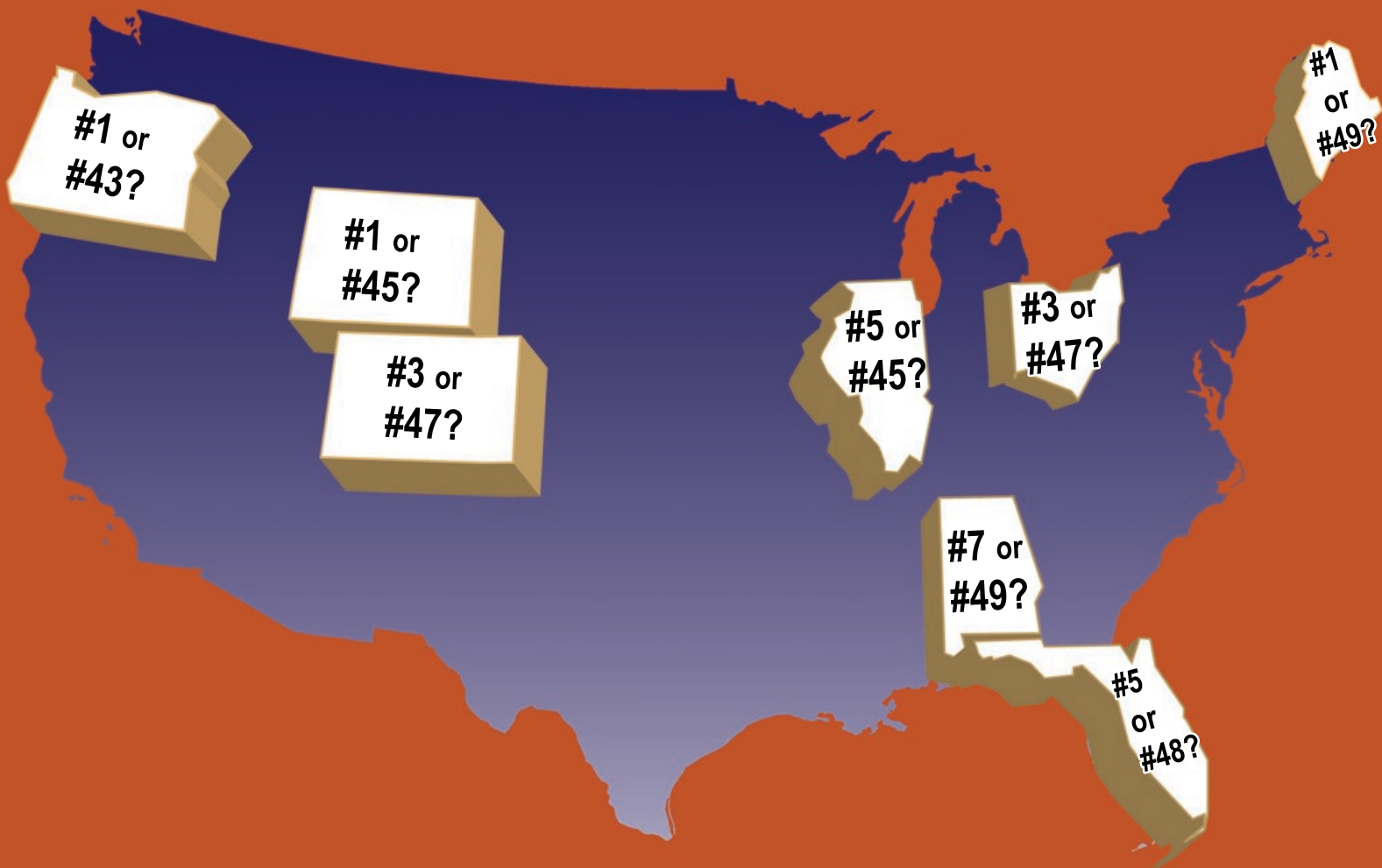


# Grading Places

What Do the Business Climate Rankings Really Tell Us?



# **Grading Places**

**What Do the Business Climate Rankings  
Really Tell Us?**

**Second Edition**

by  
Peter Fisher

with a preface by Greg LeRoy

**Good Jobs First**

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# Preface on Historical Context

by Greg LeRoy

This study is the third major takedown in 27 years of corporate-sponsored, pseudo-social science, “business climate” studies. First commissioned by the Illinois Manufacturers Association and then the Council of State Manufacturing Associations (COSMA) in the 1970s, these “business climate” reports are now issued with far broader corporate backing, reflecting how the passions of tax avoidance and wage suppression have been transmitted from the manufacturing sector to the now far-larger service economy.

The first takedown of the studies that COSMA commissioned from the Chicago-based accounting firm then known as Alexander Grant & Company (later named Grant Thornton), was published in 1985. *Taken For Granted: How Grant Thornton Leads the States Astray* was issued by the Corporation for Enterprise Development (now CFED) with the Institute on Taxation and Economic Policy and Mt. Auburn Associates.<sup>1</sup>

The second takedown, of which this study is an updated expansion, was published in 2005 by the Economic Policy Institute and also written by Dr. Peter Fisher. *Grading Places: What do the Business Climate Rankings Really Tell Us?* examined state rankings of five organizations including the

Cato Institute, the Beacon Hill Institute and the Small Business and Entrepreneurship Council. Since that study was published, the American Legislative Exchange Council has entered the debate: since 2007 it has annually issued its *Rich States, Poor States* study with its Economic Outlook Rankings.

