased employment in the state after right-to-work was passed. But HP also kept hiring employees in California, Colorado, and other non-right-to-work jurisdictions.

15. Charlene M. Kalenkoski and Donald J. Lacombe, "Right-to-Work Laws and Manufacturing Employment: The Importance of Spatial Dependence," *Southern Economic Journal* 73(2): 402-18, October 2006.

16. Kalenkoski and Lacombe 2006, p. 402. Holmes reported that, when crossing from a non-RTW to a RTW county, the average manufacturing share increased by 6.6%. Kalenkoski and Lacombe, p. 418, report an increase of only 2.12%.

17. For instance, Kalenkoski and Lacombe find that right-to-work laws have a negative impact on the employment shares of the agriculture, forestry, mining, fishing and hunting, and some service industries, but a positive impact on the employment share for professional, scientific, and management services. Since agricultural employees and most professional and managerial employees have no right to organize under federal labor law, it's not possible that right-to-work statutes could directly impact their fortunes. This suggests that industrial shares of employment are being impacted by something other than the statute measured here.

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19. Lonnie K. Stevans, "The Effect of Endogenous Right-to-Work Laws on Business and Economic Conditions in the United States: A Multivariate Approach," *Review of Law and Economics* 5(1), 595-612, 2009.

20. Stevans 2009, p. 610.

21. Robert J. Newman, *Growth in the American South*, New York: New York University Press, 1984. Robert Ady, a prominent location consultant, similarly suggested that the impact of right-to-work as an attraction in business location decisions had dramatically declined over time, dropping to as low as 10% of firms by the 1980s (cited in James Warren, "High Noon for Antiunion Law: Idaho Referendum on Right-to-Work Pits Labor, Right," *Chicago Tribune*, September 25, 1986).

22. See for example Jefferson Cowie's account of RCA's move from the North to the South and ultimately to Mexico, in his *Capital Moves*, Cornell University Press, 1999.

23. Oklahoma is a large producer and refiner of crude oil, as well as supplier of almost one-tenth of the country's natural gas; the share of Oklahomans employed in these industries is significantly above the national average. *Oklahoma Economic Indicators, December 2010*, Oklahoma Employment Security Commission, p. 16, http://osec.ok.gov, accessed 1/21/11.

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31. W. Robert Reed, "Does Right to Work Boost Economic Development?" Oklahoma Council of Public Affairs, February 2001, accessed 1/20/11 at www.ocpathink.org/publications/policy-papers/?module=news&id=1566.

32. Quoted in Bill May, "Proponents Foretell Benefits of Right to Work," *Journal Record*, September 19, 2001, accessed 1/21/11 at www.highbeam.com.

33. Quoted in Marie Price, "House Passes Right to Work; Special Election Call Fails," *Journal Record*, April 19, 2001, accessed 1/21/11 at http://findarticles.com/p/articles/mi_qn4182/is_20010419/ai_n10145597. The 80-90% claim seems to have come originally from Morris, an anti-union location consultant who testified before the Oklahoma State Senate Committee on Business and Labor, February 21, 2000. Morris' claim was repeated in a pro-RTW policy brief published by the Oklahoma Council of Public Affairs in the lead-up to the legislative debate (Reed 2001, op cit.) A similar statement by Morris – this time insisting that "90% of companies use forced collective bargaining as a first 'kickout' criteria and choose to locate only in right-to-work states when their overall operating requirements give them any latitude" – was promoted by the group Californians for Freedom to Work in that state's 1998 legislative debate over right-to-work.

34. Quoted in Larry Levy, "Oklahoma Needs Right to Work, Governor Says," *Daily Oklahoman*, June 21, 2001, accessed 1/21/11 at www.highbeam.com. Similarly, the *Tulsa World's* editor explained that "the sad fact is that all too often companies looking to move or expand automatically rule out Oklahoma as a prospective location because we do not have right to work" (David Averill, "For Right to Work: A Matter of Fairness and Economic Progress," *Tulsa World*, September 23, 2001, accessed 1/22/11 at www.tulsaworld.com/opinion/article.aspx?subjectid=61&articleid=010922_Op_averi23&archive=yes).

35. Reed 2001.

36. Oklahoma manufacturing employment, seasonally adjusted, U.S. Bureau of Labor Statistics.

37. Authors' calculations based on quarterly unemployment data from U.S. Bureau of Labor Statistics and Moody's Analytics.

38. Author's calculations based on quarterly unemployment data from U.S. Bureau of Labor Statistics and Moody's Analytics.

