

# EPI BRIEFING PAPER

ECONOMIC POLICY INSTITUTE • SEPTEMBER 15, 2011 • BRIEFING PAPER #326

## ‘RIGHT TO WORK’

### The wrong answer for Michigan’s economy

BY GORDON LAFER

#### Executive summary

As Michigan seeks to recover from the Great Recession while addressing the additional problems generated by contraction in the auto industry, some advocates are promoting the idea that the state’s economy can be turned around through adoption of a “right-to-work” law.

Large sums of money have been devoted to backing so-called “right-to-work” bills in numerous state legislatures. Lobbyists for these misleadingly named laws claim that they significantly improve both job growth and the wages people earn. The evidence shows that these claims are completely without scientific foundation.

The most rigorous scientific analysis shows the exact opposite is true:

- Right-to-work laws have no impact in boosting economic growth: research shows that there is no relationship between right-to-work laws and state unemployment rates, state per capita income, or state job growth.
- Right-to-work laws have no significant impact on attracting employers to a particular state; surveys of employers show that “right to work” is a minor or non-existent factor in location decisions, and that higher-wage, hi-tech firms in particular generally prefer free-bargaining states.
- Right-to-work laws lower wages—for both union and nonunion workers alike—by an average of \$1,500 per year, after accounting for the cost of living in each state.
- Right-to-work laws also decrease the likelihood that employees get either health insurance or pensions through their jobs—again, for both union and non-union workers.

#### TABLE OF CONTENTS

<b>Executive summary</b> .....	1
<b>Introduction</b> .....	2
<b>There is no relationship between right to work and economic growth</b> .....	3
<b>Rigorous analyses holding “all other things equal” show that right to work has no positive impact on job growth</b> .....	7
<b>There is no evidence that right-to-work laws affect siting decisions</b> .....	9
<b>Right-to-work laws lower wages and benefits and threaten economic growth</b> .....	11
<b>Prosperity for Michigan lies in understanding the real drivers behind growth</b> .....	15

[www.epi.org](http://www.epi.org)

- By cutting wages, right-to-work laws threaten to undermine job growth by reducing the discretionary income people have to spend in the local retail, real estate, construction, and service industries. Every \$1 million in wage cuts translates into an additional six jobs lost in the economy. With 85 percent of Michigan's economy concentrated in health care, retail, education, and other non-manufacturing industries, widespread wage and benefit cuts could translate into significant negative spillover effects for the state's economy.

## Introduction

Lawmakers in several states are being told that they can solve their states' unemployment problems by adopting right-to-work statutes.

Right-to-work laws do not, as one might think, confer any sort of right to a job. Nor do they have anything to do with people being forced to join a union or pay dues for political causes they do not support. Federal law already guarantees that no one can be forced to join a union, and no one can be required to pay union dues that fund political causes they oppose.

What is permitted under federal law is for a group of employees to propose—and if their employer agrees, to write into a contract—that all employees who benefit from the terms of a union contract are required to pay their fair share of the costs of administering that contract. Right-to-work laws make it illegal for employees and employers to negotiate such a contract.

By making it harder for workers' organizations to sustain themselves financially, right-to-work laws aim to weaken unions' bargaining strength.<sup>1</sup> When unions are weaker, wages and benefits decline for all workers, because nonunion employers face less competitive pressure to meet union wage standards. Indeed, right to work is promoted as a strategy for attracting new businesses to locate in a state precisely because it lowers wages and benefits, weakens workplace protections, and decreases the likelihood that employers will be required to negotiate with their employees.

Because service industries are not mobile—schools and hospitals have to be sited near the kids and sick people they serve—right-to-work laws primarily address manufacturing. Essentially, right to work is a strategy

for attracting out-of-state manufacturers by undermining union strength and therefore lowering wages and benefits.

Proponents of a right-to-work law in Michigan suggest that it would increase job growth and incomes in the state. The Strategic Task Force on Jobs of the 2010 Michigan House Republican Caucus suggests that “states with right to work laws have the fastest growing economies” (Michigan House Republican Strategic Task Force on Jobs 2010). “Freedom to Work creates prosperity,” says the Michigan Freedom to Work Coalition, adding that “the Freedom to Work Act would make Michigan a *jobs magnet*” (Michigan Freedom to Work Coalition 2011). Mackinac Center-affiliated scholar Stephen Moore echoes this conviction, calling right-to-work “the single most important thing” that could help turn around the state's economic fortunes (Kersey 2011).

These assertions appear to be based, in large part, on information supplied by advocates in the National Right to Work Committee, the Mackinac Center for Public Policy, and other anti-union organizations. The National Right to Work Committee, for instance, claims that there is “overwhelming evidence indicating that Right to Work laws are... economically beneficial (Kesari 2011).<sup>2</sup>

However, the economic claims made by the National Right to Work Committee are without any scientific foundation. If the committee's arguments were presented as evidence in civil litigation, they would be dismissed as what the courts call “junk science.” If a college student presented such an analysis for their thesis, it would be rejected for faulty methodology.

In an economy the size of the United States, it is always possible for advocates to selectively choose a few numbers that seem to illustrate their viewpoint. But legislators should not rely on anecdotes or misleading numbers when rigorous, statistically scientific analysis of the impact of right-to-work laws is available.

The scientific—as opposed to ideological—analysis of right-to-work laws shows that right-to-work laws lower wages and benefits for both union and nonunion workers alike, while having no positive impact whatsoever on job growth.

Michigan's economy is one of the most challenging in the country. Lawmakers are looking for all potential ways to improve economic performance. The track record of

right-to-work laws clearly shows that they are not a good candidate for that role.

## **There is no relationship between right to work and economic growth**

The central argument for right-to-work is the claim that the states with such laws have enjoyed higher than average growth in the number of jobs and the wages people earn. This argument rests on faulty logic—taking the overall average of 22 very different states that happen to share a minor law in common; assuming without evidence that this minor law explains the pattern of economic growth seen in those states; and then declaring that any other state adopting a right-to-work law will experience growth similar to the group’s average. This logic fails to account for how easy it is to find false correlations. For example, in the past decade, average job growth was nine times higher in the states whose names start with the letters N-Z than in states whose names begin with A–M (U.S. Bureau of Labor Statistics 2010a). Yet no one would suggest that a state could improve job growth by changing its name.

Indeed, even referring to “the right-to-work states” as a coherent group, as if their all having passed a certain law means that their economies all function in similar fashion, is misleading. It implies that labor laws play a dominant role in shaping these states’ economies. But people don’t refer to the 27 states that offer tax credits for child care as “the child-care tax credit states” because that would wrongly imply that these states are, above all, linked together by their common child-care policies.

The same is true for right-to-work policies. The 22 states with right-to-work laws have very different economies, and their economic fortunes are mostly explained by the unique features of their economies and state economic development policies. Texas, for instance—the single largest right-to-work state—has a very large oil and gas industry. Florida and Nevada have large tourism industries and attract large numbers of both young people and retirees drawn to the climate. It is factors such as these—along with a host of state policies other than labor law—that determine a state’s economic fortunes. The average growth

rate of these 22 states misleads us into assuming that all states in this group grow in a similar fashion, when in truth they have hugely divergent track records.

As the following analyses show, there is tremendous variation between right-to-work states with high or low unemployment rates, and fast or slow growth rates, which proves that the average is meaningless and the real factors driving state fortunes have nothing to do with “right to work.”

## **State-by-state numbers reveal no relationship between unemployment and right-to-work laws**

The Mackinac Center argues that since the average unemployment rate is lower in states with right-to-work laws than in free-bargaining states (Kersey 2007; Washburne and Kersey 2007), if Michigan adopts a right-to-work law, its unemployment rate will improve in line with the average of all right-to-work states.

However, these averages are highly deceiving. As shown in **Table 1**, the actual state-by-state unemployment rates show that there is no relationship whatsoever between a state’s unemployment rate and whether or not it has a right-to-work law. First, while Michigan’s unemployment rate is troubling, it is not the highest, but in fact is lower than that of two states with right-to-work laws (Nevada and Florida) and even with that of a third, South Carolina. If right-to-work laws guarantee low unemployment, why are Nevada and Florida worse off than Michigan?