As business climatology’s sponsorship has diversified, so have its practitioners. However, its core methodological tricks have remained the same: Choose public policies that are of high concern to the corporate and/or high-wealth sponsors (e.g., unemployment insurance rates then or the estate tax today). Use self-interested respondents and/or anecdotes to ascribe otherwise unverifiable or even improbable weights to the variables. Choose variables that reduce inequality (e.g., state minimum wages) and down-rate them, in the name of jobs, of course. Or choose variables that are self-fulfilling because they are outcomes, not causes (e.g., using high-speed broadband access as a predictor rather than an indicator of growth). Or cherry-pick small, incomplete sample sets to suggest positive or negative correlations.

A recurring proof of the flawed methodologies is their lack of predictive value. It used to be Grant Thornton allowing 50 state manufacturing lobbyists to each

weight their own “business climate” variables, obviously an unscientific data pollutant. Today, the same kind of idiosyncratic issues surface, as when the American Legislative Exchange Council (ALEC) inveighs against Tennessee’s estate tax. In our 2012 study focusing specifically on *Rich States, Poor States: The ALEC-Laffer Economic Competitiveness Index*, we actually found small negative correlations between some of ALEC’s favored policies and positive economic outcomes (and no statistically significant positive relationships).<sup>2</sup>

Indeed, the underlying frame of these studies—that there is such a thing as a state “business climate” that can be measured and rated—is nonsensical. The needs of different businesses and facilities vary far too widely. Besides, states are not the meaningful unit of competition in economic development: metro areas are, and conditions can vary more among metro areas within a state than they do between states. Young tech start-ups need lots of engineers and venture capital. Server farms and mini-mills need cheap electricity. Warehouses need proximity to interstate highways. Headquarters need access to finance, marketing and industry-specific talent pools. Given these realities, “business climate” studies must be viewed for what they actually are: attempts by corporate sponsors to justify their demands for lower taxes and to gain public-sector help suppressing wages.

It is little known that the Fantus Company, the original and long-dominant site location consulting firm, issued the first 48-state business climate study in 1975, commissioned by the Illinois Manufacturers Association. However, after seeing how its work was used, Fantus—which absolutely knew better than anyone else that one size does not fit all in site location—refused to do another such report and became a critic of subsequent studies done by Grant Thornton. “These surveys do a lot of harm” and are not a good basis for changing public policies, said a Fantus vice president. He called them “a Trojan horse for a certain ideological position” because they are based upon business executives’ opinions, not economic statistics. In a consulting report to a state, Fantus referred disdainfully to “the popular generic study that purports to rank state business climates” and a “poorly conceived generic study.”<sup>3</sup>

The broader tragedy surrounding this corporate-sponsored disinformation is how badly it has distorted and impoverished our public dialog about the optimal role of government in strengthening the private economy. To borrow Oscar Wilde’s witticism about cynics, these “business climate” studies know the cost of everything and the value of nothing. By isolating and wailing upon hot-button issues du jour, they drown out the far more important issues:

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- Are we treating small businesses fairly? Or are we enshrining policies that grossly favor multistate companies?
- Are we treating similarly situated business even-handedly? Or are we favoring those with the largest lobbying budgets?
- Are we modernizing our tax codes to reflect long-term changes in the makeup of the U.S. economy? Or are we stuck with structural deficits driven by tax codes written in the 1950s?
- Are we spending our revenues in ways that make our economy more resilient? That maximize innovation and opportunity?
- Or are we, in the name of economic development, perversely corroding the public fisc and undermining the investments in skills and infrastructure that benefit all employers?

We hope this study will help rebalance the debate. It's time to shun single-variable, silver-bullet ideas that are actually gussied-up cover stories for the pet peeves of large corporations and wealthy people. It's time to focus on building a tax and budget system that is fair, modern—*and relevant*.

# Executive Summary

An examination of the four most prominent “business climate” ratings of state tax systems finds them to be deeply flawed and of no value to informing state policy. They produce state rankings that bear little relation to actual taxes paid in one state versus another. They sometimes include factors that are effects instead of causes of economic growth, or factors that have no empirically proven relationship to growth. They omit significant differences among state corporate tax systems. They display no predictive value about economic growth. They come to highly inconsistent findings among themselves.

Each of these four rankings is constructed by taking widely disparate data points and adding or averaging them to construct an index number. The result is not a useful summary measure of business climate as claimed. It is at best meaningless, and at worst a state ranking manipulated to make the case for policy positions advocated by the organization sponsoring the index.

Two other 50-state ratings that use mathematical models to study typical or representative firms generate more defensible data. However, both are weakened by simplifying assumptions that lead to misleading results. Both generate disaggregated data for different companies but then combine them by state in ways that obscure or dilute their value. And

the two sets of findings are also highly inconsistent with each other.