39. Data are from the Quarterly Census of Employment and Wages (QCEW). These quarterly payroll data, broken down by industry, are based on the ES-202 filings required by establishments to determine payroll taxes related to unemployment insurance (UI). Therefore, the QCEW closely represents a near-census accounting, as approximately 98% of workers are covered by UI.

40. Our research design is similar to that used to study minimum wage effects in Arindrajit Dube, William Lester, and Michael Reich, "Minimum Wage Effects Across State Borders: Estimates Using Contiguous Counties," *Review of Economics and Statistics* 92(4): 945-64, November 2010. Dube et al. used the QCEW to analyze contiguous border county-pairs that had differing minimum wages.

41. We constructed two samples from the QCEW for this analysis. The first sample comprises all counties in Oklahoma and the adjacent states. This regional "all county" sample was chosen to mitigate unobserved influences that affect employment growth that are not easily measured. In a second parallel analysis, we employed a sample of contiguous border county-pairs. In this instance border counties in Oklahoma are paired with adjacent counties in neighboring states. This method allows for a more localized comparison as it assumes that a county is more similar to its cross-state counterpart than to a randomly chosen county and comes closer to isolating the impact of right-to-work itself. For both the all-county and border-county-pair analysis the outcome variables of interest are total private sector employment and manufacturing employment. Two approaches are used to measure the effect of Oklahoma's policy change. First, a dichotomous or dummy variable is constructed that indicates when Oklahoma implemented the policy change and continues thereafter. Second, we model Oklahoma specific year effects leading up to and following the 2001 policy change. Here, an indicator variable on Oklahoma is interacted with leads three years prior to the policy change and lags three years after the policy change along with the year the change was implemented.

42. The results for manufacturing for the contiguous county border pairs were imprecise due to sparse data. Regression results provided upon request.

43. These specifications were clustered at the county level.

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Exhibit D
Interim Study Committee on
Employment Issues
July 26, 2011 Meeting #1

EPI BRIEFING PAPER

ECONOMIC POLICY INSTITUTE • FEBRUARY 17, 2011 • BRIEFING PAPER #299

THE COMPENSATION PENALTY OF "RIGHT-TO-WORK" LAWS

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Recent proposals to advance so-called "right-to-work" (RTW) laws are being suggested in states as a way to boost economic growth. In this economic climate, something called right-to-work legislation sounds positive, but the name is misleading: these laws do not guarantee a job for anyone. In fact, they make it illegal for a group of unionized workers to negotiate a contract that requires each employee who enjoys the benefits of the contract terms to pay his or her share of costs for negotiating and policing the contract. This provision directly limits the financial viability of unions, reducing their strength and ability to negotiate favorable contracts, higher wages, and better benefits. Similarly, by diminishing union resources, an RTW law makes it more difficult for unions to provide a workers' voice on policy issues ranging from unemployment insurance to workers compensation, minimum wages, and other areas. The simple reality is that RTW laws undermine the resources that help workers bargain for better wages and benefits.

This briefing paper directly examines the impact of RTW on the wages and benefits received by workers, both union and nonunion. It does this by examining differences in the wages and benefits workers receive in RTW and non-RTW states. In a regression framework, we analyze the relationship between RTW status and wages and benefits after controlling for the demographic and job characteristics of workers, in addition to state-level economic conditions and cost-of-living differences across states. We find the following:

- Wages in right-to-work states are 3.2% lower than those in non-RTW states, after controlling for a full complement of individual demographic and socioeconomic variables as well as state macroeconomic indicators. Using the average wage in non-RTW states as the base ($22.11), the average full-time, full-year worker in an RTW state makes about $1,500 less annually than a similar worker in a non-RTW state.

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- The rate of employer-sponsored health insurance (ESI) is 2.6 percentage points lower in RTW states compared with non-RTW states, after controlling for individual, job, and state-level characteristics. If workers in non-RTW states were to receive ESI at this lower rate, 2 million fewer workers nationally would be covered.
- The rate of employer-sponsored pensions is 4.8 percentage points lower in RTW states, using the full complement of control variables in our regression model. If workers in non-RTW states were to receive pensions at this lower rate, 3.8 million fewer workers nationally would have pensions.
- This briefing paper provides the most comprehensive study to date of the relationship between RTW status and compensation. Using a full set of explanatory variables, including state-level controls, it is clear that our analysis stands apart as being more rigorous than others of this type.

Our results apply not just to union members, but to all employees in a state. Where unions are strong, compensation increases even for workers not covered by any union contract, as nonunion employers face competitive pressure to match union standards. Likewise, when unions are weakened by "right-to-work" laws, the impact is felt by all of a state's workers.

