RIGHT-TO-WORK AND INDIANA'S ECONOMIC FUTURE

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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]

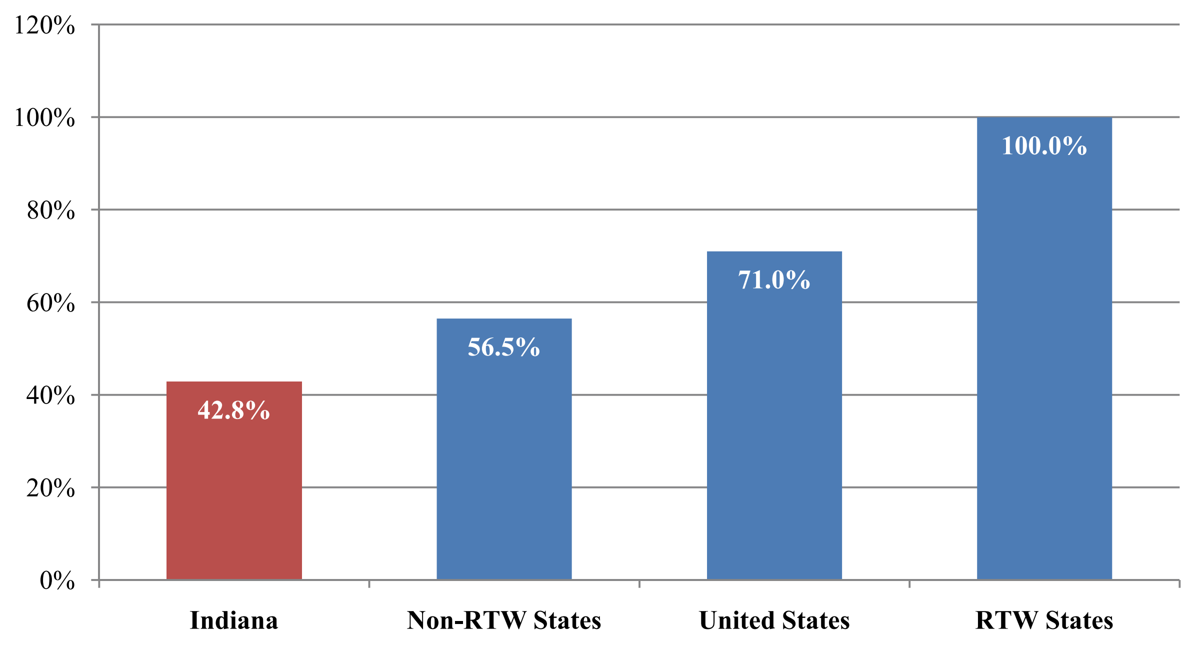
Another useful analysis is to compare total employment growth in RTW states versus that growth in non-RTW states. Using data from the Bureau of Economic Analysis for the years 1977 and 2008, Chart 1 displays this comparison. Over the 31-year period, nationwide total employment grew 71 percent. RTW states 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