When we look at the broader pattern of unemployment in the states, the relationship between unemployment and state labor laws is even harder to discern. Seven of the 10 highest-unemployment states are states with right-to-work laws. How can that be true, if right to work is the path to low unemployment? Put another way, if Michigan adopts a right-to-work law, how can we tell whether it will end up with an unemployment rate as low as North Dakota’s, or as high as Nevada’s?

Indeed, both the highest and the lowest unemployment rates in the country are found in states with such laws. Clearly, then, something other than right to work explains relative growth rates in the states.

**TABLE 1**

**State unemployment rates ranked from highest to lowest, June 2011\***

State	Unemployment rate	State	Unemployment rate
<i>Nevada</i>	12.4%	<i>Arkansas</i>	8.1%
<i>California</i>	11.8	<i>Delaware</i>	8.0
<i>Rhode Island</i>	10.8	<i>New York</i>	8.0
<i>Florida</i>	10.7	<i>Louisiana</i>	7.8
<i>South Carolina</i>	10.5	<i>Maine</i>	7.8
<i>Michigan</i>	10.5	<i>Massachusetts</i>	7.6
<i>Mississippi</i>	10.4	<i>Pennsylvania</i>	7.6
<i>Alabama</i>	9.9	<i>Wisconsin</i>	7.6
<i>Georgia</i>	9.9	<i>Alaska</i>	7.5
<i>North Carolina</i>	9.9	<i>Montana</i>	7.5
<i>Tennessee</i>	9.8	<i>Utah</i>	7.4
<i>Kentucky</i>	9.6	<i>Maryland</i>	7.0
<i>New Jersey</i>	9.5	<i>Minnesota</i>	6.8
<i>Idaho</i>	9.4	<i>New Mexico</i>	6.8
<i>Oregon</i>	9.4	<i>Kansas</i>	6.6
<i>Arizona</i>	9.3	<i>Hawaii</i>	6.0
<i>Washington</i>	9.3	<i>Iowa</i>	6.0
<i>Connecticut</i>	9.1	<i>Virginia</i>	6.0
<i>Illinois</i>	9.1	<i>Wyoming</i>	5.9
<i>Missouri</i>	8.8	<i>Vermont</i>	5.5
<i>Ohio</i>	8.8	<i>Oklahoma</i>	5.4
<i>Colorado</i>	8.5	<i>New Hampshire</i>	4.9
<i>West Virginia</i>	8.5	<i>South Dakota</i>	4.7
<i>Indiana</i>	8.3	<i>Nebraska</i>	4.2
<i>Texas</i>	8.2	<i>North Dakota</i>	3.2

\* Rates are seasonally adjusted; shading denotes right-to-work states.

**NOTE:** As of August 2011, July 2011 numbers were still preliminary, so June 2011 is most recent month of final data.

**SOURCE:** U.S. Bureau of Labor Statistics (2011a).

**State-by-state numbers reveal no relationship between right-to-work laws and per capita income**

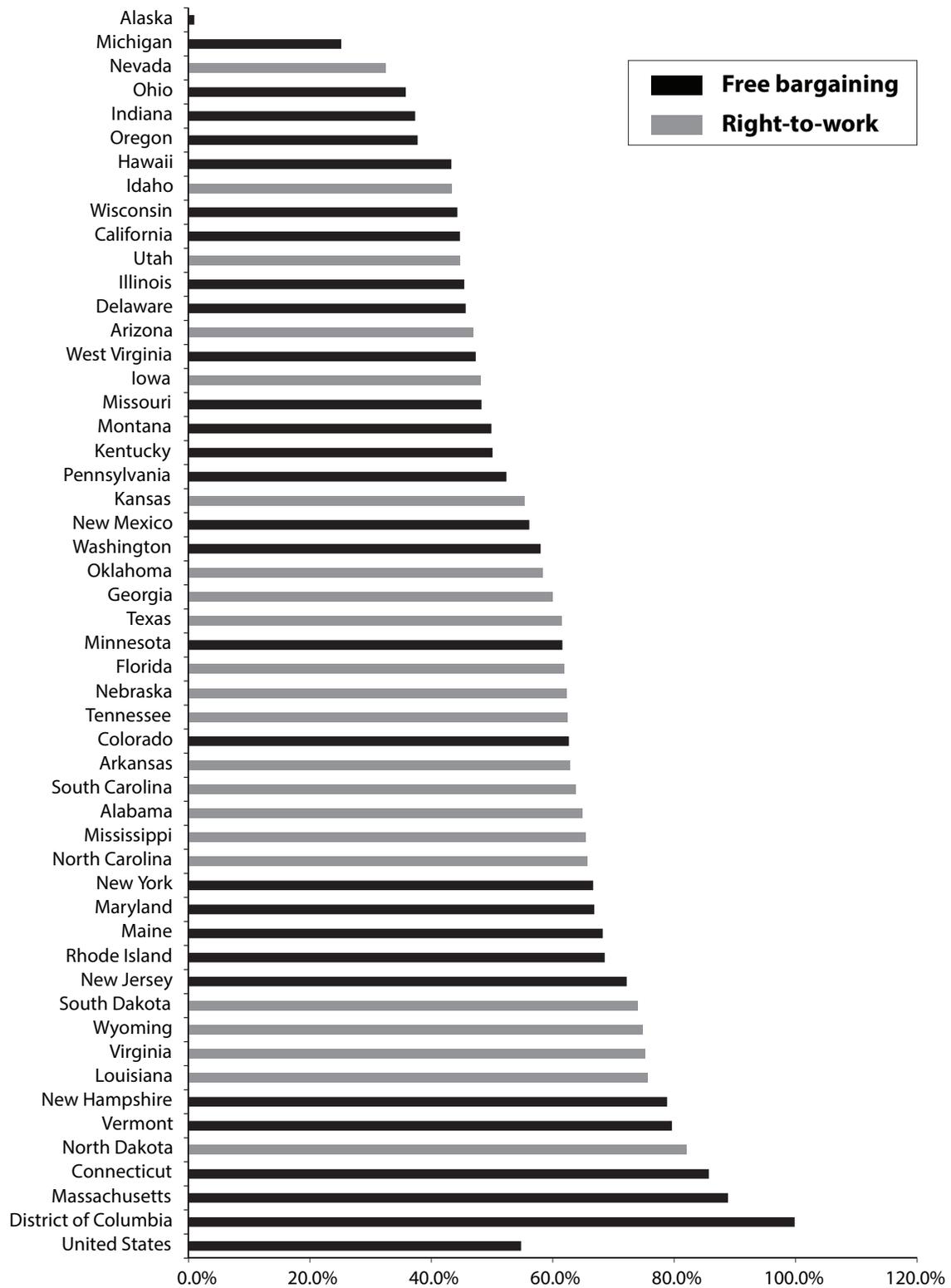
The misleading “averages” of 22 very different states are also used by others to obscure the reality of state-by-state data. For example, a January 2011 Indiana Chamber of Commerce report promoting a right-to-work law for Indiana focused on the fact that personal income in the 22 right-to-work states grew faster on average than in the 28 free-bargaining states (Vedder 2011). Based on these

numbers, the Chamber asserted that if Indiana adopted a right-to-work law, personal income there would grow at a rate similar to the average of right-to-work states over the past 30 years.

At first glance, the Chamber’s argument may seem convincing. “States with Right to Work laws have experienced above average economic growth ... while states without such laws have seen below average growth,” the report said (Vedder 2011, 12). As with the claims about unemployment rates, a reader might conclude that *all*

**FIGURE A**

**Growth in per capita personal income, by state, 1977–2008**



SOURCE: U.S. Bureau of Economic Analysis (2009).

right-to-work states enjoyed rapid economic growth (measured in this case by the growth in per capita income), while *all* free-bargaining states had sluggish growth—that if the states were lined up in order of growth, we’d find all the right-to-work states up front and all others at the back of the line. In reality, this is far from the case.

**Figure A** shows the exact same data used by Richard Vedder, the Mackinac Center-affiliated economist who authored the Chamber of Commerce’s study in Indiana. But where the Chamber only reported the overall average for all 22 states with right-to-work laws, Figure A shows the underlying data for each individual state, with bars for states that are right-to-work shaded in gray. Again, this data make it readily apparent that there is no clear relationship between growth in per capita income and right-to-work laws. The two fastest-growing states between 1977 and 2008 were Massachusetts and Connecticut—both free-bargaining states with relatively high rates of unionization. In fact, 10 free-bargaining jurisdictions (nine states plus the District of Columbia) all enjoyed growth over this period that was superior to three quarters of the right-to-work states.