We measure the particular effects of RTW laws on compensation among workers who are not unionized or covered by union contracts. The wage penalty for nonunionized workers is 3.0%, and the benefit penalty is 2.8 percentage points and 5.3 percentage points for health and pension benefits, respectively. Our results suggest that proposals to advance RTW laws likely come at the expense of workers' wages and benefits, both within and outside of unions.

Background

The 1947 Taft-Hartley amendments to the National Labor Relations Act (1935) sanctioned a state's right to pass laws that prohibit unions from requiring a worker to pay dues, even when the worker is covered by a union-negotiated collective bargaining agreement. Within a couple of years of the amendment's passage, 12 states passed these so-called "right-to-work" laws, as did many other states in the intervening years. Today, right-to-work laws are in place in 22 states, predominantly in the South and Southwest. (For a complete list of states that currently have RTW laws, see Appendix Table A1.)

Although there has been an extensive amount of research on the effect of right-to-work laws on union density, organizing efforts, and industrial development (see Moore 1998 and Moore and Newman 1985 for literature overviews), there has been surprisingly little examination of the perhaps more important issue of right-to-work laws' effect on wages and even less on employer-sponsored benefits.

The limited amount of research that does examine the effect of right-to-work laws on wages can be divided into two areas: RTW laws' effect on union wage premiums, or the effect of these laws on overall wages. Our research focuses on the latter. Since right-to-work laws affect union density and effectiveness (Farber 1985), the effect of the union wage premium is not easily disentangled from the effects of RTW legislation. Our analysis tries to overcome the shortcomings in previous research in this area. First, we control for differences in cost of living throughout the United States, thereby making wages in various parts of the country as comparable as possible. Second, we measure the spillover effects of RTW legislation by examining wages and benefits of nonunionized workers.

How do RTW and non-RTW states compare?

To determine the effect of right-to-work laws on wages, we estimate log wage equations using the Bureau of Labor Statistics' Current Population Survey – Outgoing Rotation Group (CPS-ORG) for 2009. The sample consists of 108,627 workers, ages 18-64, who earn wages and salaries. About 37% of the sample lives in states with RTW laws. Average hourly wages are $20.91, and median hourly wages are $17.00.

Table 1 displays the characteristics of workers in both RTW and non-RTW states. On many levels, these two sets of workers are similar. The average age is nearly the same, as is the share of the workforce that is male and that is married. Educational attainment is similar, with workers in non-RTW states having slightly higher levels

TABLE 1

Characteristics of workers by residence in right-to-work state

	Right-to-work state	Non-right-to-work state
Demographics		
Age	39.4	40.0
Sex (male)	51.3%	50.4%
Race/ethnicity		
White non-Hispanic	64.8%	71.9%
Black non-Hispanic	13.5	7.1
Hispanic	17.1	13.7
Asian	2.6	5.4
Other	2.0	1.9
Education		
Some high school	10.1%	8.1%
High school degree	28.1	26.5
Some college	20.6	19.5
Associate's degree	10.7	10.5
College degree	20.7	23.0
Post-college degree	9.8	12.3
Married	57.2	57.4
Metropolitan area	82.3	86.4
Work characteristics		
Hourly worker	55.3%	56.9%
Full-time	83.1	79.6
Union/union contract	7.6	18.6
Hourly wage	$19.06	$22.11
State characteristics		
Unemployment rate (2009)	8.6%	9.6%
Cost of living (PERI)	0.95	1.03
Cost of living (MO)	94.81	111.95
Number of observations	40,563	68,064

SOURCE: Author's analysis of CPS ORG, 2009.

of schooling. The racial/ethnic composition varies, with more white workers in non-RTW states, and more African American and Hispanic workers in RTW states.

The biggest difference between workers in RTW and non-RTW states is the fact that workers in non-RTW states are more than twice as likely to be in a union or protected by a union contract. Average hourly wages, the prime variable of interest, are 16% higher in non-RTW states ($22.11 in non-RTW vs. $19.06 in RTW states). Median wages (not shown) are 14.4% higher in non-RTW states ($17.16 vs. $15.00).

What is the independent effect of right-to-work on wages?

As shown in Table 1, there are differences between workers' characteristics in RTW and non-RTW states, and some of these characteristics will have a direct impact on workers' expected wages. For instance, workers in non-RTW states have somewhat higher levels of educational attainment, which is associated with higher wages, on average. Controlling for these factors in a multivariate regression model helps us factor in these differences, allowing us to come closer to identifying the "pure," or independent, RTW effect on wages.