## ***The Four Business Climate Indexes***

**The Small Business and Entrepreneurship Council’s *U.S. Business Policy Index*** is an amalgam of 46 factors, including 6 on health care regulation, 22 on taxes, 7 on government services, and a potpourri of others on crime, paid leave, renewable energy portfolio standards, electricity rates, eminent domain and tort liability. However, when the 46 variables are disaggregated to reveal which ones actually distinguish one state from another, it is only the 12 factors that bear upon tax progressivity that matter; the other 34 are statistical background noise. Compared to measures of state economic dynamism tracked by the Information Technology and Innovation Foundation, the USBPI does not correlate; that is, it does not apparently measure things that contribute to higher rates of innovation and entrepreneurship.

**The Beacon Hill Institute’s *State Competitiveness Report*** combines 45 variables that are again extremely diverse: 6 on fiscal policy, 8 on human resources, 7 on technology, and 8 on business incubation. There are some dubious choices such as weekly unemployment benefits, cell phones per 1,000 residents, infant mortality rate,



and the percent of residents born abroad (they are said to be more motivated). The study confuses cause and effect, including various measures that are the *result* of growth, such as labor participation rates, firm births, initial public offerings, exports, and public-budget surpluses.

**The Tax Foundation’s *State Business Tax Climate*** Index combines 35 variables, all having to do with taxes: 11 on the corporate income tax, 7 on the personal income tax, 4 on sales taxes, and 10 on property taxes. The ratings consistently favor regressivity. When compared to the Council on State Taxation’s (COST) ranking of actual corporate tax burdens, the Tax Foundation’s rankings fail miserably. Of the Foundation’s top 10 states, only one actually ranks among the 10 states with the lowest share of state GDP going to business taxes. Its top-rated state, Wyoming, ranks 45th, according to COST.

**The American Legislative Exchange Council’s *Rich States, Poor States: The ALEC-Laffer Economic Competitiveness Index***, despite its aggressive claims, fails to predict job creation, GDP growth, state and local revenue growth, or rising personal incomes. Empirical evidence does not support its claims that estate taxes or graduated personal income taxes cause rich people to move and thereby retard economic development. No state is anywhere near “Laffer Curve” rates of taxation; the only certain outcome of a tax cut is lower revenues. And the only clear impact of “right to work” laws is lower wages.

The four business climate studies are not about jobs and income, but rather about ideology. We note that each group’s findings dovetail with its stated advocacy positions. The one consistent theme that the indexes harp on is regressive taxation, especially lower corporate income taxes, lower or flat or nonexistent personal income taxes, and no estate or inheritance taxes. Even though state tax systems (including income, property, consumption and other taxes) are already quite regressive (and barely offset by the progressivity of the federal income tax), the business climate authors would have states enact even more inequality into their tax codes.

A second recurring theme is wage suppression via recommendations against minimum wages, free union bargaining, health care regulation, paid leave and unemployment insurance. The unspoken subtext seems to be: use public policies to keep your wages down and you will attract investment. This despite the fact that non-managerial wages have stagnated and failed to keep pace with productivity for more than three decades, and consumer spending drives more than two-thirds of the economy.

A third theme is the degradation of the public sector via negative ratings tied to the number of public employees (even if that were to mean smaller school-class size or better public health) and absolute indifference to the condition of a state’s infrastructure (the American Society of Civil Engineers’ report cards are nowhere to be seen).

A fourth theme is the belief that state and local business taxes are the primary state policy tool for bringing about growth and prosperity. In fact, a review of the extensive academic research in this area reveals that taxes are such a small share of business costs that they have little effect on investment decisions. In fact, the tax-cutting approach can lead to cuts in services that are counterproductive. The rankings are striking in their near total failure to acknowledge the actual sources of rising prosperity and the role of state and local governments in supporting economic development: investments in education, job training, infrastructure, health, and public safety.

Finally, in addition to all of their individual methodological problems, the studies bear no relation to each other. Massachusetts ranks 1st in one index and 38th in another. Alabama is next to last by one ranking and 7th on another. Alaska is ranked 4th and 38th. If a state wants to advertise its friendly business climate, 22 can brag they are in the top 10 (according to someone). If business lobbyists want to demand business tax cuts, in 24 states they can complain about being in the bottom 10. It's all about what a brilliantly malleable term "business climate" has become.

As stated in our Preface, these studies follow in a long line of ideologically charged pseudo-social science published to further the interests of corporations and rich people. They are properly viewed as artifacts of corporate advocacy rather than prescriptions for prosperity.

### ***Representative Firm Models: Promising but Under-realized***

We also examined two representative firm models: ***COST's Competitiveness of State and Local Business Taxes on New Investment***, prepared by the accounting firm Ernst & Young; and the ***Tax Foundation's Location Matters***, prepared with the accounting firm KPMG. These mathematical models allow for more complexity and nuance because they acknowledge that different companies and facilities vary greatly in how they interact with tax codes and they are aimed at measuring how tax systems impact plant expansions or relocations.

Unfortunately, both models have serious flaws and fail to take full advantage of the methodology. COST's model excludes pass-through entities such as S corporation or LLCs, very common small-business forms. And even though it models five different kinds of facilities and three kinds of taxes, it hides those disaggregated results and only provides two blended numbers per state (returns weighted by job creation or capital investment). In a huge omission, it fails to account for tax incentives, even though such subsidies can greatly reduce tax liabilities and thereby affect investment returns. The COST model also assumes every facility sells five percent of its output in-state, whether it is located in, say, California or North Dakota. Finally, it uses the property tax rates of each state's largest city, which are often far higher than statewide averages.