Indeed, the argument that average growth rates reveal the underlying factors behind the rates could be used to make a case for unionization as the path to economic revival. Over the past 30 years, per capita income grew significantly faster in Scandinavia than in the United States (U.S. Bureau of Labor Statistics 2010b). Not only do none of the Scandinavian countries have right-to-work laws, but their share of employees represented by unions is much higher than anyplace in the United States, ranging from a low of 72 percent in Norway to a high of 92 percent in Sweden. Yet corporate lobbyists are not suggesting that we emulate Scandinavia by encouraging increased unionization. This suggests that there is a disconnect between the arguments of those advocating right-to-work and their methodology: Averages that support right-to-work laws are widely disseminated while averages that undermine them are ignored

### ***The real factors driving state economies***

If states with right-to-work laws can experience either dramatic employment growth or steep declines, and if both right-to-work and free-bargaining states can

foster booming job markets, then it is clear that something in these states’ economies, demographics, or policies other than right-to-work laws must be driving their job growth.

The economic fortunes of the 22 states with right-to-work laws are mostly explained by the unique features of their economies and state economic development policies. Texas, for instance—the single largest right-to-work state—has a very large oil and gas industry. Florida and Nevada have large tourism industries and attract large numbers of both young people and retirees drawn to the climate. It is factors such as these—along with a host of state policies other than labor law—that determine a state’s economic fortunes. The average growth rate of these 22 states misleads us into assuming that all states in this group grow in a similar fashion, when in truth they have hugely divergent track records. The tremendous variation between right-to-work states with high or low unemployment rates, and fast or slow growth rates, proves that the average is meaningless and the real factors driving state fortunes have nothing to do with “right to work.”

To the extent that these 22 states share any common economic trends, their growth is explained by factors other than labor law. For example, the Right to Work Committee has documented that these states have experienced higher than average population growth, including higher immigration of people from other states, which accelerates job growth as the new migrants buy homes and start consuming in the local economy.

There is no reason to believe that Americans move from one state to another because of right-to-work laws, as most Americans have likely never heard of something called “right to work.” Rather, the evidence points to other factors. One factor is the weather. The right-to-work states are concentrated in the South and Southwest, and it is likely that the climates of Florida, Nevada, Arizona, and similar states draw many migrants. The single most important factor is the cost of housing, according to U.S. Census data (Schachter 2001). For example, many Californians have moved to Oregon, a free-bargaining state that happens to have much more affordable housing prices. Thus, higher job growth may be concentrated in those warmer-weather states that happen to have right-to-work laws, but it has nothing to do with those laws.

**TABLE 2**

**Potential factors influencing economic growth in Michigan and right-to-work Texas and Florida**

<b>Feature of state economy</b>	<b>Michigan</b>	<b>Texas</b>	<b>Florida</b>
<i>Average temperature</i>	44	65	71
<i>Snow days per year</i>	49	2	0
<i>Jobs in oil and gas</i>	16,268	298,701	19,795
<i>Gas tax</i>	\$0.41	\$0.20	\$0.35
<i>College tuition</i>	\$12,634	\$9,794	\$5,045

**SOURCE:** Data on average temperatures comes from the National Oceanic and Atmospheric Administration (2011); on snow days per year from Current Results Nexus (2011); on 2009 employment in oil and gas from the U.S. Bureau of Economic Analysis (2010); on gasoline tax by state, as of July 1, 2011, from Common Sense Junction and American Petroleum Institute (2011); and on tuition and fees for four-year bachelor’s degree, in-state at the University of Michigan-Ann Arbor, University of Texas-Austin, and University of Florida-Gainesville, from College Board (2011).

**Rigorous analyses holding “all other things equal” show that right to work has no positive impact on job growth**

To assess the impact of any one policy on a state’s economic growth, it is necessary to separate out that policy’s effect from the myriad other factors that shape a state’s economy, including thousands of statutes and regulations as well as natural and industrial resources.

With regard to right-to-work laws, researchers must aim to discover how it impacts a state’s job growth, all other things being equal. Noticing, for instance, that a given right-to-work state has experienced faster growth than a given non-right-to-work state, they must consider whether the difference is due to the discrepancy in labor laws or to the difference in the educational level of the workforce, the proximity of transportation hubs, the cost of real estate, the state’s inheritance tax, its natural resources, the quality of its school system. There is a long list of possible factors.

**Table 2**, for example, lists a number of differences between Michigan and the two largest right-to-work states—Texas and Florida—any of which likely explains more of the difference between these states’ economies than labor laws. Already discussed is the population draw of warm climates; so, too, many businesses prefer to operate without the impediments of snow days. Likewise, its large oil and gas industry marks a critical advantage for Texas; when the

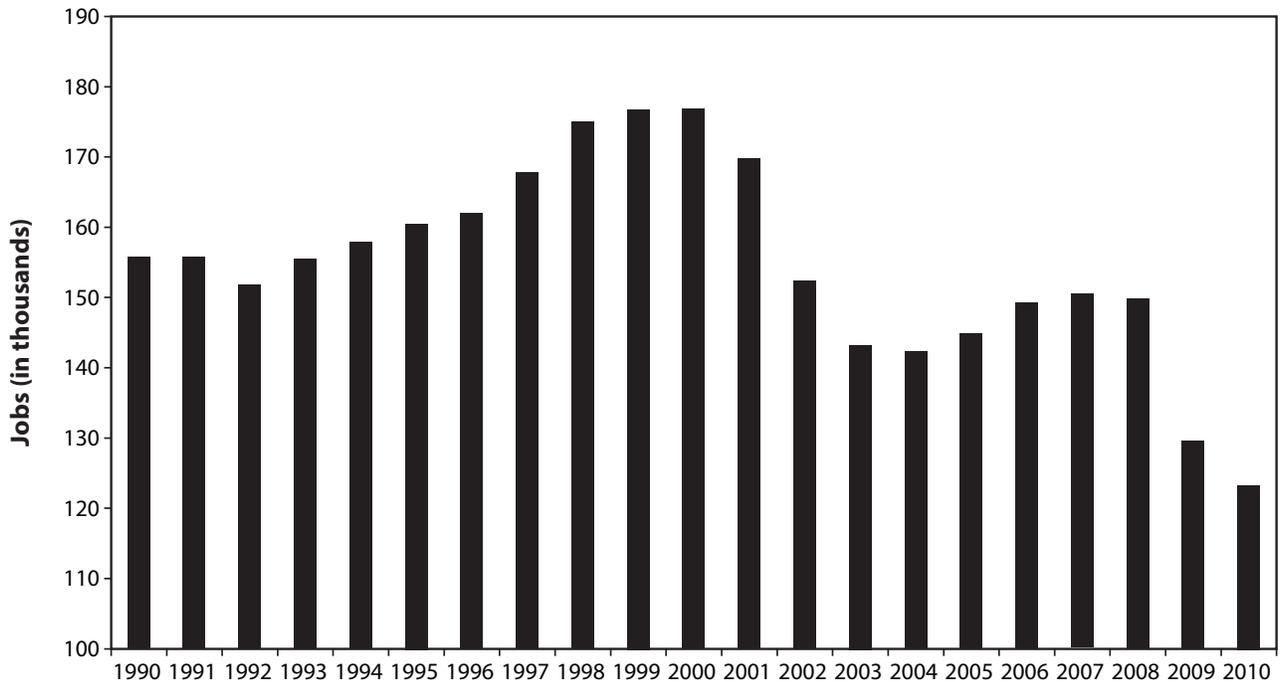
price of oil rises, it’s bad for cold manufacturing states like Michigan, but good for Texas. Several scholars have pointed to the high cost of higher education in Michigan as a barrier to retaining young people and growing the type of new-economy industries critical to future growth.<sup>3</sup> None of these policies alone can be declared the sole engine of that growth.

When scholars are rigorous about separating out the impact of right-to-work laws from other factors, the evidence suggests that right-to-work has no effect on a state’s employment. One of the most recent and ambitious studies estimated the impact of right-to-work 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. When these variables are accounted for “right to work laws...seem to have no effect on economic activity,” the study noted (Belman, Block, and Roberts 2009).