In **Table 2**, we construct a regression model, starting with the most general and building up to a model that controls for the full range of explanatory variables. The dependent variable is always the natural log of hourly wage, and the variable of interest is an indicator variable taking on the value one when the worker lives in a RTW state and zero otherwise. (Full regression results are reported in Appendix Table A2.)

The results of the uncontrolled model mimic the differences in wages found in the descriptive statistics. Wages in RTW states are 13.7% lower than in non-RTW states. The basic set of controls includes the demographic variables included in Table 1 – age, age squared, race/ethnicity, education indicators, sex, marital status, urbanicity, an indicator for being an hourly worker, an indicator for being a full-time worker – in addition to a worker's major industry and occupation. As with worker characteristics, the industry and occupation mix in the state could affect the average wage. Again, controlling for these differences allows us to better isolate the relationship between RTW states and wages. As expected, the coefficient on the RTW indicator moves closer to zero, and wages in RTW states are found to be 9.1% lower, on average, after controlling for these worker differences.

The third column of Table 2 includes additional state-level variables on the economic conditions – measured by the state unemployment rate – and differences in cost of living across states. Averages for these three continuous variables are found at the bottom of Table 1. The Political Economy Research Institute (PERI) established a method that was used by researchers in the Census Bureau to calculate a cost-of-living adjustment to the hourly wage. PERI used Fair Market Rents, which consider housing and utilities prices, to construct a state-by-state cost-of-living adjustment. This measure (COL_PERI) creates an index of prices relative to the national average.

The second measure of cost of living (COL_MO) is based on data collected from the 3rd quarter of 2010 by the Missouri Economic Research and Information Center. The cost-of-living adjustment scale for each state is based on the average of the indices of cities in that state. As expected, New England, Alaska, Hawaii, and the West Coast are among the most expensive areas to live, while Midwest and Southern states continue to be some of the least expensive.

We include both indicators for cost of living in the full model because they measure costs slightly differently; however, running this regression produces comparable results regardless of which one is used. Controlling for these price differences captures the extent to which higher costs, and

TABLE 2

Wage regressions: Estimates of coefficient of right-to-work indicator (full sample)

Dependent variable	Model with no controls	Model with basic set of controls	Full model
Natural log of hourly wage	-0.137***	-0.0911***	-0.0317***
	(0.00449)	(0.00323)	(0.00375)

NOTE: Robust standard errors are in parentheses. Three asterisks (***) indicate significance at the 1% level, two indicate significance at the 5% level, one indicates significance at the 10% level.

Basic set of controls include age, age squared, race/ethnicity, education indicators, sex, marital status, urbanicity, hourly worker, full-time worker, union status, major industry, and major occupation.

Full model includes the basic set plus state-level unemployment rate and adjustments for cost-of-living differences across states.

SOURCE: Author's analysis of CPS ORG, 2009.

therefore higher wages may be found in non-RTW states for reasons other than their lack of RTW legislation, letting us better isolate the relationship between wages and RTW status.

As the methodology above attests, we have attempted as nearly as possible to isolate the impact of "right-to-work" legislation itself, apart from the myriad other factors that impact wages in a given state. All told, our model controls for 42 demographic, economic, geographic, and policy factors. After controlling for this full complement of differences, we find wages in RTW states to be statistically and economically significantly lower than in non-RTW states. On average, "right-to-work" laws are associated with wages – for everyone, not just union members – that are 3.2% lower than they would be without such a law.

Beyond the overall impact of "right-to-work" laws on the workforce as a whole, it is important for policy makers to understand the particular effect such laws can have on specific communities within the state. To get at this question, we ran a series of regressions on demographic subgroups of the population. Here again we are looking at the relationship between RTW laws and wages in both

TABLE 3

Wage regressions on restricted samples: Estimates of coefficient of right-to-work indicator

Sample	Model with no controls	Full model
Women only	-0.145***	-0.0442***
	(0.00596)	(0.00513)
Men only	-0.132***	-0.0172***
	(0.00656)	-0.0054
Less than high school only	-0.0780***	-0.0389***
	(0.0103)	(0.0110)
High school only	-0.102***	-0.0274***
	(0.00674)	(0.00611)
Some college only	-0.0990***	-0.0317***
	(0.00715)	(0.00630)
College or more only	-0.117***	-0.0314***
	(0.00781)	(0.00766)
White non-Hispanic only	-0.0988***	-0.0298***
	(0.00545)	(0.00444)
Black non-Hispanic only	-0.180***	-0.0483***
	(0.0131)	(0.0113)
Hispanic only	-0.108***	-0.0444***
	(0.0102)	(0.0105)
Union only	-0.0951***	-0.0287***
	(0.0107)	(0.00997)
Non-union only	-0.110***	-0.0298***
	(0.00488)	(0.00402)

NOTE: Robust standard errors are in parentheses. Three asterisks (***) indicate significance at the 1% level, two indicate significance at the 5% level, one indicates significance at the 10% level.