The Tax Foundation/KPMG report models seven theoretical facilities. It assumes that six of the seven companies have payroll and property only in the rated state, and distributes sales among the 50 states according to the sizes of their economies, but then admits such a scenario is unrealistic. This assumption artificially penalizes facilities in states with both single sales factor income tax apportionment and throwback rules. The Foundation does publish its disaggregated seven scores for each state, but then

weights them all equally to derive state scores, a less defensible method than COST's weighted scores (i.e., a clothing store with 25 workers is weighted equally with a corporate headquarters employing 200).

Held against each other, the COST and Tax Foundation numbers show many contradictions. Comparing the five most comparable tax-rate estimates shows an average difference of 57 percent per state.

# Introduction: Interrogating the Indexes

Since the first edition of this analysis was published in 2005, the compulsion to rank states on some aspect of their “business climate,” or “economic competitiveness,” has continued unabated. New rankings and indexes have appeared. The American Legislative Exchange Council has now published five editions of its *Rich States, Poor States: The ALEC-Laffer Economic Competitiveness Index* (the 2012 edition was released in May 2012). The accounting firm Ernst and Young, in collaboration with the Council on State Taxation, published a new ranking called *Competitiveness of State and Local Business Taxes on New Investment* in April 2011. And the Tax Foundation published a new and entirely different ranking of states, called *Location Matters*, in February of 2012. Critiques of all of these rankings have been added in this second edition.

Three state rankings reviewed in the first edition have continued to be published annually: The Tax Foundation’s *State Business Tax Climate Index* (first published in 2003, with the most recent being the 2013 edition published in October 2012), the Beacon Hill Institute’s *State Competitiveness Report* (11<sup>th</sup> annual edition, for 2011, published in March 2012)<sup>4</sup>, and the Small Business and Entrepreneurship Council’s *U.S. Business Policy Index*, formerly the *Small Business Survival Index* (the 2011 edition, released in November,

2011, was the 16<sup>th</sup>). All three have made modest changes in their methodology in the intervening years; we examine whether these changes have overcome some of the fundamental flaws in their analyses.

Two rankings reviewed in the first edition do not appear here because they have been discontinued. The Cato Institute’s *Fiscal Policy Report Card*, which we characterized as “little more than a rating of governors on their aggressiveness in promoting an agenda of limited government,” is not really a ranking on state economic competitiveness, and was last published in 2010. The Pacific Research Institute’s *Economic Freedom Index*, which we found to be “a sometimes bizarre collection of policies and laws libertarians love,” really has no plausible connection to a state’s economic growth potential and was last published in 2008.

The six reports we review in detail all purport to measure the competitiveness of a state for business activity, and all emphasize the importance of taxes. Three focus exclusively on some measure of state taxes on business; the others include non-tax factors but state tax policy still plays a prominent role in their calculations. For this reason, we begin with a discussion of the sources of long term economic growth and prosperity, for nations and for states. We then review the extensive body of research

on the role of tax policy in determining which states grow or prosper (or not), and how to construct a valid measure of the level of business taxation. We use this established academic consensus as the baseline to assess the relevance and validity of each of the six rankings that follow.

Five of the six reports critiqued here have something else in common: They are produced by organizations with distinctly conservative ideologies and agendas (the Tax Foundation, the Beacon Hill Institute, the Small Business and Entrepreneurship Council, and the American Legislative Exchange Council). The reports, as a result, are really aimed at state policy makers, in the hope of promoting the underlying agendas of the organizations. The other report is produced by a business organization (the Council on State Taxation) that clearly seeks to lower state taxes on large, multistate business.

Of the six reports, four involve creation of an index – a score or rating of each state created more or less arbitrarily by combining many disparate measures into a single summary number. (The two exceptions are the Ernst and Young/COST report and *Location Matters*.) The policy recommendations in these reports are valid, of course, only if the index is a valid measure of the state’s growth climate. That is the nub purpose of this report: We interrogate each index to assess the validity of its components and the way in which they are combined.

The first question to be asked is: Does the index include relevant variables, and only relevant variables? For example, an index may purport to measure the capacity for growth. Are the major factors that research has shown contribute to growth included in the index? Does the index include factors that are not plausibly related to growth? An index could be called “The Best State Economic Policy Index,” but if the ranking is determined by the number of letters in the state’s name, or other implausible factors, it will not be very informative about which states have the best economic policies.

Equally misleading, an index that purports to measure the *climate* for growth may include records of the state’s actual performance, such as new business starts or growth in per capita income. Creating a multidimensional measure of states’ economic performance may well be a useful thing. But including performance measures in a supposedly causal index, and then arguing that the index predicts performance, is circular reasoning.

The second question we ask of the indexes is: Do the causal variables in fact measure what they claim to measure? For example, a sub-index might be labeled “business tax burden.” This may be a legitimate thing to include in a causal index, but is the business tax burden measured appropriately?

The third question is: How does the index combine disparate measures into a single index number? For example, if one believed the only important factors in economic growth were the top state corporate

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income tax rate and the state's per-capita health care expenditures, how would one construct an index? To start with, corporate income tax rates are expressed as a percentage, with 12 percent or less, and the per-capita health care expenditures range from approximately \$3,000 to \$7,000. If these two numbers were just added together for each state, the index would really only measure the health care expenditures. That is, index components should be converted to a similar scale before they are combined.

