

The Location of Industry: Do States' Policies Matter?

BY THOMAS J. HOLMES

whether states' policies make much of a difference in determining where industries locate. Progress in resolving the issue has been hampered by the difficulty of distinguishing the effects of state policies from the effects of other state characteristics that are unrelated to policy.

In recent work, however, I considered what happens to manufacturing activity when one crosses a border between a state with a "pro-business" policy and a state with an "anti-business" policy. If states' policies matter, then one should find an abrupt change in manufacturing activity when one crosses a border where policy changes, because state characteristics unrelated to policy are the same on both sides of the border. My results indicate that there is such an abrupt change, which is evidence that policies do, indeed, matter.

MEASURING STATES' POLICIES

TO GET AROUND THE DIFFICULTY OF MEASURING THE degree to which a state's policy is pro-business or anti-business, I simply classify a state as *pro-business* if it has a

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N STATE CAPITALS THROUGHOUT THE COUNTRY, proponents of pro-business policies routinely claim that such policies are essential for attracting industry. But in the academic literature there is a lack of consensus as to

right-to-work law and *anti-business* if it does not. I focus on this crude but easy-to-determine measure of state policy for two reasons. First, a right-to-work law is obviously a pro-business policy because such a law weakens unions by banning the union shop. Having an anti-union policy is widely thought to make a difference in firms' location decisions. In fact, on the state of Texas's web site that is aimed at businesses making site-selection decisions, the first advantage cited for Texas is that it is a right-to-work state.

The second reason for my use of right-to-work as a proxy for pro-business climate is that the same forces that lead to the passage of right-to-work laws also lead to the adoption of other pro-business policies. For example, in addition to having a right-to-work law, Texas is widely thought to be pro-business in its tax policies; New York and Massachusetts have long-held reputations for being hostile to business, and neither state has a right-to-work law.

Figure 1 shows which states have right-to-work laws. The geographical pattern is striking. No state in the traditional manufacturing belt (the New England, mid-Atlantic, and Great Lakes states) has a right-to-work law; every southern state that joined the Confederacy has one. Most of the plains states west of the manufacturing belt (e.g., North

and South Dakota) have right-to-work laws.

There are some remarkable facts about what has happened to manufacturing in the right-to-work states since World War II. Manufacturing employment in the states without right-to-work laws is virtually the same now as it was in 1947, but manufacturing employment has increased

ciation between manufacturing growth and right-to-work laws because of underlying differences between right-to-work states differ from non-right-to-work states.

In the time since right-to-work laws were enacted just after World War II, manufacturing has shifted to right-to-work states for at least four reasons that have nothing to do with states' policies:

The results do not say that it is right-to-work laws that matter, but rather that the “pro-business package” offered by right-to-work states seems to matter.

150 percent in the right-to-work states. Of the 10 states with the highest manufacturing employment growth rates, 8 are right-to-work states; of the 10 states with the lowest growth rates, none is a right-to-work state.