Another recent study compared states with and without right-to-work laws, while controlling for a broad array of economic variables (Stevens 2009). Most importantly, the author controlled for a state’s general business climate, in order to separate the impact of right-to-work laws from other economic policies of the state. According to the study, right-to-work laws, in and of themselves, have

FIGURE B

Oklahoma manufacturing employment, 1990–2010  
(seasonally adjusted)



SOURCE: U.S. Bureau of Labor Statistics (2011b).

no statistically significant impact 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 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,” the study found (Stevens 2009, 610).

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.<sup>4</sup> The most recent and most methodologically rigorous studies concluded that the policy has no statistically significant impact.

**Oklahoma:  
A laboratory of right to work in action**

The failure of right-to-work to increase job growth is particularly evident in the case of Oklahoma, the only

state that has adopted a right-to-work law in the past 25 years. Oklahoma passed its right-to-work law in 2001, after 1994 enactment of the North American Free Trade Agreement (NAFTA) and China’s 2001 entry into the World Trade Organization (WTO). In the aftermath of these trade agreements, manufacturers became increasingly likely to seek low-wage laborers in Mexico or China rather than the Southern United States. Thus Oklahoma’s experience is a particularly useful guide to those states now debating such policies.

Unfortunately, Oklahoma saw no improvement in its unemployment rate after right to work was enacted. The state’s manufacturing sector shrank dramatically (Figure B), and the number of new companies coming into the state fell by one-third in the decade following adoption of the labor statute (Table 3). And multiple statistically scientific analyses have concluded that right-to-work has utterly failed to enhance job growth in the state (Lafer and Allegretto 2011).

**TABLE 3**

**Announced openings of new manufacturing and service facilities in Oklahoma, 1990–2010**

Year	Manufacturers		Service industries		Total, mfg & services	
	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
<b>Annual average, various periods</b>						
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: Oklahoma Department of Commerce (2011).

**There is no evidence that right-to-work laws affect siting decisions**

Oklahoma’s negative experience with company relocation sheds light on the claim that a right-to-work law in Michigan would draw new employers to the state by lowering labor costs. The Michigan Freedom to Work Coalition, for instance, asserts that by passing a right-to-work law, “new businesses, manufacturing plants, and other skilled labor-intensive jobs will flow ... into Michigan” (Michigan Freedom to Work Coalition 2011).

When the Oklahoma right-to-work law was being debated in 2001, right-to-work advocates asserted that a large percentage of companies refused to consider locating in Oklahoma because it lacked a right-to-work law. In much-reported testimony, Texas-based consultant Elizabeth Morris told Oklahoma legislators that if their state adopted right to work, they would see a 90 percent increase in the number of firms considering locating in the state. Morris didn’t present any survey data to back up her assertion, and evidence shows that it had no basis in fact. As stated earlier, Table 3 shows that the number of new

firms coming into the state actually *decreased* following the adoption of right to work. In the 1990s, the decade preceding right to work, Oklahoma welcomed an average of 48 new firms, creating nearly 6,500 new jobs, per year. In the 10 years that the state has operated under its right-to-work law, however, the average number of firms and jobs coming into the state has been one-third lower than when Oklahoma was a free-bargaining state (Oklahoma Department of Commerce 2011).

Ours is a very big economy, and it's always possible to find anecdotes on any side of an issue—including business owners who state that they prefer a unionized workforce. But there is no reason for legislators to make policy based on anecdotal stories when there is actual survey data available. There is no single comprehensive survey of employers' location decisions. But the data that is available—conducted by location professionals, not by advocates—indicate that right-to-work laws have no measurable impact on attracting employers.

A Brookings Institution study of large corporations' location decisions, based in part on interviews with prominent corporate location consultants, found that right-to-work laws did not figure anywhere in the typical decision process of big businesses (Cohen 2000).

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. In 2009, right to work 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 (Gambale 2009, 2008).

In fact, *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 predominantly found in free-bargaining states (Burns 2011). The Information Technology and Innovation Foundation's 2010 *State New Economy Index*—measuring each state's economic dynamism, technological innovation, digital

transformation, knowledge jobs, and integration into global trade—ranked free-bargaining Massachusetts, Washington, Maryland, New Jersey, and Connecticut as the most desirable and best positioned locations for the globally competitive industries of the 21st century. Indeed, nine of the top 10 ranked states are free-bargaining states—states with strong education systems, world-class universities, robust digital infrastructure, and a skilled and stable workforce. Michigan ranked 17th, ahead of all but two of the 22 right-to-work states (Atkinson and Andes 2010).

With regard to an industry of major importance to Michigan—the automotive industry—there is no evidence that right-to-work status is a precondition for auto industry investors. Toyota, for instance, has chosen to locate its North American manufacturing headquarters in the free-bargaining state of Kentucky, where it also runs a large plant. Ford has recently expanded two plants in Louisville, Kentucky, and GM announced plans for a \$100 million expansion of its Bowling Green Chevette plant (Sloan 2011). This trend is even more true of the most cutting-edge auto technologies. When electric car manufacturer Tesla Motors looked for a place to produce up to half a million cars per year, it settled on a location in the free-bargaining state of California (Tesla Motors 2010). Similarly, when Fisker Automotive looked to begin production of its premium plug-in sedan, it could have located anywhere in the country; it chose the free-bargaining state of Delaware (Fisker Automotive 2011).

Looking ahead, Michigan is slated to benefit from increased investment in auto manufacturing. Between 2009-2015, the state is expected to add 60,000 manufacturing jobs, including significant expansion in the auto industry. GM is planning to increase production of the Chevrolet Volt in Detroit, Bay City, Saginaw and Flint, supporting 2,600 jobs. Ford expects to add 7,000 workers over the next two years, many of them in Michigan. Chrysler is considering adding up to 2,000 new employees with added shifts in Detroit-area assembly and engine plants. And multiple auto suppliers—many focusing on green and other new technologies—are expanding their operations in Michigan (Koropeckyj 2011).

Indeed, a series of recent corporate announcements make clear that many auto industry companies continue to prefer Michigan over right-to-work competitors:

- Ralco Industries, a producer of stampings and welded assemblies, recently announced plans to invest \$6.4 million in a Pontiac facility, preferring Michigan to a competing site in right-to-work Tennessee (Michigan Economic Development Corporation 2011a).
- ClydeUnion Pumps, a major manufacturer of industrial pumps, plans to invest \$17.1 million to expand its Battle Creek operations—a location chosen over competing sites in Texas and Louisiana. (Michigan Economic Development Corporation 2011b).
- Cascade Engineering is investing \$2.8 million to expand its renewable energy division in Grand Rapids, chosen over competing sites in North Carolina and Texas (Cascade Engineering 2010).
- Continental Plastics Company will create 333 jobs in Michigan as it consolidates operations for automotive interior components, choosing Michigan over a location in Georgia (Michigan Economic Growth Authority 2011).

Even for those auto plants located in states with right-to-work laws, companies point to reasons other than labor law as the deciding factor in their location decisions. Toyota built a truck plant in San Antonio because Texas is the single largest market for pickups; it chose a site in Tupelo, Mississippi largely because the area boasted a large number of unemployed furniture workers whose former jobs had been shipped to China. In other cases, the “shovel-readiness” of a particular site was the determining factor (Sloan 2011).

Regarding Michigan in particular, some plant managers may be reluctant to go into a market where they know they will be, at best, the fourth-largest manufacturer in the state. “When you pick up the phone to call the governor, the feeling is you could be fourth in line,” explains Center for Automotive Research director Kim Hill. “The state’s already kind of saturated” (Sloan 2011).

Corporate lobbyists who contend that right-to-work laws determine where plants locate do not necessarily speak for auto executives. Dennis Cuneo, the Toyota executive charged with North American site selection for more than a decade, reports that he chose to locate a plant in Texas and another in Mississippi for a variety of reasons, but was

not influenced by state labor laws, which he characterized as neither “a positive or a negative” (Sloan 2011).

## **Right-to-work laws lower wages and benefits and threaten economic growth**

While it is notoriously difficult to isolate the economic impact of a single state policy, increasingly sophisticated and more comprehensive analyses holding “all other things” equal have shown that right-to-work laws not only have no positive impact on job growth but also have a modest *negative* impact on both wages and benefits, for both union and nonunion employees.