Combining disparate measures also entails explicit or implicit weighting. Even if corporate income tax and health expenditures were scaled so that one doesn't dominate the other in the index, the question remains as to whether one is more important than the other as a cause of economic growth. An index may weight components according to their perceived importance. One sure sign of an index that isn't serious is all components weighted the same. We know that every factor is not of equal importance in causing economic growth and a failure to appropriately weight factors indicates a failed index. (A more complete discussion of the issues involved in combining factors to create an index can be found in Appendix A.)

Finally: Does the index actually predict why some states grew more rapidly than others? Recent academic research puts some of the indexes to the test; we review the results of that research in chapter 7, but caution that it is difficult to draw conclusions, because

it is not clear that these index rankings measure anything meaningful. Just because an index is named "business tax climate" does not mean that it is actually measuring state business tax policy. In some cases we use our own simple statistical models to evaluate whether there is a connection between a "business climate" ranking and actual economic performance.

These questions raise a broader one: Is there a "right way" to measure what these indexes purport to measure? Can such indexes be legitimate tools? Is there a science of evaluating competitiveness and business climates? Yes, there is indeed such a science: It is the statistical analysis of factors contributing to state or metro area growth. A very large body of scholarly research has focused on this question, and the methodology used is generally some form of multiple regression analysis. The explanatory variables in these models are like the individual measures that go into the making of an index.

The key difference between an index and a statistical model is that, in a model, the variables are not weighted arbitrarily while in an index they are. The weights in a model are *findings*: they are generated by the statistical tools used in the analysis. Each weight (or regression coefficient) tells us how significantly that variable correlates with (and therefore apparently contributes to) the differences among states' economic growth. For many variables, it is found that the contribution is small or nonexistent ("statistically insignificant").

It might still be the case that a given index, while not scientifically constructed, in fact does a reasonable job of including and measuring appropriate variables, excluding inappropriate ones, and weighting them in a sensible fashion. To a significant degree, the legitimacy of an index depends on how well it mimics a more sophisticated statistical approach. As we shall see, the indexes reviewed here fail this test.

In addition to their lack of statistical underpinnings, there is another reason to question the indexes examined here. It is not clear that the very concept of “business climate” or “competitiveness index” for an entire state or metro area makes sense to begin with. Charles Skoro has argued that “the usefulness of the business climate concept depends on the existence of a set of indicators that are *measurable*, that have *substantial effects* on business outcomes, and that are truly *generic*—they influence business activity in a more or less uniform manner regardless of industry, region, or time period.”<sup>5</sup>

Others have made similar arguments: that the factors important to location and expansion decisions are industry-specific, and that the conditions conducive to growth can vary tremendously within a state.

They also argue—and we agree—that metropolitan regions, not states, are the meaningful unit of competition for business investment decisions.<sup>6</sup> New York City bears little resemblance to Buffalo; the same is true for El Paso and Houston and for San Jose and San Bernardino.

So why even bother with an index of states? Why not just rely on scholarly research to shape policy? For example, a recent study by Robert Lynch reviewed the large body of research on the effects of taxes on growth, and concluded that the effects are quite small or nonexistent.<sup>7</sup> Most research in this area has found other factors to be more important determinants of business location and investment decisions: quality of public services in general and education in particular, utility costs, access to markets, transportation infrastructure, the education level of the labor force, and wage rates.

The reason for creating an index, we can only conclude, is that index numbers, and rankings based upon them, are simple to create (and manipulate), require little in the way of analytical expertise, and are attractive to a news media that rarely knows the difference between a modeled finding and a politicized index.

# Chapter 1: The Business Climate and State Economic Growth

Few people would disagree that state economic policy should seek to improve the standard of living of the state's residents. Progress should be assessed by such metrics as rising per capita income or median family income, reduced incidence of poverty, greater stability and family economic security, and an improving quality of life as measured by public health and by leisure time. While population growth may go along with prosperity—people seek out places where their chances are better—it is not an end in itself. Also, growth in the economy, as measured by rising Gross Domestic Product (GDP), is at best a crude measure of prosperity because GDP growth does not guarantee that the incomes of the average family will rise—that requires growth derived from rising wages and salaries. Similarly, more jobs will be needed if unemployment rates are to be lowered, but new jobs themselves do not guarantee rising incomes; they must be good enough to raise the average or median wage, not lower it.

## ***The Sources of Growth and Prosperity***

In the long run of economic history, the only way to achieve broadly shared prosperity is to increase productivity. Only if more goods and services are *produced* per

capita, can more goods and services can be *consumed* per capita (or the work week shortened without reducing the standard of living). Greater production per person, i.e. productivity, is achieved in four ways. First, investments in capital—buildings, equipment, infrastructure—make the economy more productive because they make workers and workplaces more productive (e.g., better highways mean goods can be shipped using less labor time and fuel). Second, technological advances increase the efficiency of production, allow new uses of existing resources, or create new products and services that directly raise the standard of living. Third, labor becomes more productive through investments in “human capital”—education and training—that increase the skills of workers. Finally, the overall productivity of the economy depends on labor and capital being utilized as fully as possible, and that requires full employment, and a labor force that remains healthy and on the job.