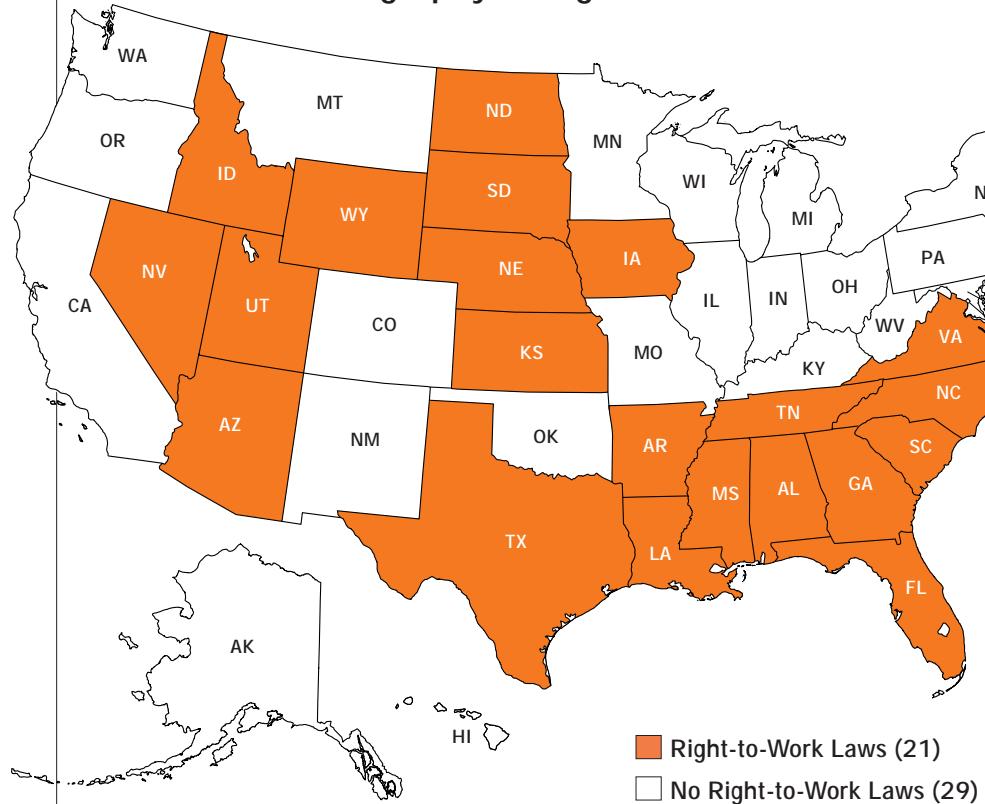
INSUFFICIENT EVIDENCE

CITING SUCH STATISTICS, THE NATIONAL RIGHT-TO-WORK Committee (an anti-union lobbying group) claims that right-to-work laws attract industry. But statistics about the growth of manufacturing jobs do not prove the committee's case for right-to-work laws. We would expect to find a positive asso-

The growth of manufacturing jobs in those states reflects, in part, the decline of agricultural jobs as agriculture has become less labor-intensive.

- The advent of air-conditioning has led to a shift in the population to the sun-belt states—most of which are right-to-work states—and manufacturing has followed the population shift.
- Right-to-work laws were adopted by states already hostile to unions. Even without right-to-work laws, those states would have been attractive to manufacturing firms seeking to avoid unionization