In a recent Economic Policy Institute study, a pair of economists conducted a rigorous statistical analysis to measure the impact of right-to-work laws on wages and benefits (Gould and Shierholz 2011). As shown in **Table 4**, this analysis controlled for more than 40 different factors, including the age, race, ethnicity, gender, education, industry, occupation, urbanization, full-time status, and cost of living of workers in different states, compared with the National Institute for Labor Relations Research and Mackinac Center studies, which did not control for any factors. Thus, the EPI analysis comes as close as possible to holding “all other things equal” in measuring the impact of right-to-work laws. The authors reached the following conclusions:

*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 socio-economic 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.*

*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.*

TABLE 4

### Comparison of variables controlled for in estimating impact of right-to-work laws

	Economic Policy Institute (2011)	Indiana Chamber of Commerce (2011)	National Institute for Labor Relations Research (2005)	Mackinac Center (2007)
<i>Right-to-work indicator</i>	x	x		
<i>Union indicator</i>	x			
<b>Demographics</b>				
<i>Race/ethnicity</i>				
White non-Hispanic	x			
Hispanic	x			
Asian	x			
Other race/ethnicity	x			
<i>Gender</i>				
	x			
<i>Education</i>				
Some high school	x			
Some college	x			
Associate's degree	x			
Bachelor's degree	x	x		
Advanced degree	x	x		
<i>Age</i>				
Age squared	x			
<i>Married</i>				
	x			
Hourly worker	x			
Full-time worker	x			
Living in a metro area	x			
<b>Industry</b>				
<i>Agriculture, forestry, fishing, hunting</i>	x			
<i>Mining</i>	x			
<i>Construction</i>	x			
<i>Manufacturing</i>	x	x		
<i>Transportation and utilities</i>	x			
<i>Information</i>	x			
<i>Financial activities</i>	x			
<i>Professional and business services</i>	x			
<i>Educational and health services</i>	x			
<i>Leisure and hospitality</i>	x			
<i>Other services</i>	x			
<i>Public administration</i>	x			

cont. on page 13

**TABLE 4 (CONTINUED)**

**Comparison of variables controlled for in estimating impact of right-to-work laws**

	Economic Policy Institute (2011)	Indiana Chamber of Commerce (2011)	National Institute for Labor Relations Research (2005)	Mackinac Center (2007)
<b>Occupation</b>				
<i>Management, business, and financial occupations</i>	x			
<i>Professional and related occupations</i>	x			
<i>Service occupations</i>	x			
<i>Sales and related occupations</i>	x			
<i>Farming, fishing, and forestry occupations</i>	x			
<i>Construction and extraction occupations</i>	x			
<i>Installation, maintenance, and repair occupations</i>	x			
<i>Production occupations</i>	x			
<i>Transportation and material moving occupations</i>	x			
<b>Macro variables</b>				
<i>Unemployment rate</i>	x			
<i>Employment-to-population ratio</i>		x		
<i>Population growth</i>		x		
<i>Cost of living (measure including housing and utilities)</i>	x			
<i>Cost of living (measure based on average of the indices of cities in state)</i>	x			
<i>Age of state</i>		x		

**SOURCE:** Gould and Shierholz (2011); Vedder, Denhard, and Robe (2011); Kersey (2007); and Greer (2005).

*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... 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.*

Thus, it is clear that if Michigan adopted a right-to-work law—all else being equal—Michigan workers could expect to find their wages lowered and their ability to secure job-based health insurance or pension benefits weakened.

The fact that right-to-work lowers wages and benefits is not surprising, given that it is, in fact, the central purpose of such laws. Federal data show that employees who have a union earn 15 percent more in wages, and have a 19 percent better chance of getting health insurance and a 24 percent better chance of getting pensions through their job, than nonunion employees in the same industry, with the same levels of education (Schmitt 2010). The

core right-to-work strategy is to prevent unionization in an effort to lower wages and benefits and thereby make a state more attractive to outside manufacturers. Thus the scientific evidence that right to work lowers wages and benefits is in keeping with the policy's fundamental logic.

### ***Right to work threatens economic growth by undermining consumer spending***

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.

Amid the ongoing unemployment crisis, economists, policymakers, and business leaders point to consumer demand as the key to igniting job growth. 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” (Business Roundtable 2009).

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 over 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 (U.S. Bureau of Labor Statistics 2009).

The largest industry in Michigan's economy is not manufacturing but rather health and education services, which will play an even bigger role in the future. The state's biggest growth industries over the next decade are all in the service sector: education; health care; retail; and professional, technical, and business services (Michigan Department of Technology 2007).

These industries are vulnerable to cuts in demand arising from declining wages. For every \$1 million in wage cuts to workers, \$850,000 less is spent in the economy.<sup>6</sup> 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 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.

### ***Should Michigan imitate Mississippi?***

Some right-to-work advocates point to Southern auto plants as evidence that the policy is the key to prosperity, pointing to Mississippi as a model of economic growth. Governor Haley Barbour touts Mississippi's right-to-work law as a key to attracting a Toyota plant, and in assuring that “Mississippi's future continues to be bright” (Kollath 2010). Long-time auto industry advisors Boston Consulting Group say that Mississippi's “flexible... workers” and “minimal wage growth” are reasons that make the state attractive to auto companies (Slaughter 2011). And Mississippi Sen. Roger Wicker argues that his state's right-to-work law is key in getting Mississippi “on the right track” (Wicker 2011).

The U.S. Chamber of Commerce points to Mississippi's right-to-work law as a key factor making it a model for “strong pro-employment policies.” The Chamber suggests that if Michigan were more like Mississippi, it would see increased job creation and lower unemployment (U.S. Chamber of Commerce 2011).

But Michigan policymakers may want to think twice about emulating Mississippi. Even with its myriad challenges, the performance of free-bargaining Michigan is superior to that of right-to-work Mississippi. Mississippi ranks 50th—dead last—in median household income, and first in poverty, with a poverty rate 50 percent higher than Michigan's (U.S. Census Bureau 2011). Less than 20 percent of the state's 8th graders read at or above grade level (National Assessment of Educational Progress 2009). Mississippi also ranks first in the country in infant mortality, and 48th in doctors, with one physician for every 561 residents, compared with one for every 400 people in Michigan (U.S. Census Bureau 2011).

Whatever right-to-work advocates may promise, it's clear that the policy has not enabled Mississippians to escape desperate conditions. It's possible that some employers

might find such a poor state attractive; but that doesn't make it a model for Michigan.

## **Prosperity for Michigan lies in understanding the real drivers behind growth**

Right-to-work laws emerged decades ago. One of the problems of basing policy on what happened in the 1970s or 1980s is that we live in a fundamentally different economy due to the globalization of trade and production. In the 1970s, low wages may have lured manufacturers from the Northeast and upper Midwest to the South. But in 2011, companies looking for cheap labor are more likely to go to China or Mexico than to South Carolina.

As discussed earlier, this has been the experience of Oklahoma, the one state to adopt right-to-work in the post-NAFTA, post-WTO era. Even for those manufacturers seeking cheap labor, the right-to-work advantage has proven no advantage at all when states are competing with the cheapest labor forces on the globe. In the years since right-to-work was adopted in Oklahoma, for instance, 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.<sup>7</sup> It is estimated that, from 2001 to 2008, trade with China alone reduced the number of Oklahoma jobs by more than 20,000 (Scott 2010).

Michigan's problems too are overwhelmingly a product of national and international economic trends, rather than state labor law. According to Moody's Analytics, 87 percent of Michigan's employment problems are not specific to the state, but are due to broader economic trends in the U.S. as a whole (Koropecj 2011).

## **The contraction of manufacturing and the U.S. auto industry**

Chief among those factors is the contraction in the U.S. auto industry. American auto manufacturing as a whole has contracted dramatically over the past decade, with employment falling by 41 percent nationwide (U.S. Bureau of Labor Statistics 2011c). While robotization of manufacturing production, soaring gas prices, and crises in the international credit markets have all contributed to the

decline, the single most important factor is the series of "free trade" agreements that have encouraged corporations to move manufacturing jobs to the lowest-wage countries on the globe.

Since the adoption of the North American Free Trade Agreement in 1994, the United States has lost almost 5 million jobs, many of which were well-paying manufacturing jobs that were the backbone of the middle class (Public Citizen 2011). The awarding of Permanent Normal Trade Relations to China, and that country's entry into the World Trade Organization in 2001, marked an even more dramatic downturn for American manufacturing, as industry after industry shipped its production overseas.