Full model includes the age, age squared, race/ethnicity, education indicators, sex, marital status, urbanicity, hourly worker, full-time worker, union status, major industry, major occupation, state level unemployment rate and adjustments for cost-of-living differences across states (except where restricted sample disallows variable inclusion).

SOURCE: Author's analysis of CPS ORG, 2009.

the model without meaningful controls and the fully controlled model (comparable to column 3 in Table 2). In the model with no controls, it appears that male and female workers experience the same wage penalty, but after controlling for individual and state characteristics, we find that women's wages are penalized further (4.4%) in RTW states than men's (1.7%). The wage penalty exists across all categories of educational attainment and racial/ethnic groups; however, we find that it is higher among nonwhites, with the RTW penalty being 4.8% for blacks and 4.4% for Hispanics.

It is particularly important to note that "right-to-work" laws have a statistically significant negative effect on the wages of ***nonunion workers***, as shown in the last row of **Table 3**. Using the fully controlled regression model, our analysis indicates that nonunion workers in RTW states have wages that are 3.0% lower, on average, than their counterparts in non-RTW states.

RTW status and employer-sponsored benefits

To determine the effect of right-to-work laws on employer-sponsored benefits, we use the Bureau of Labor Statistics' Current Population Survey from March 2010, referring to full-year 2009 information.[1] The sample consists of 21,834 employees, ages 18-64. As with the wage data, about 37% of the sample lives in states with RTW laws. Examining this sample, we find that 69.7% of workers have employer-sponsored health insurance, and 42.1% have employer-sponsored pensions.[2] In raw comparisons, about 4.5% more of the workforce is covered by employer-sponsored insurance in non-RTW states than in RTW states. Similarly, about 4.5% more of the workforce receives a pension through their job in non-RTW states than in RTW states.

We follow the same methodology as in the wage analysis, starting with a model with no controls and building up to one with a full set of controls. In addition to the overall cost-of-living measures, the health insurance regressions also include average family premiums within each state to further control for the effects of prices on the rate at which employers offer and employees take up these benefits. The key results are shown in **Table 4** (with detailed regression results in Appendix Table A3).

As expected, the results of the uncontrolled model directly replicate the descriptive statistics that show benefit coverage is lower in RTW than non-RTW states. Workers' employer-sponsored health insurance coverage in RTW states is 4.5 percentage points lower and employer-sponsored pension coverage is 4.6 percentage points lower than among workers in non-RTW states. The full model confirms these results. After controlling for differences in prices across states as well as individual socioeconomic

TABLE 4

Benefit regressions: Estimates of coefficient of right-to-work indicator (full sample)

Dependent variable	Model with no controls	Model with basic set of controls	Full model
Employer-sponsored health insurance	-0.0447***	-0.0258***	-0.0259***
	(0.00780)	(0.00709)	(0.00887)
Employer-sponsored pension	-0.0464***	-0.0272***	-0.0483***
	(0.00819)	(0.00756)	(0.00926)

NOTE: Linear regression model used for ease in interpretation. Probit regression was also run with consistent results. Robust standard errors are in parentheses. Three asterisks (***) indicate significance at the 1% level, two indicate significance at the 5% level, one indicates significance at the 10% level.

Basic set of controls include age, age squared, race/ethnicity, education indicators, sex, marital status, urbanicity, hourly worker, full-time worker, union status, major industry, and major occupation.

Full model includes the basic set plus state level unemployment rate and adjustments for cost-of-living differences across states. Health insurance model includes average ESI family premiums.

SOURCE: Author's analysis of CPS ASEC, 2010.

characteristics, workers in RTW states, on average, are less likely to receive health insurance (by 2.6 percentage points) and pensions (by 4.8 percentage points) from employers. These estimates imply a much larger percentage drop in actual coverage, since coverage even in non-RTW states is far from universal: coverage of employer-sponsored health insurance and pensions is, respectively, 71.5% and 44.9% in non-RTW states. Therefore, a 2.6 percentage-point estimated deterioration in health insurance coverage in non-RTW states implies a 3.8% reduction in coverage, or 2 million fewer covered workers. Likewise, a 4.8 percentage-point estimated deterioration in pension coverage

TABLE 5

Benefit regressions on restricted samples: Estimates of coefficient of right-to-work indicator