The public sector has important roles to play in enabling rising productivity and incomes. State and local governments play a crucial role in expanding capital investment as primary actors for maintaining and improving the transportation network. Roads, bridges and public transit are part of the capital an economy needs, as are water



and sewer systems, ports and waterways, and airports. State and local governments are also the primary providers of K-12 and community college education, and play an important role in worker training. They provide emergency medical and fire response, insurance regulation, and criminal justice. Finally, states and counties are significant players in providing public health services, including Medicaid and children's health insurance.

The importance of education in raising incomes has been well documented. A recent study by a Federal Reserve Bank economist found that the education level of the workforce in a state was the primary determinant, along with the rate of patents, of which states experienced more rapid growth in incomes from 1939 to 2004.<sup>8</sup> Another research article studying states from 1967 to 1993 found that the more a state spent on education the greater the growth in personal income.<sup>9</sup>

While increasing productivity is a prerequisite for rising prosperity, it does not guarantee that prosperity will be broadly shared. In fact, the period from 1979 to 2007 was characterized by growing productivity but also rising inequality: 40 percent of the gains in real income during this period were captured by the richest 1 percent of the population, and almost two-thirds of the gain in income went to the top 10 percent.<sup>10</sup> The logic of an unregulated market economy is that the gains go to those with the most leverage or bargaining power in the market. Thus again it is public institutions, including regulations aimed

at mitigating corporate power, schools offering all children a chance to thrive, laws strengthening the bargaining power of labor, or a tax system based on ability to pay, that help ensure that the gains from greater productivity are spread more broadly and not captured entirely by those at the top.

All of which is to say: a report on prosperity policies should focus on how to increase investment (public and private), how to strengthen labor productivity through education, or how to maintain an economy at full employment with a healthy labor force. And it should address how that prosperity is shared. Instead, the reports examined here focus almost exclusively on how states can out-compete each other for business investment through tax cutting and through policies that suppress wages by weakening the position of workers.

But let us suppose that we buy into the beggar-thy-neighbor strategy of competitive cutting of business costs: Will it even work? Will tax cutting and wage-suppression policies cause a state to grow more rapidly, at the expense of its neighbors? Here we look at what the research tells us about such a strategy.

### ***State and Local Taxes are Not Significant Determinants of Growth***

Underlying the state rankings examined here is the belief that state government should use its power to lower the costs of doing business and thereby entice firms

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to relocate or expand in one state at the expense of another. The rankings pay most attention to state and local taxes on businesses and high-income individuals.

However, any cost-reduction strategy limited to state and local taxes is focusing on a very small component of business costs. Businesses take many factors into account when making an investment location decision; they weigh most heavily the business basics that comprise more than 98 percent of their cost structure. Those factors vary greatly depending upon what the company makes or does; which part of the company is being sited; where the company and industry are in their life cycle; where the company and its competitors already have facilities, and other factors. Common key variables include: proximity to markets and to suppliers; transportation infrastructure; supply of labor with appropriate education and skills; wage and salary rates; energy costs; occupancy costs (to buy or lease space); access to supporting business services; the quality of local schools, recreation amenities, climate and other amenities important in attracting and retaining skilled labor; and proximity to university research facilities. For service-sector companies, labor is the biggest cost; for manufacturing or warehousing, physical plant space is also a major expense.

By comparison, all state and local taxes on businesses combined (including corporate and individual income taxes, sales taxes,

plus local property taxes) represent only about 1.8 percent of total business costs on average for all states.<sup>11</sup> Corporate income taxes, in turn, are only about 9.5 percent of that 1.8 percent, or 0.17 percent, according to one estimate.<sup>12</sup> Put another way, a large corporate tax break that reduces a company's corporate income tax bill by half represents a cost savings to the average firm of just 0.09 percent.<sup>13</sup> By contrast, tiny differences in big-ticket cost items such as labor, occupancy, energy, or raw materials, would dwarf anything a company could gain via tax breaks.

Such a tiny change in the cost calculus facing a business cannot be expected to change any meaningful share of site location choices. Any tax differences will be overwhelmed by differences in other costs. As a result, all or nearly all of any across the board tax cut will be wasted on corporations that would have chosen or remained in a state anyway.

If tax rates do affect business location decisions to any degree, then states with lower taxes should experience more rapid growth, other things held equal. The last phrase, "other things held equal," is crucial. If a state lowers corporate taxes, it must deal with the loss of revenue by raising taxes on individuals and/or other businesses or by lowering the quality of public services, or some of both. Either action could make a state less attractive for private investment.

As stated above, many factors influence business location decisions. To discern the separate effect of tax levels, researchers must use statistical techniques to hold all other relevant factors constant. The question is: if two states are similar in their business basics (labor skills and wages, access to markets and materials, occupancy and energy costs, etc.), will a difference in business taxes be associated with a difference in growth rates? Statistical techniques have become increasingly sophisticated over the past 25 years, enabling better ways to control for other location determinants and thereby generate more reliable answers to this question. While even the most sophisticated statistical analysis cannot *prove* causality, the more carefully a study controls for the whole range of factors reasonably believed to affect business decisions, and the more often such studies are replicated, the more confidence we gain in evidence of a causal relation.