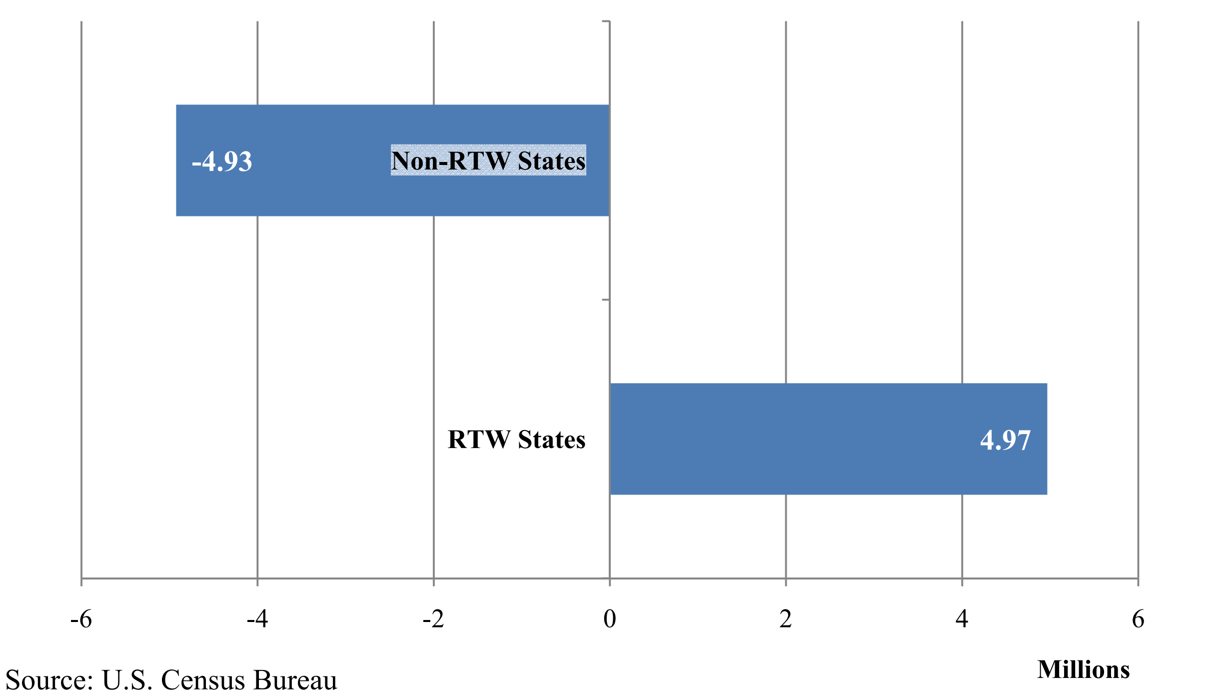
Source: Bureau of Economic Analysis, Authors' calculations

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.

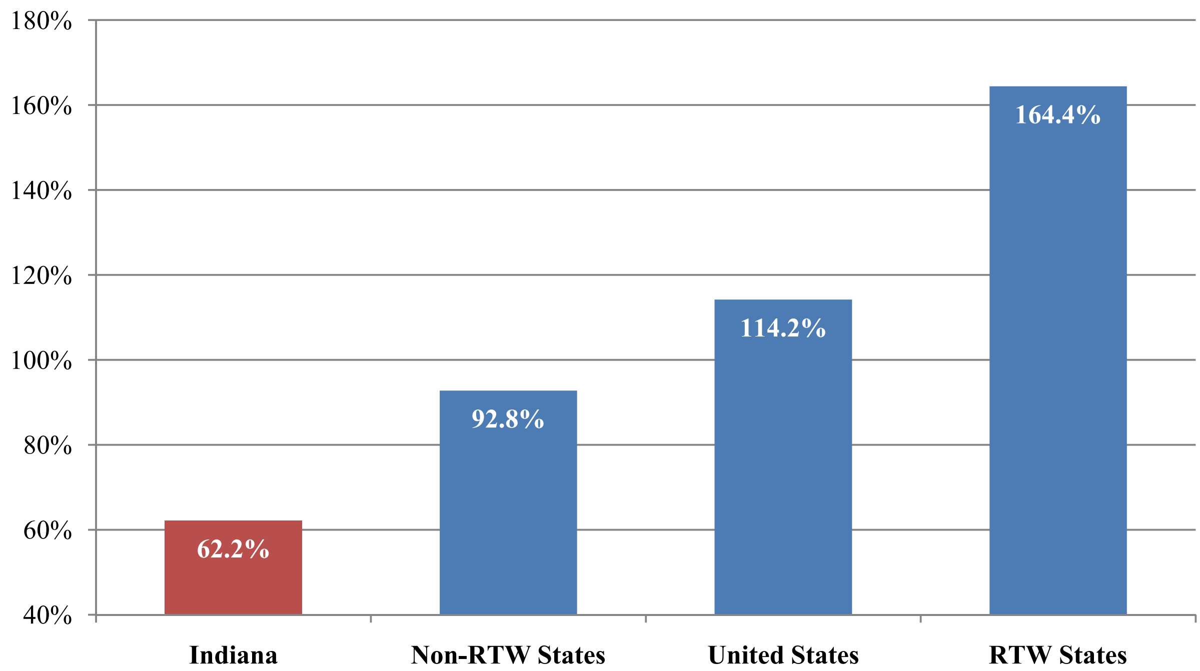
Regression Analysis of Right-to-Work Laws and Economic Growth

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.