	Dependent variable: Employer-sponsored health insurance		Dependent variable: Employer-sponsored pension	
Sample	***Model with no controls***	***Full model***	***Model with no controls***	***Full model***
Women only	-0.0476***	-0.0219*	-0.0480***	-0.0489***
	(0.0108)	(0.0125)	(0.0115)	(0.0129)
Men only	-0.0421***	-0.0295**	-0.0447***	-0.0468***
	(0.0113)	(0.0126)	(0.0116)	(0.0133)
Less than high school only	-0.0396	-0.0434	0.0173	0.00893
	(0.0246)	(0.0352)	(0.0177)	(0.0246)
High school only	-0.0495***	-0.0206	-0.0317**	-0.0305*
	(0.0151)	(0.0171)	(0.0148)	(0.0174)
Some college only	-0.0312**	-0.0415**	-0.0568***	-0.0812***
	(0.0140)	(0.0169)	(0.0146)	(0.0159)
College or more only	-0.0189*	-0.0106	-0.0342**	-0.0419**
	(0.0113)	(0.0133)	(0.0151)	(0.0174)
White non-Hispanic only	-0.0365***	-0.0292***	-0.0551***	-0.0583***
	(0.00930)	(0.0105)	(0.0106)	(0.0112)
Black non-Hispanic only	-0.0213	-0.0150	-0.00577	-0.0244
	(0.0234)	(0.0287)	(0.0227)	(0.0276)
Hispanic only	-0.0223	-0.0442*	-0.000335	-5.21e-05
	(0.0192)	(0.0265)	(0.0161)	(0.0223)
Union only	-0.0216	-0.00987	0.00818	0.00124
	(0.0230)	(0.0273)	(0.0306)	(0.0349)
Non-union only	-0.0304***	-0.0276***	-0.0238***	-0.0527***
	(0.00817)	(0.00933)	(0.00839)	(0.00964)

NOTE: Linear regression model. Robust standard errors are in parentheses. Three asterisks (***) indicate significance at the 1% level, two indicate significance at the 5% level, one indicates significance at the 10% level.

Full model includes the age, age squared, race/ethnicity, education indicators, sex, marital status, urbanicity, hourly worker, full-time worker, union status, major industry, major occupation, state level unemployment rate and adjustments for cost-of-living differences across states (except where restricted sample disallows variable inclusion).

SOURCE: Author's analysis of CPS ASEC, 2010.

in non-RTW states implies a 12.1% reduction in pension coverage, or 3.8 million fewer workers with pensions.

Because the sample size is smaller in the benefit analysis, it is harder to conduct a detailed analysis for subgroups of the population. But some findings are clear and statistically significant: In this case, male and female workers in non-RTW states are equally more likely to have employer-sponsored benefits.

We find that RTW legislation has large spillover effects, that is, the legislation doesn't only affect unionized workers, but also those that lack union contract coverage. The coefficient of RTW for the nonunion subgroup is quite large: -2.8 percentage points for insurance and -5.3 percentage points for pensions. This suggests that even among nonunion workers, living in a RTW state makes them less likely to enjoy valuable employer-sponsored benefits.

The necessity of rigorous methodology

Tables 2 and 4 show that workers in RTW states have lower compensation, on average, than their counterparts in non-RTW states. How much of this difference can be attributed to RTW status itself? There is an inherent "endogeneity" problem in any attempt to answer that question, namely that RTW and non-RTW states differ on a wide variety of measures that are also related to compensation, making it difficult to isolate the impact of RTW status. The approach we use to identify the independent effect on compensation of being in a RTW state is admittedly limited, but we do control for all of the many observable characteristics that are available in the CPS, including education, race/ethnicity, age, gender, marital status, union status, industry, occupation, urbanicity, whether a worker is an hourly worker, and whether a worker is a full-time worker. We also control for macroeconomic differences between states that may affect compensation packages, including cost-of-living measures and the unemployment rate. But despite our comprehensive set of observable controls, there may be unobservable state-level characteristics that lead to both lower average compensation packages and an increased likelihood of RTW legislation (for example, a broader political climate that puts workers at a disadvantage).