Figure 1 Geography of Right-to-Work Laws



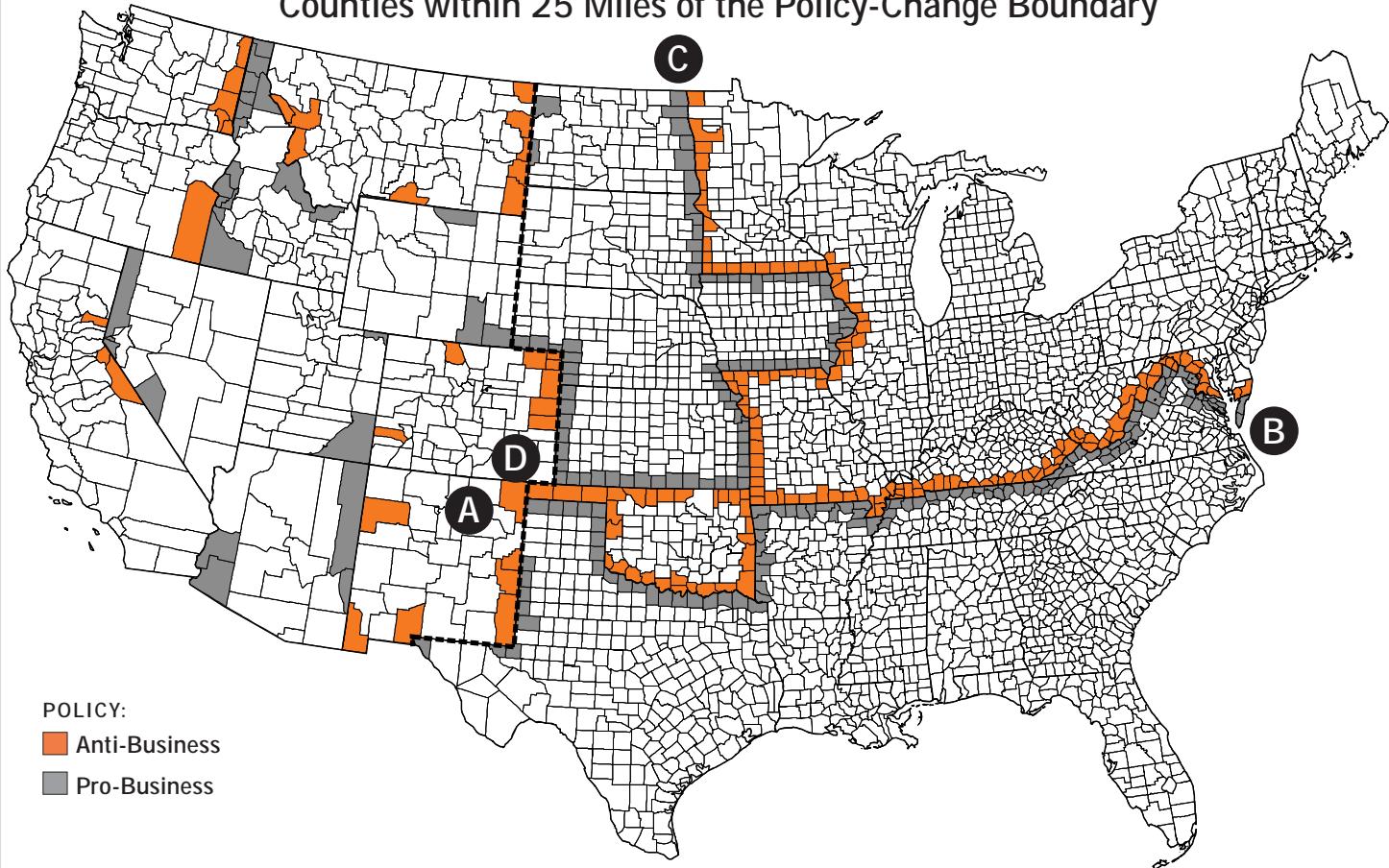
In sum, broad comparisons of right-to-work states and non-right-to-work states prove nothing about the effects of states' policies on manufacturing growth rates.

AN ALTERNATIVE ANALYSIS

BECAUSE THE GEOGRAPHIC determinants of the distribution of manufacturing (e.g., climate and access to transportation) are about the same on both sides of a border between states, I focused on the areas along the borders between right-to-work and non-right-to-work states. There should be an abrupt change in manufacturing activity at those borders if the pro-business policies pursued by right-to-work states have influenced the migration of industry.

Figure 2

Counties within 25 Miles of the Policy-Change Boundary



The Data Drawing on the U.S. Census Bureau's County Business Patterns series, I used county-level data for two measures of manufacturing activity: (1) manufacturing employment as a share of total private employment in 1992 and (2) the growth in manufacturing employment from 1948 to 1992. (For the entire United States, manufacturing employment was 19.6 percent of total private employment in 1992, and manufacturing employment grew by 24 percent from 1948 to 1992.) To control for nonpolicy variables, I grouped counties according to their distance from the policy-change boundary (as measured from each county's center): 0-25 miles, 25-50 miles, 50-75 miles, and 75-100 miles.

Figure 2 highlights the counties whose centers are within 25 miles of the policy-change boundary. The line from point A to point B happens to be the boundary between North and South in the Civil War. The line from point C to point D divides the industrial midwestern states from the Great Plains states. Lines A-B and C-D seem well defined because the centers of most of the counties adjacent to the boundary are within 25 miles of a state border. (Indeed, at many points there are two counties whose centers are within 25 miles of the boundary.)

The policy-change boundary in the western states (to the left of the heavy broken line in Figure 2) seems less well defined than lines A-B and C-D because western counties

generally are much larger than counties to the east. (Many western counties are larger than New Jersey.) The geographic data for the western states are therefore relatively crude. However, the results of the analysis are essentially unchanged when the western states are excluded.