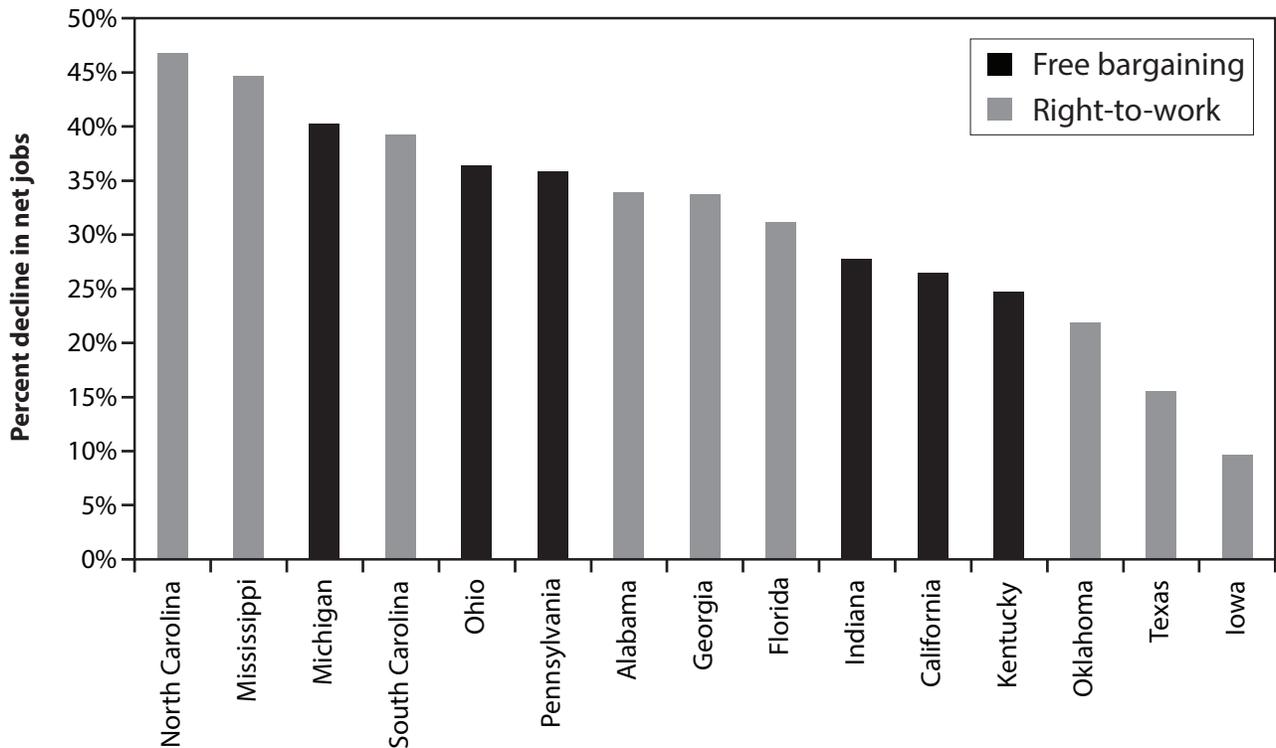
The loss of manufacturing jobs since NAFTA has been felt in every state in the country, regardless of its labor laws, and Michigan is not the hardest-hit state in the country. As shown in **Figure C**, in the years since NAFTA went into effect, the right-to-work states of North Carolina and Mississippi each lost a higher percentage of their manufacturing job base than did Michigan, with each seeing about 45 percent of their manufacturing employment wiped out (Public Citizen 2011).

While the auto industry still finds compelling reasons to keep facilities in the United States—including a skilled labor force and ready access to the world's largest consumer base—the globalization of the industry has taken a significant toll. For companies seeking the lowest wages on the globe, there is little Americans can offer. Auto-workers in Mexico, for example, make one-tenth of what even nonunion auto workers make in the United States. In the face of such competition, right-to-work states as well as free-bargaining states have seen their auto industries constrained, or even shrinking, in the past decade. From 2003–2008, for instance, auto industry employment in right-to-work Tennessee declined by 8,000; right-to-work North Carolina lost 2,000 auto manufacturing jobs over the same period (Platzer and Harrison 2009, 22).

The decline of the U.S. auto industry is part of a global trend that has seen auto manufacturing moved out of more developed, higher-wage countries to second and third world locales. From 2000–2010, auto production shrank not only in the United States but also in Japan, Australia, and virtually every country in Western Europe.

FIGURE C

Manufacturing net job loss since NAFTA (1994–2010)



SOURCE: Public Citizen (2011).

Production was shifted primarily to China, and secondarily to places like India, Iran, and Thailand, whose aggregate production increased by the same amount that American production shrank (International Organization of Motor Vehicle Manufacturers 2011).

Michigan bore the brunt of this race to the bottom of the global labor market. Michigan has the greatest concentration of auto manufacturing in the country, and when the industry was hard hit, Michigan was hit the hardest.

**New technologies offer the promise of regrowth**

Despite the hardships in the auto industry, Michigan’s economy has recently shown signs of improvement, with significant job growth and personal income growth in the past year (Fulton 2011). After a decade of decline, Michigan’s employment began growing again in the past year—led by more than 5% job growth in the auto industry

—and the state is projected to see positive job growth in each of the next five years (Koropeckj 2011).

In the modern globalized economy, every state has focused on trying to attract high-tech, higher wage companies offering work that can support middle-class families and that requires skills less available in low-wage countries. In Michigan, economic development officials have focused on diversifying the economy through support for higher-technology growth industries “the concept of ‘economic gardening’ where a state or region supports and grows its own indigenous technology sectors supplanted the more traditional process of ‘smokestack chasing,’ attempting to lure new manufacturers and plan expansions either from abroad or elsewhere in the U.S.” (Michigan Economic Development Corporation 2010a). Over the past 10 years, the state’s 21st Century Jobs Fund is credited with creating or retaining nearly 25,000 jobs in these fields (Michigan Economic Development Corporation 2010a).

Most notably, within the auto industry itself, some of the most important growth has focused on the development of new technologies to produce more efficient and more climate-friendly vehicles. Such work is extremely promising as a growth area within the industry that provides well-paying jobs and is less easily outsourced to low-wage countries. The vast majority of investment in this “auto industry of the future” has been in free-bargaining states. A review of 56 recent announcements of multimillion dollar investments in advanced auto-related technologies such as lithium-ion batteries, advanced battery materials, electric drive manufacturing, and advanced vehicle electrification identified more than \$2.5 billion in recently announced investments in these industries. More than 85 percent of those funds are being invested in free-bargaining states.<sup>8</sup> Examples of the largest such projects, each entailing investments well over \$100 million, include:

- General Motors is constructing new facilities to manufacture its second-generation rear wheel electric drive system in Michigan and Maryland.
- Johnson Controls is developing new facilities to produce nickel-cobalt-metal battery cells for hybrid and electric vehicles in Michigan and Oregon.
- A123 Systems is investing in multiple Michigan locations where the company will manufacture batteries and battery packs for hybrid and electric vehicles.
- Ener Dell is investing in new manufacturing of lithium-ion cells in Indiana.

In keeping with this trend, Michigan has seen a growing wave of technology companies coming into the state, even luring technology workers from Silicon Valley to Detroit. As the technological standards of cars and trucks has increased, Michigan has found increasing success in growing these leading-edge industries at home. Firms focused in fields such as cloud computing, energy management, and mobile software applications have all grown rapidly in the Detroit area, with companies such as online music providers Pandora and Mog both opening Detroit offices in the past year. Indeed, in 2010 Michigan ranked 7th among the 50 states in the number of new patents granted to local companies, prompting the U.S. Patent Office to open its first satellite office in Detroit (Giles 2011).

These steps toward diversification of Michigan’s economy—particularly into auto-related technology fields—point to an alternative path forward, one that does not rely on lowering wages and benefits in hopes of competing with China or Thailand. This path relies on strategic investments in the state’s workforce, research capacity, digital infrastructure, and venture capital. There is no easy panacea in the current economy, but this path lays out a strategy that is not a race to the bottom but a considered focus on developing family-wage jobs that will not be susceptible to outsourcing.