With these caveats, the analysis presented above is as close as rigorous social science can get to identifying the specific impact of "right-to-work" laws on wages and benefits. In fact, almost all other studies on RTW fail to use such rigorous methods. For instance, in a report from the Indiana Chamber of Commerce Foundation, Vedder, Denhart, and Robe (2011) examine the effects of RTW legislation on income growth from 1977-2008. In our analysis, we include a full set of demographic variables, including race/ethnicity, gender, education, age, marital status, and metro area. Of this list, Vedder et al. control only for the change in college attainment. We control for work characteristics such as being in a union or having a union contract, hourly worker and full-time worker status, 12 major industry categories, and nine occupational classifications. Of this list, Vedder et al. only control for average proportion of employment in manufacturing. Both of our studies control for a labor force measure; ours is the unemployment rate, while Vedder et al. use the change in the employer-to-population ratio. They also include population growth, imperative for looking at changes over long spans of time when growth occurred unevenly across the country. We also control for two measures of cost of living, which captures the extent to which higher costs and therefore higher wages may be found in non-RTW states for reasons other than their lack of RTW legislation, letting us better isolate the relationship between wages and RTW status; Vedder et al. do not control for cost of living. Their remaining control variable is years that have elapsed since each state attained statehood, for which they offer no justification.

In short, we include the set of controls that the standard econometric practice demands in analyses of this type. Vedder et al. (2011) do not meet this standard, calling into question the validity of their analysis.[3]

Conclusions

Once we control for our comprehensive set of both individual and state-level observable characteristics, we find that the mean effect of working in a right-to-work state is a 3.2% reduction in wages for workers in these states. We also find a 2.6 and 4.8 percentage-point reduction in employer-sponsored health insurance and employer-sponsored pensions, respectively. Furthermore, we demonstrate that the wage penalty for nonunionized workers is 3.0%, and the benefit penalty is 2.8 percentage points and 5.3 percentage points for health and pension benefits, respectively.

It is notoriously difficult to separate out the effect of a single public policy on wages across a statewide economy. It is possible that future data will enable even more exact measurements. However, our findings – that "right–to-work" laws are associated with significantly lower wages and reduced chances of receiving employer-sponsored health insurance and pensions – are based on the most rigorous statistical analysis currently possible. These findings should discourage right-to-work policy initiatives. The fact is, while RTW legislation misleadingly sounds like a positive change in this weak economy, in reality the opportunity it gives workers is only that to work for lower wages and fewer benefits. For legislators dedicated to making policy on the basis of economic fact rather than ideological passion, our findings indicate that, contrary to the rhetoric of RTW proponents, the data show that workers in "right-to-work" states have lower compensation – both union and nonunion workers alike.

Appendix

TABLE A1

Right to work states

Alabama	Nevada
Arizona	North Carolina
Arkansas	North Dakota
Florida	Oklahoma
Georgia	South Carolina
Idaho	South Dakota
Iowa	Tennessee
Kansas	Texas
Louisiana	Utah
Mississippi	Virginia
Nebraska	Wyoming

SOURCE: U.S. Department of Labor, Wage and Hour Division.

TABLE A2

Full regression results: Log wage regressions

	Model with no controls	Model with basic set of controls	Full model
RTW indicator	-0.137***	-0.0911***	-0.0317***
	(0.00449)	(0.00323)	(0.00375)
Union indicator		0.131***	0.120***
		(0.00450)	(0.00445)
White non-Hispanic		0.0915***	0.100***
		(0.00525)	(0.00522)
Hispanic		-0.00855	-0.0411***
		(0.00633)	(0.00635)
Asian		0.0417***	0.00675
		(0.00994)	(0.00999)
Other race/ethnicity		0.0586***	0.0506***
		(0.0107)	(0.0107)
Male		0.144***	0.143***
		(0.00361)	(0.00358)
Some high school		-0.112***	-0.114***
		(0.00555)	(0.00554)
Some college		0.0706***	0.0673***
		(0.00417)	(0.00414)
Associate's degree		0.153***	0.151***
		(0.00538)	(0.00534)
College		0.258***	0.252***
		(0.00539)	(0.00534)
Advanced degree		0.454***	0.447***
		(0.00752)	(0.00746)
Age		0.0368***	0.0370***
		(0.000917)	(0.000909)
Age squared		-0.000361***	-0.000365***
		(1.13e-05)	(1.12e-05)
Married		0.0710***	0.0751***
		(0.00340)	(0.00337)
Hourly worker		-0.174***	-0.167***
		(0.00409)	(0.00407)
Full-time worker		0.142***	0.146***
		(0.00461)	(0.00459)
Metro area		0.137***	0.105***
		(0.00381)	(0.00391)
Industry and occupation indicators	no	yes	yes
State unemployment and cost-of-living indices	no	no	yes
Constant	2.879***	1.431***	0.758***
	(0.00280)	(0.0195)	(0.0275)
Observations	108627	108627	108627
R-squared	0.011	0.518	0.526

NOTE: Robust standard errors are in parentheses. Three asterisks (***) indicate significance at the 1% level, two indicate significance at the 5% level, one indicates significance at the 10% level. Omitted categories include: Black non-Hispanic, high school education. Contact authors for coefficient estimates on variables not listed.