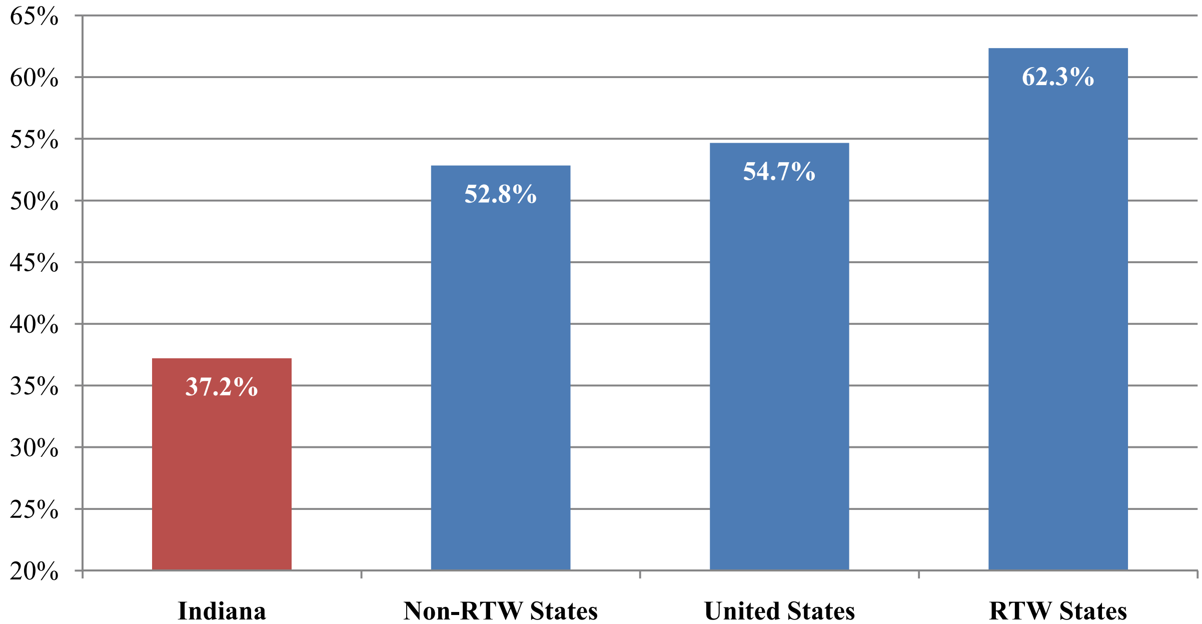
Chart 3: Growth in Real Personal Income, 1977-2008



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		

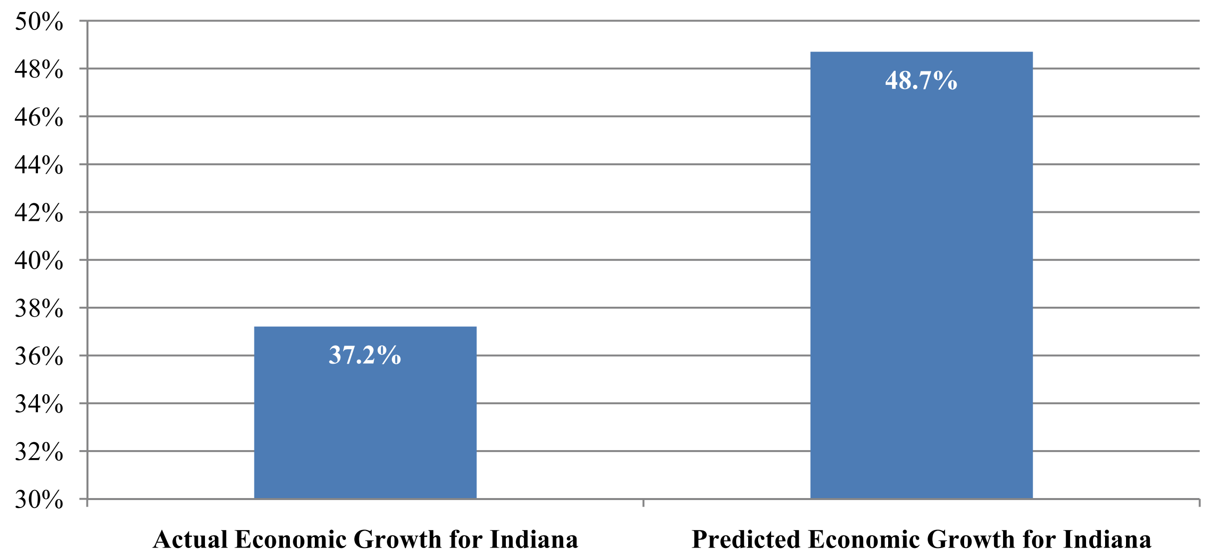
[a]This model includes only the 48 contiguous states. It excludes Alaska and Hawaii, as well as the District of Columbia
* p < 0.1, ** p < 0.05, ***p < 0.001