The Results Table 1 shows remarkable differences between the pro-business and anti-business sides of the policy-change boundary. For example, manufacturing employment in first-tier counties on the pro-business side—those counties within 25 miles of the border—was 25.3 percent of total private employment in 1992, compared with 19.3 percent for first-tier counties on the anti-business side. The difference of 6 percentage points is highly statistically significant (the *p*-value is 0.0002).

We also see a large difference in the growth of manufacturing jobs between first-tier counties on either side of the policy-change boundary. Between 1947 and 1992, the number of jobs grew by 88.5 percent in first-tier counties on the pro-business side, 26 percentage points more than the 62.6 percent increase for first-tier counties on the anti-business side. This difference is statistically significant (the *p*-value is 0.006).

Additional perspective on the significance of the difference in manufacturing employment share can be gained by comparing layers on the same side of the border. Consider what happens to the share if we start at the pro-busi-

Table 1
Manufacturing Employment Shares and Growth: Cross-County Averages by Side of Policy Boundary and Distance from Boundary

Side of policy boundary	Distance from center of county to boundary (miles)	Manufacturing employment as percentage of total private employment (1992)	Percentage growth of manufacturing employment (1947-1992)
Anti-Business	75-100	22.6	70.5
	50-75	20.2	56.8
	25-50	21.2	74.5
	0-25	19.3	62.6
Pro-Business	0-25	25.3	88.5
	25-50	23.1	86.9
	50-75	22.7	92.6
	75-100	22.4	86.4

Data source: U.S. Census Bureau, County Business Patterns series.

ness border layer and move into the interior. The percentage share starts at 25.3, goes to 23.1, then goes to 22.7, and ends up at 22.4. These changes are relatively small and none of the differences is statistically significant. We should not be surprised by such small differences because these sets of neighboring counties are similar (on average) in their geographic characteristics and in their policies. The border counties on the pro-business side are likewise similar in geographic (i.e., nonpolicy) characteristics to the border counties on the anti-business side. But despite similarities on nonpolicy dimensions, the share of manufacturing employment changes greatly at the border.

We see a similar picture when we look at growth rates of manufacturing employment: those lie in the range of 86 to 93 percent for the layers on the pro-business side, but the range is 56 to 75 percent on the anti-business side. Manufacturing grew faster in pro-business states, and the difference is readily apparent at the border.

We get similar results when we consider subsets of the data and look at different time periods. For example, the results hold if we look just at the differences across line A-B or line C-D in Figure 2. The results also hold if we use data for different years; the differences between anti-business and pro-business states became statistically significant in the early 1960s and have become more pronounced since then.

CONCLUSION AND CAVEATS

IN SATELLITE PICTURES OF EARTH TAKEN FROM OUTER space, parts of the western border between Canada and the United States at the 49th parallel are clearly visible because of differences in the two nations' land-use policies. The policy-change boundary between pro-business and anti-business states may not be visible from outer space, but it becomes visible when we look at data about manufacturing jobs: manufacturing activity is sharply higher on the pro-business side of the boundary.

In sum, states' policies appear to have a significant effect

on the location of manufacturing activity. But the results should be interpreted cautiously.

First, the results do not say which policies matter. Right-to-work states historically have pursued a number of other smokestack-chasing policies, such as low taxes, aggressive subsidies, and even, in some cases, lax environmental regulations. Thus, my results do not say that it is right-to-work laws that matter, but rather that the "pro-business package"

offered by right-to-work states seems to matter. Perhaps the relative effects of various policies can be found through further analysis of changes at the boundary between pro-business and anti-business states.

Second, the results do not characterize the welfare effects of policy differences. The fact that states' policies seem to influence the distribution of industry does not mean that the pro-business states are pursuing "good" policies while the anti-business states are pursuing "bad" policies. A higher share of jobs in manufacturing industries means a lower share of jobs in service industries. Whether that is good or bad, I cannot say here, but if a state attracts manufacturing through weak environmental regulations, its "pro-business" policies could be bad policies.

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