

# Digging Into the Details: Our Research Method & Results

In order to detect the ability of ALEC policies to produce growth since 2007, it is important to look not simply at the correlation between the EOR and growth, but to examine that relationship while controlling for other important factors influencing economic performance.

## Other Factors Matter for Growth

State economies are thoroughly integrated within the national and international economies. One would expect that the state economies faring best from 2007 through 2013 would be those poised at the start with a higher concentration of growing industries, and/or those states least exposed to declining sectors.

To understand why this is important, consider the effects of the oil boom in North Dakota and other states. Suppose the states that happened to have huge shale oil reserves destined to be opened by fracking technology, fueling an economic boom in that sector, also were among the states adhering to ALEC's favored policies. A simple correlation between the EOR and state growth might well show a significant relationship, but it could be driven entirely by the oil economy and not by ALEC policies. Correlation is not causality.

## What We Did to Control for Other Factors

To test the argument about ALEC policies and growth, we adopted the approach of Kolko et al<sup>2</sup> in devising a measure of how well a state was poised to grow. State economic structure in 2006 – the shares of state GDP accounted for by each of 20 economic sectors – was used to predict state GDP in 2013 if each state sector were to grow (or decline) at the same rate as that sector did nationally between 2007 and 2013. If our hypothesis is valid, actual state growth should be highly related to this measure of predicted growth based on economic structure. Of course, some states grew more rapidly than predicted, some more slowly, and the pertinent question is: Are there state policies that influenced whether a state did better or worse than would be expected based on economic structure?

The economic structure variable was entered in a multiple regression equation, along with the 2007 ALEC-Laffer EOR ranking to see how well the two variables explained actual state growth differences from 2007 to 2013. Additionally, we controlled for the degree of urbanization (percent of population living in metropolitan areas) because of the long term trend for growth to concentrate in urban areas, the education level of the population (because jobs with different skill levels could be growing at different rates), and climate (to reflect the long trend in population shifts towards the sunbelt).

## **Our Results: What Didn't Matter?**

We examined growth in economic output (state Gross Domestic Product), jobs (non-farm employment), income (per capita personal income and median family income), and wages (median annual earnings), as well as changes in the poverty rate. The results show that the state policies embodied in the ALEC-Laffer EOR ranking did not influence the rate at which the state grew. The EOR failed to have a statistically significant effect on any of the measures of growth.

## **Our Results: What Did Matter?**

The structure of the state economy, on the other hand, had a great deal to do with how fast a state grew; the variable had a statistically significant effect on growth in GDP, jobs and wages. Much of this effect, no doubt, has to do with the resilience of economies with natural resources like oil during this period. It is also consistent, of course, with many reports that as oil prices have risen, states with large oil reserves (e.g., North Dakota, Wyoming, Texas and Alaska) have experienced large increases in drilling and transmission-related jobs. Education level and degree of urbanization were also significant determinants of growth for some variables.

To see if the 2007 EOR ranking was an anomaly, we substituted the average EOR for the first four years of the period, 2007-2010, and the results were not changed.

There is a modest correlation between the EOR and average education level, with less educated states doing better on the ALEC-Laffer index, and a correlation between the EOR and climate, with sun-belt states having better EOR. It is possible these correlations were making it difficult to separate the independent effects of the EOR from the effects of the other two variables. Omitting education and climate from the equation, however, did not result in the EOR having a significant effect on any of the growth variables, with one exception: slow growth in median family income. The better a state's ranking according to the EOR, the slower the growth in median family income, though this result was only mildly significant.

We also tested the relationship between a state's adherence to ALEC-Laffer policies and the level of income or poverty in the state. Here we used the average ranking on the EOR from 2007 to 2014, along with the education and urbanization measures as controls, to predict the average level of per capita income, median family income, median annual wage, and poverty rate from 2007 to 2013. The EOR was statistically significant (but only at the 10 percent level) only in predicting the median annual wage: the *worse* a state ranked according to the EOR over the period, the *higher* the annual wage.

1. See Michael Mazerov, "State Taxes Have a Negligible Impact on Americans' Interstate Moves." Center on Budget and Policy Priorities, May 21, 2014. <http://www.cbpp.org/cms/?fa=view&id=4141>

2. Jed Kolko, David Neumark, and Marisol Mejia. "Public Policy, State Business Climates, and Economic Growth." Working Paper 16968. Cambridge, MA: National Bureau of Economic Research, April 2011.