—**Gordon Lafer** is an Associate Professor at the Labor Education and Research Center at the University of Oregon. His work concentrates on strategic planning, strategic research, and labor and employment policy issues.

## Endnotes

1. As noted in Vedder, 2011, 6-7, “the goal of labor unions [is] to increase wages and benefits for their members,” and the goal of right-to-work is to cut wages in the hopes of attracting outside investors.
2. Moore, director of fiscal policy studies at the Cato Institute, is an adjunct scholar with the Mackinac Center.
3. For instance, Michigan Economic Development Corporation, 2010b, notes that “in-state tuition rates at Michigan’s 4-year public schools are among the most expensive in the country. These factors may be contributing to the large outflow of Michigan’s university-level students to attend institutions in other states.”
4. This subject is examined in detail in Gordon Lafer and Sylvia Allegretto, *Does right-to-work Create Jobs? Answers from Oklahoma*, Economic Policy Institute, March 1, 2011. A review of earlier studies is provided in Tannenwald, 1997. 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 (2001), for instance, cited Tannenwald in an influential policy report issued by the Oklahoma Council for Public Affairs in early 2001. Where Reed cites the existence of these eight studies as Tannenwald’s “conclusion,” Tannenwald’s actual article questions both the methodology and findings of these studies.
5. Morris’s testimony is reported in May (2001).
6. Calculation by EPI staff economists based on standard multiplier ratios.
7. Mass layoffs are reported in notices issued pursuant to the WARN (Worker Adjustment and Retraining Notification) Act, which covers workplaces that have 100 or more employees. Facilities closed due to offshoring or foreign trade are reported by the U.S. Department of Labor under the Trade Adjustment Assistance Act.
8. Data includes high technology auto industry investments that received support from the federal government through the Department of Energy’s EISA Section 136 loans, EPCA section 1703 and 1705 loans, and the American Recovery and Reinvestment Act, and includes all projects listed as of August 5, 2011 (U.S. Department of Energy 2011).

## References

Associated Oregon Industries and Chamber of Commerce of the United States of America. 2009. Complaint for Injunctive and Declaratory Relief, 28 U.S.C. Sec. 2201-2202; F.R.C.P. 65.

Atkinson, Robert D. and Scott Andes. 2010. *The 2010 State New Economy Index: Benchmarking Economic Transformation in the States*. Washington, D.C.: Information Technology and Innovation Foundation. [http://www.kauffman.org/uploadedfiles/snei\\_2010\\_report.pdf](http://www.kauffman.org/uploadedfiles/snei_2010_report.pdf)

Belman, Dale, Richard Block, and Karen Roberts. 2009. “Economic Impact of State Differences in Labor Standards in the United States, 1998-2000.” East Lansing, Mich.: Michigan State University. Posted Jan. 21, 2011 on the *Employment Policy Research Network blog*; <http://www.employmentpolicy.org/topic/15/blog/economic-impact-state-differences-labor-standards-united-states-1998-2000>.

Burns, Adam. 2011. “State of the States,” *Site Selection* magazine, January. <http://www.siteselection.com/portal>.

Business Roundtable. 2009. “Harold McGraw III’s Remarks at the National Press Club Newsmaker Event,” February 11. <http://businessroundtable.org/news-center/harold-mcgraw-iiis-remarks-at-the-national-press-club-newsmaker-event>.

Cascade Engineering. 2010. “Cascade Engineering to Expand Renewable Energy Division.” Company press release posted on PR Web. <http://www.prweb.com/releases/2010/07/prweb4281554.htm>.

Cohen, Natalie. 2000. *Business Location Decision-Making and the Cities: Bringing Companies Back In*, Brookings Institution Working Paper. Washington, D.C.: Brookings Institution. [http://www.brookings.edu/~media/Files/rc/reports/2000/05metropolitanpolicy\\_cohen/cohen.pdf](http://www.brookings.edu/~media/Files/rc/reports/2000/05metropolitanpolicy_cohen/cohen.pdf).

College Board. 2011. College Search website, accessed August 23. <http://collegesearch.collegeboard.com/search/CollegeDetail.jsp?collegeId=1195&profileId=2>.

Common Sense Junction and American Petroleum Institute. 2011. “U.S. Federal & State Gasoline Taxes,” accessed on the Common Sense Junction website, July 1. <http://www.common-sensejunction.com/notes/gas-tax-rate.html>.

Current Results Nexus. 2011. “Average Yearly Snowfall by American State,” accessed on the Current Results website, August 26. <http://www.currentresults.com/Weather/US/average-snowfall-by-state.php>

Fisker Automotive. 2011. “Fisker Automotive Starts First Round of Job Postings at Re-commissioned Wilmington, Delaware Plant.” Press release accessed on the Fisker Automotive website, June 22. [http://media.fiskerautomotive.com/press/press\\_releases](http://media.fiskerautomotive.com/press/press_releases).

Fulton, George. 2011. “Some highlights from the most recent RSQE Michigan forecast,” Research Seminar in Quantitative Economics (RSQE), an economic and modeling unit of the University of Michigan, May 25.

Gambale, Geraldine. 2008. *23rd Annual Corporate Survey and 5th Annual Consultants Survey*. Westbury, N.Y.: Area Development Magazine. [www.areadevelopment-digital.com/CorporateConsultsSurvey/23rdAnnualCorporateSurvey#pg1](http://www.areadevelopment-digital.com/CorporateConsultsSurvey/23rdAnnualCorporateSurvey#pg1).

- Gambale, Geraldine. 2009. *The 24th Annual Corporate Survey and 6th Annual Consultants Survey*. Westbury, N.Y.: Area Development Magazine. [www.areadevelopment-digital.com/CorporateConsultsSurvey/24thAnnualCorporateSurvey#pg1](http://www.areadevelopment-digital.com/CorporateConsultsSurvey/24thAnnualCorporateSurvey#pg1).
- Giles, Tom. 2011. "Detroit Outgrows Silicon Valley in Tech Jobs as Ford Hires," *Bloomberg News*, March 24. <http://news.businessweek.com/article.asp?documentKey=1377-a7cBEdF-Wchls-3UAOBHNVP9T0C8RRAO6K9G3S4A>
- Gould, Elise and Heidi Shierholz. 2011. *The Compensation Penalty of "Right-to-Work" Laws*, Economic Policy Institute Briefing Paper #299. Washington, D.C.: EPI.
- Greer, Stan. 2005. *The Economic Benefits of a Michigan Right to Work Law*. Springfield, Va.: National Institute for Labor Relations Research.
- Griswold, Daniel and Dale Buss. 2004. *Outsourcing Benefits Michigan Economy and Taxpayers*. Mackinac Center for Public Policy, Policy Brief, September 16. Midland, Mich.: Mackinac Center for Public Policy.
- International Organization of Motor Vehicle Manufacturers. 2011. "Motor Vehicle Production Statistics." IOMVC Web page. <http://oica.net/category/production-statistics/>
- Kersey, Paul. 2007. *The Economic Effects of Right-to-Work Laws: 2007*. Midland, Mich.: Mackinac Center for Public Policy.
- Kersey, Paul. 2011. "'The Single Most Important Thing': Stephen Moore on RTW in Michigan," Mackinac Center for Public Policy Web page, June 1. <http://www.mackinac.org/article.aspx?ID=15123&print=yes>.
- Kesari, Dimitri. 2011. Statement of the National Right to Work Committee Director of Government Affairs before the New Hampshire House Employment, Labor and Pensions Committee, New Hampshire General Court, February 3.
- Kollath, Carlie. 2010. "Toyota MS hourly jobs open today," *Daily Journal*, August 23. [http://nems360.com/pages/bizbuzz\\_full/push?blog-entry-Toyota+job+details+expected+today%20&cid=9245337&instance=popular](http://nems360.com/pages/bizbuzz_full/push?blog-entry-Toyota+job+details+expected+today%20&cid=9245337&instance=popular)
- Koropecykj, Sophia. 2011. *Précis State: Michigan*. New York: Moody's Analytics.
- Lafer, Gordon and Sylvia Allegretto. 2011. *Does "Right to Work" Create Jobs? Answers from Oklahoma*. Economic Policy Institute, Briefing Paper #300. Washington, D.C.: EPI.
- May, Bill. 2001. "Proponents Foretell Benefits of Right to Work," *Journal Record*, September 19.
- Michigan Department of Technology, Management and Budget. 2007. "Industry Employment Forecasts, 2008-2018" from MDT "Labor Market Information" Web page. Accessed August 28, 2011 at [http://milmi.org/admin/uploadedPublications/1441\\_nac\\_2016.htm](http://milmi.org/admin/uploadedPublications/1441_nac_2016.htm).
- Michigan Economic Development Corporation. 2011a. "Ralco Industries, Inc., plans to invest \$6.4 million in Pontiac," MEDC Web page accessed August 23. <http://www.michiganadvantage.org/Stories/Ralco-Industries-Inc--plans-to-invest-6-4-million-in-Pontiac>.
- Michigan Economic Development Corporation. 2011b. "Clyde-Union Pumps Staying in Michigan to Keep Experience Workforce," MEDC *e-newsletter*, August.
- Michigan Economic Development Corporation. 2010a. *A Foundation for the New Michigan Economy: 21st Century Jobs Fund Report*. Lansing, Mich.: MEDC.
- Michigan Economic Development Corporation. 2010b. *Benchmarks for the Next Michigan: 2010 Update*. Lansing, Mich.: MEDC.
- Michigan Economic Growth Authority. 2011. Board Meeting, Adopted Minutes, June 14, p. 2.
- Michigan Freedom to Work Coalition. 2011. "Michigan Freedom to Work" flyer. Accessed August 27. <http://www.mifreedomto-work.com/materials/trifoldoutside.pdf>
- Michigan House Republican Strategic Task Force on Jobs. 2010. *House Republican Strategic Task Force on Jobs*. [http://www.gop-house.coms\\_Task\\_Force\\_Report.pdf](http://www.gop-house.coms_Task_Force_Report.pdf)
- National Assessment of Educational Progress. 2010. *Reading 2009: National Assessment of Educational Progress at Grades 4 and 8*. Washington, D.C.: U.S. Department of Education National Center for Education Statistics. <http://nces.ed.gov/nation-sreportcard/pdf/main2009/2010458.pdf>.
- National Oceanic and Atmospheric Administration (NOAA). 2011. "Average Mean Temperature Index by month; Climatology by state based on climate division data: 1971-2000." NOAA online table. <http://www.esrl.noaa.gov/psd/data/usclimate/tmp.state.19712000.climo>
- Oklahoma Department of Commerce. 2011. *Announced New and Expanded Manufacturers and Services: 2010 Annual Report*. Oklahoma City, Okla.: Oklahoma Department of Commerce. [www.okcommerce.gov/Libraries/Documents/2010-Annual-Report-Announced-N\\_3224.pdf](http://www.okcommerce.gov/Libraries/Documents/2010-Annual-Report-Announced-N_3224.pdf).
- Platzer, Michael and Glennon Harrison. 2009. *The U.S. Automotive Industry: National and State Trends in Manufacturing Employment*, Congressional Research Service Report 7-5700. Washington, D.C.: CRS, p. 22.