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.

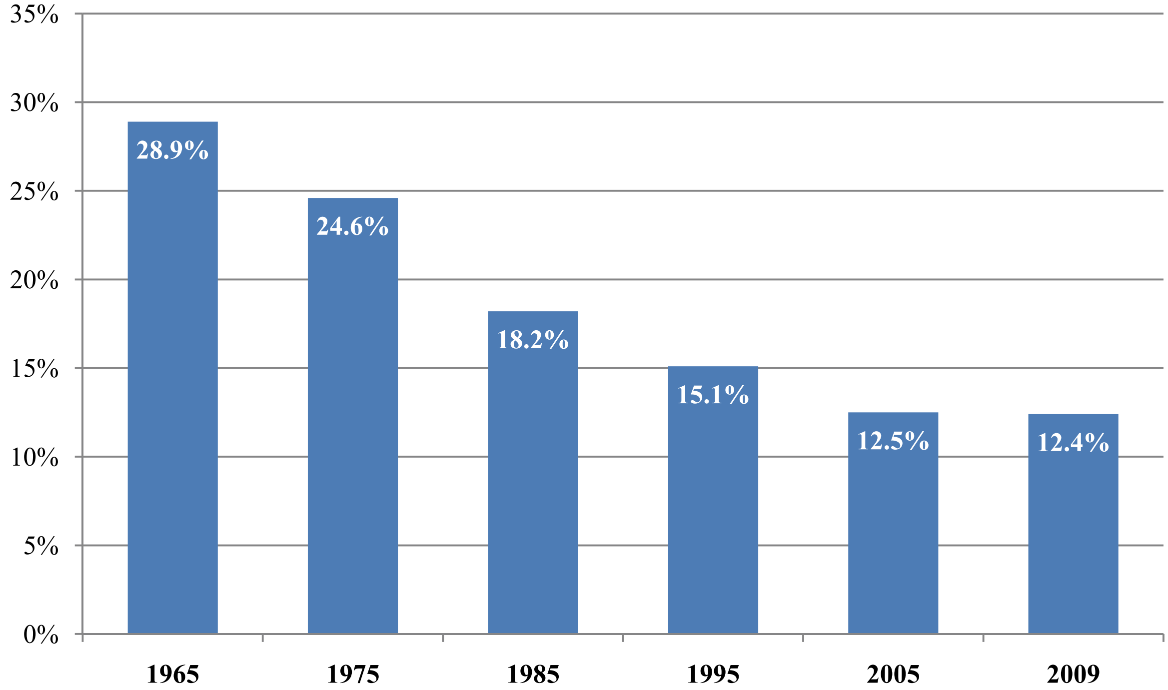
The added income and output from a more vibrant economy associated with a right to work law would have increased tax collections in Indiana by around $1.2 billion annually, more than the anticipated budget shortfall the Hoosier state faces, and that estimate is extremely conservative, as it does not 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.