Fortunately for those seriously interested in learning how taxes interact with economic growth, there has been a large volume of research investigating this question over the past 40 years. Three meta-summaries of the research, in 1988 (by Newman and Sullivan), 1991 (by Bartik), and in 1998 (by Wasylenko) produced something of a consensus on the independent effect of state taxes on state growth.<sup>14</sup> The research conclusions were expressed in terms of “elasticity,” a measure of how sensitive growth is to taxes. The elasticity of state

GDP with respect to state taxes, for example, is the percentage change in GDP divided by the percentage change in taxes.

Bartik’s review of 59 studies completed prior to 1991, including 34 studies that attempted to measure the effects of business taxes on state output, led him to conclude that the bulk of the credible research indicated an elasticity somewhere between -.1 and -.6, and probably about -.3. What does this mean? It means that a 10 percent reduction in taxes will lead eventually to an increase in the state GDP of 3 percent (+3 percent divided by -10 percent is equal to the elasticity of -.3).

Subsequent literature reviews report continued mixed results, with several studies finding no significant effect of business taxes on state growth, and others finding statistically significant but small effects (almost all within the range of -1. to -.6).<sup>15</sup>

The preponderance of the evidence, then, from many dozens of peer-reviewed studies over several decades is that business tax cuts, *if they could be enacted without cutting public spending*, have some positive effect on state economic growth, but that this effect is quite small. These statistically-controlled policy experiments are in effect *holding all else equal*. It is important to understand what this means. The research does not imply that a 10 percent cut in taxes on business that is paid for by cutting the state budget would produce 3 percent

growth. Such a pair of actions (states of course must balance their budgets) might well produce no growth at all, especially in the long run, because budget cuts necessarily mean cuts in state and local services essential to the functioning of the economy. As Bartik himself has said: “[A]n economic development policy of business tax cuts may fail to increase jobs in a state or metropolitan area if it leads to a deterioration of public services to business. An economic development policy of tax increases may succeed in increasing jobs if it significantly improves public services to business.”<sup>16</sup>

Business tax breaks could be financed, alternatively, by increases in taxes on households. However, such a strategy is likely to result in a net *decrease* in consumer spending within the state, with resultant harm to local retailers and other in-state businesses, and to the state economy.<sup>17</sup> This is the case because a greater share of household income than of business profits is spent locally.

It is also important to understand why these effects are correctly characterized as quite small to nonexistent. They suggest that a 10 percent cut in *total state and local taxes on business*—not a 10 percent cut in any one business tax—might lead to a 3 percent increase in growth. However, a 10 percent cut in a state’s corporate income tax would reduce the *total* state and local taxes on all businesses in the average state by only about 1 percent (because, as stated before, state corporate income taxes are

only 9.5 percent of all state and local taxes on companies). It is important to keep this fact in mind when examining the business climate studies, because they pay so much attention to income tax rates. A 10 percent income tax rate cut (equaling a 1 percent cut in total taxes) would lead to a meager 0.3 percent increase in growth. And, again, much or even all of that small gain is likely to be canceled out by offsetting spending cuts and/or tax increases.

### ***Wage Suppression Policies Do Not Generate Prosperity***

While tax policies dominate the six reports, three also cover labor policies. In particular, they view state minimum wage laws as impediments to growth and so-called “right-to-work” (RTW) laws as boosters of growth. Right-to-work laws do not create a right to a job, of course. Instead they take away the right of private-sector labor unions to negotiate a contract provision requiring all workers who are covered by and benefit from a union contract to support the cost of negotiating and maintaining that contract. In fact, federal law requires private-sector unions to provide their services, including resolution of grievances, to all workers in the workplace. So the effect of RTW is to force dues-paying union members to give free services to non-members. RTW states would more accurately be dubbed “Right to Freeload” states. The clear intent and effect of such laws is to weaken unions, thereby reducing their ability to win higher wages and better benefits.

It has been documented conclusively that wages are lower and benefits more meager in RTW states. In a study that examined the effect of a state's RTW status, controlling for differences in the cost of living, demographics, job characteristics, education of the workforce, and other factors, it was found that in RTW states, compared to free-bargaining (non-RTW) states, wages are 3.2 percent lower, a smaller percentage of workers (by 2.6 percentage points) have employer-sponsored health insurance, and the percent of workers with employer-sponsored pensions is 4.8 percentage points lower.<sup>18</sup>

These effects would be larger, of course, if we considered only those private industries with the highest unionization rates. But even those effects are still small given that only 6.6 percent of private-sector jobs in the U.S. are unionized (RTW does not pertain to public employees) and many sectors of the economy have virtually no unionization, making RTW basically irrelevant for employers choosing locations in, for example, high technology, financial services, information technology, and most of the service sector. It is important to note also that these are the effects for all workers in the state, union and non-union. Because some employers provide wages and benefits close to union levels as a way to discourage workers from organizing, or out of competitive necessity, reducing unions' bargaining power can affect compensation levels more broadly. The study also found

that the RTW wage penalty is higher for women, blacks and Hispanics.