- Price, Marie. 2001. "House Passes Right to Work; Special Election Call Fails," *Journal Record*, April 19. [http://findarticles.com/p/articles/mi\\_qn4182/is\\_20010419/ai\\_n10145597](http://findarticles.com/p/articles/mi_qn4182/is_20010419/ai_n10145597).
- Public Citizen. 2011. "Trade-Related Job Loss by State." Public Citizen Web page accessed August 23. <http://www.citizen.org/Page.aspx?pid=2543>.
- Reed, W. Robert. 2001. *Does Right to Work Boost Economic Development?* "Does Right To Work Boost Economic Development?" Oklahoma Council of Public Affairs Labor Study Series, Vol. 1, No. 1. Oklahoma City: OCPA.
- Schachter, Jason. 2001. *Why People Move: Exploring the March 2000 Current Population Survey*. U.S. Census Bureau, Current Population Report P23-204. Washington, D.C.: U.S. Census Bureau.
- Schmitt, John. 2010. *The Unions of the States*. Washington, D.C.: Center for Economic and Policy Research.
- Scott, Robert E. 2010. *Unfair China Trade Costs Local Jobs*. Economic Policy Institute Briefing Paper # 260. Washington, D.C.: EPI.
- Scott, Robert E. 2011. *Heading South: U.S.-Mexico Trade and Job Displacement After NAFTA*. Economic Policy Institute Briefing Paper #308. Washington, D.C.: EPI.
- Slaughter, Jane. 2011. "Next low-wage haven: USA," *Facing South: The Online magazine of the Institute for Southern Studies*, August 10. <http://www.southernstudies.org/2011/08/next-low-wage-haven-usa.html>
- Sloan, Scott. 2011. "Kentucky got Toyota in 1986, but why have none come since?" *Herald-Leader*, May 2. <http://www.kentucky.com/2011/05/01/1725979/kentucky-got-toyota-in-1986-but.html>
- Stevens, Lonnie K. 2009. "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), pp. 595-612.
- Tannenwald, Robert. 1997. "State Regulatory Policy and Economic Development," *New England Economic Review*, March/April, pp. 83-107.
- Tesla Motors. 2010. "Tesla Motors Announces Factory in Northern California," Tesla Motors press release, May 20. <http://www.teslamotors.com/about/press/releases/tesla-motors-announces-factory-northern-california>.
- U.S. Bureau of Economic Analysis. 2009 [presumed]. "State Income and Employment Summary, 1977-2008," BEA online table accessed August 30, 2011. <http://www.bea.gov/regional/spi/action.cfm>.
- U.S. Bureau of Economic Analysis. 2010 [presumed]. "Regional Data—GDP & Personal Income— Annual State Personal Income and Employment." BEA online table accessed September 10, 2011. <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=4>
- U.S. Bureau of Labor Statistics. 2009. *Employment Projections – 2008-18*, USDL-09-1503, released December 11.
- U.S. Bureau of Labor Statistics. 2010a. "States and selected areas: Employment status of the civilian noninstitutional population, 1976 to 2009 annual averages." BLS Local Area Unemployment Statistics online table.
- U.S. Bureau of Labor Statistics. 2010b. "International Labor Comparisons—GDP Per Capita and Per Hour," various years. Online BLS database accessed January 2010.
- U.S. Bureau of Labor Statistics. 2011a. "Economic news release, August 19—Table 3. Civilian labor force and unemployment by state and selected area, seasonally adjusted." <http://www.bls.gov/news.release/laus.t03.htm>
- U.S. Bureau of Labor Statistics. 2011b. "State and Metro Area Employment, Hours, & Earnings Employment," downloadable database from the Current Employment Statistics program survey. <http://www.bls.gov/sae/#data>
- U.S. Bureau of Labor Statistics. 2011c. "Employment, Hours, and Earnings from the Current Employment Statistics survey (National)—Employment by Industry, Motor vehicles and parts manufacturing, 2011," online BLS table. [http://data.bls.gov/timeseries/CES3133600101?data\\_tool=XGtable](http://data.bls.gov/timeseries/CES3133600101?data_tool=XGtable)
- U.S. Census Bureau. 2011. *Statistical Abstract of the United States*, 2011. <http://www.census.gov/compendia/statab/rankings.html>.
- U.S. Chamber of Commerce. 2011. *The Impact of State Employment Policies on Job Growth: A 50-State Review*. Washington, D.C.: U.S. Chamber of Commerce. [http://www.uschamber.com/sites/default/files/reports/201103WFI\\_StateBook.pdf](http://www.uschamber.com/sites/default/files/reports/201103WFI_StateBook.pdf).
- U.S. Department of Energy. 2011. U.S. Department of Energy Loan Programs Office website, accessed August 26. [https://lpo.energy.gov/?page\\_id=45](https://lpo.energy.gov/?page_id=45)
- Vedder, Richard, Matthew Denhard, and Jonathan Robe. 2011. *Right-to-Work and Indiana's Economic Future*. Indianapolis: Indiana Chamber of Commerce Foundation.
- Washburne, Thomas and Paul Kersey. 2007. *Right-to-Work FAQ*, Mackinac Center for Public Policy, June 28, 2007, accessed August 23, 2011 at <http://www.mackinac.org/8694>.
- Wicker, Roger. 2011. "Mississippi on the right track toward creating new jobs," *Madison County Herald*, August 25, 2011. <http://www.mcherald.com/apps/pbcs.dll/article?AID=/20110825/OPINION/108250306/1005>