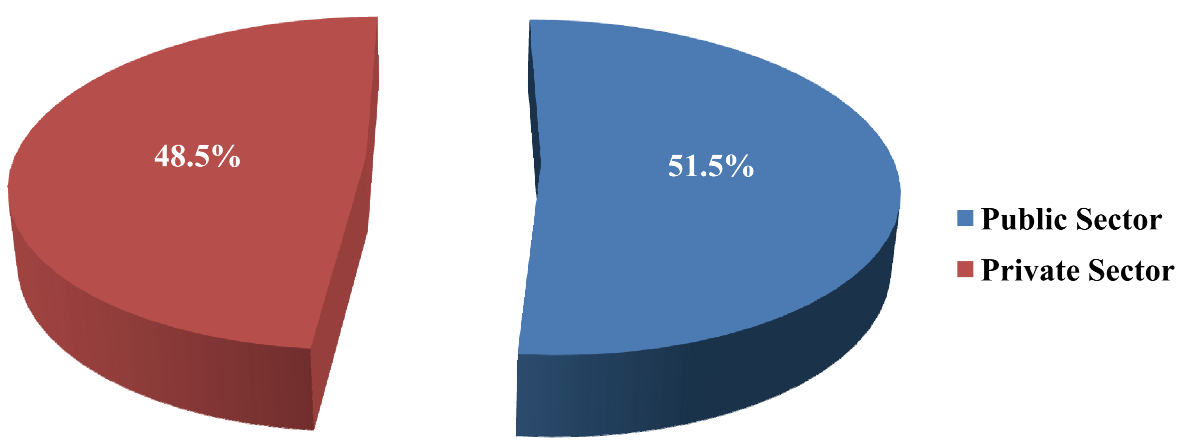
Interestingly enough, the rate at which union membership has declined has been faster in Indiana than in the United States as a whole. Nationally, union membership has fallen by over 16 percentage points between 1965 and 2009; in Indiana, union membership has fallen by almost 25 percentage points. While 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]



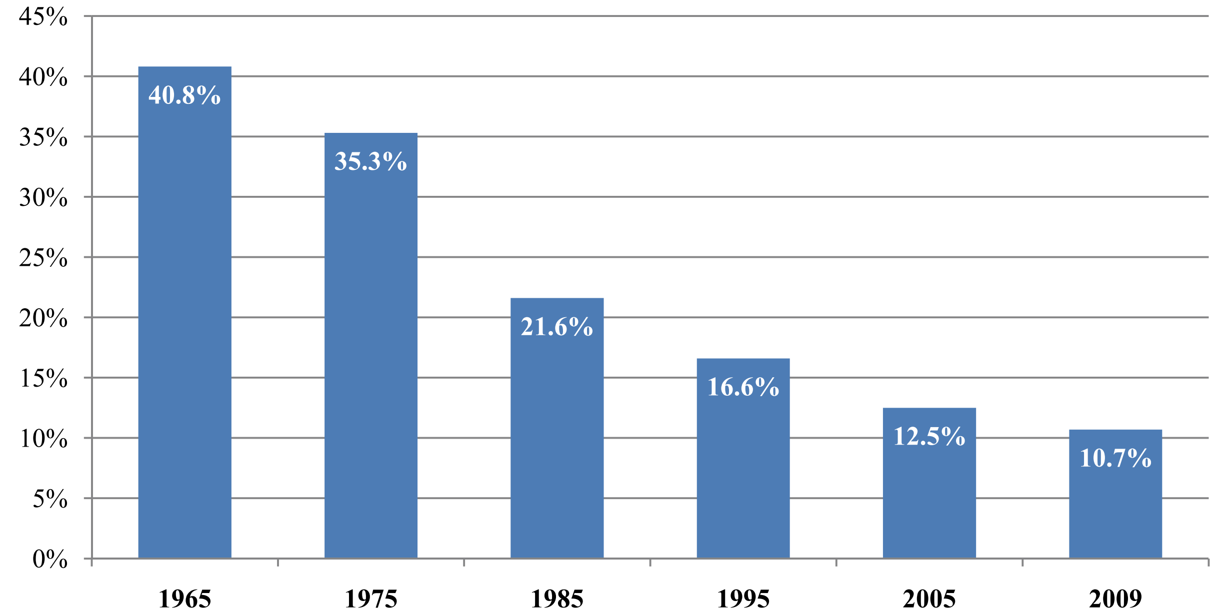
Sources: http://unionstats.com/; see also Hirsch, Macpherson, Vroman (2001).

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."