SOURCE: Author's analysis of CPS ORG, 2009.

TABLE A3

Full regression results: Health insurance and pensions

	Dependent variable: Employer-sponsored health insurance			Dependent variable: Employer-sponsored pension		
	Model with no controls	*Model with basic set of controls*	*Full model*	*Model with no controls*	*Model with basic set of controls*	*Full model*
RTW indicator	-0.0447***	-0.0258***	-0.0259***	-0.0464***	-0.0272***	-0.0483***
	(0.00780)	(0.00709)	(0.00887)	(0.00819)	(0.00756)	(0.00926)
Union indicator		0.106***	0.105***		0.210***	0.213***
		(0.00998)	(0.01000)		(0.0131)	(0.0131)
White non-Hispanic		0.0944***	0.0939***		0.0384***	0.0346***
		(0.0119)	(0.0119)		(0.0119)	(0.0119)
Hispanic		-0.0703***	-0.0716***		-0.0718***	-0.0628***
		(0.0141)	(0.0143)		(0.0134)	(0.0135)
Asian		-0.0131	-0.0156		-0.0512***	-0.0429**
		(0.0181)	(0.0183)		(0.0189)	(0.0190)
Other race/ethnicity		0.0232	0.0203		0.00995	0.00608
		(0.0246)	(0.0248)		(0.0247)	(0.0248)
Male		-0.0160**	-0.0160**		0.00611	0.00628
		(0.00746)	(0.00746)		(0.00794)	(0.00793)
Some high school		-0.135***	-0.135***		-0.108***	-0.109***
		(0.0149)	(0.0149)		(0.0120)	(0.0120)
Some college		0.0552***	0.0552***		0.0387***	0.0402***
		(0.0105)	(0.0105)		(0.0103)	(0.0103)
Associate's degree		0.0891***	0.0890***		0.0636***	0.0650***
		(0.0123)	(0.0124)		(0.0139)	(0.0138)
College		0.104***	0.103***		0.0951***	0.0968***
		(0.0103)	(0.0103)		(0.0118)	(0.0118)
Advanced degree		0.105***	0.105***		0.143***	0.145***
		(0.0122)	(0.0122)		(0.0153)	(0.0153)
Age		0.00470**	0.00478**		0.0185***	0.0186***
		(0.00208)	(0.00208)		(0.00206)	(0.00206)
Age squared		-2.57e-05	-2.65e-05		-0.000171***	-0.000171***
		(2.44e-05)	(2.44e-05)		(2.53e-05)	(2.53e-05)
Married		0.134***	0.134***		0.0672***	0.0666***
		(0.00760)	(0.00761)		(0.00831)	(0.00830)
Full-time worker		0.145***	0.145***		0.211***	0.211***
		(0.0105)	(0.0105)		(0.00910)	(0.00910)
Metro area		0.0292***	0.0295***		0.00248	0.0119
		(0.00936)	(0.00959)		(0.00970)	(0.00996)
Industry and occupation indicators	no	yes	yes	no	yes	yes
State unemployment and cost-of-living indices	no	no	yes	no	no	yes
Constant	*0.715****	*0.255****	*0.295****	*0.449****	*-0.328****	*-0.105**
	(0.00459)	*(0.0434)*	*(0.0726)*	*(0.00500)*	*(0.0398)*	*(0.0605)*
Observations	*21834*	*20951*	*20951*	*21834*	*20951*	*20951*
R-squared	*0.002*	*0.226*	*0.227*	*0.002*	*0.240*	*0.242*

NOTE: Linear regression model used for ease in interpretation. Probit regression was also run with consistent results. Robust standard errors are in parentheses. Three asterisks (***) indicate significance at the 1% level, two indicate significance at the 5% level, one indicates significance at the 10% level. Omitted categories include: Black non-Hispanic, high school education. Health insurance regression includes average family health insurance premiums. Contact authors for coefficient estimates on variables not listed.

SOURCE: Author's analysis of CPS ASEC, 2009.

Endnotes

1. We restrict our sample to the subset of the March Current Population Survey – known as the Annual Social and Economic Supplement that overlaps with the CPS-ORG to enable us to include variables such as union status, which is imperarive for this analysis.

2. Our health insurance analysis counts workers as insured if either they receive insurance through their own job or they receive it as a dependent on a spouse's job, as we believe it measures more completely the extent of employer-sponsored insurance in the state.

3. For a more comprehensive critique of Vedder et al. (2011), see Lafer (forthcoming 2011a) and Lafer (forthcoming 2011b).

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