What about economic growth? Perhaps employers prefer RTW states and weak unions to such a degree that those states experience greater growth in GDP and employment. This turns out not to be the case. As Gordon Lafer has documented, a 50-state examination of growth in per capita income from 1977 to 2008 reveals no pattern with respect to RTW status. Just focusing on the outliers he found that the fastest-growing and the slowest-growing states were both free bargaining states, while RTW states claimed both the third-highest and the third-lowest growth rates. Lafer puts it this way: "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."<sup>19</sup>

A serious attempt to isolate the impact of RTW on state growth would have to control for these other factors—state economic structure, climate, workforce demographics, and others. Two recent studies have done just that. One concluded: "...right to work laws ... seem to have no effect on economic activity."<sup>20</sup> The other found that right-to-work laws have no significant impact on job growth or the rate of new business formation, but do result in lower wages and lower per capita income.<sup>21</sup>

Most states (45) have minimum wage laws that establish a state minimum wage for groups of workers not covered by the federal minimum and/or establish a state minimum for federally-covered workers that is higher than the federal rate (currently 17 states). The ALEC-Laffer State Economic Outlook Ranking penalizes states for having a state minimum wage higher than the federal. How could raising wages for thousands of low-wage workers *reduce* prosperity? Laffer provides no rationale whatsoever for this claim. Presumably he would reiterate the old argument that minimum wages cost jobs. But research conducted in the 1990s and more recently has demonstrated that the employment effects of a modest increase in the minimum wage are very small or nonexistent; as a result, the minimum wage clearly raises incomes overall.<sup>22</sup> Second, minimum-wage jobs are overwhelmingly in local market sectors: leisure and hospitality (especially food service occupations) and retail trade.<sup>23</sup> By that we mean these are not “footloose” industries with capital mobility to seek out the best production location among many states and then export to national or world markets; these jobs are tied to local markets.

### ***How Much Do Businesses Pay in Taxes?***

Business taxes are either the central or exclusive focus of the state business climate rankings detailed in this study. One might reasonably ask: So why do we need all

these different rankings? Why don't we just measure what businesses pay in state and local taxes in each state and be done with it? This is a reasonable question, for there is a standard metric that is commonly used to rank states: total state and local taxes falling on businesses as a percentage of some measure of total business activity such as state Gross Domestic Product (GDP). This is a rough but reasonable measure of the bite that taxes take out of business income in a state. If business profits everywhere are about the same percentage of state GDP then this measure is proportional to the effective tax rate on profits in each state (i.e., the rate businesses actually pay on all their profits, which is always substantially less than the nominal tax rate).

There are complications, of course. Determining which taxes are taxes on businesses, as opposed to individuals, is not as straightforward as one might think. The first step is to determine which taxes are at least initially paid by businesses. The corporate income tax is easy: it falls only on for-profit corporations. Business license or franchise taxes, and insurance premium taxes, also fall only on the business, while unemployment insurance taxes fall on all employers. State sales and excise taxes, on the other hand, fall largely on consumers since they tax primarily goods and services at the final purchase (especially in those states that broadly exempt business-to-business sales transactions).

Many goods and services are purchased by both consumers and by businesses

(computers, stationery, and building materials, for example), and some states' sales taxes apply to certain items that are clearly production inputs rather than final goods (such as electricity used in manufacturing). So the analysis must separate business from consumer purchases. Individual income taxes fall on wages and salaries, but also on business income from sole proprietorships, partnerships, limited liability companies (LLCs), and subchapter S corporations. The latter three are "pass-through entities:" business income is not taxed at the business level but is passed through to the owners, who report it on their individual income tax returns. Finally, property taxes fall on agricultural, utility, commercial and industrial property as well as residential real estate.

It is possible to sort out or to estimate the business share of sales, excise, individual income, and property taxes, and thus to produce an estimate of the total state and local taxes falling initially on businesses. That is where studies generally end. But that is not where the story really ends: businesses may have greater or lesser ability to pass taxes on to consumers in the form of higher prices, or to workers in lower wages or to real estate owners in lower rents or purchase prices, depending on market conditions. A complete tax incidence analysis would attempt to determine how much of each tax is actually borne by the business owner writing the check to the state department of revenue, and how much is passed along to other

parties. This is quite difficult to do in a thoroughgoing fashion, state by state, and one might be satisfied with the assumption that the share of business taxes that sticks with the business is pretty much the same from one state to another, so it is not misleading to compare states on the basis of total business taxes.

Still, there are instances where incidence really should be taken into account and where an assumption of equivalence clearly falls down. Severance taxes are the primary example. Few economists would argue that, for example, Alaska's oil severance tax falls on Alaska businesses. Instead, the tax is largely passed on to consumers elsewhere in the form of higher prices for gasoline and other oil byproducts. This matters because severance tax revenues are a very substantial share of state revenues in a handful of states (also Wyoming, Texas and North Dakota) but small or nonexistent everywhere else. Including them as a business tax makes severance-tax states look like high-tax places for all businesses, which is quite misleading.

Ernst and Young, in conjunction with the Council on State Taxation (COST), have been producing estimates of the state and local taxes falling on business, by state, for several years.<sup>24</sup> They take the approach of including all taxes where a business has the legal obligation of making the tax payment. In other words, they ignore final incidence. This approach, in other words, does not measure the share of taxes ultimately

## WHAT DO THE BUSINESS CLIMATE RANKINGS REALLY TELL US?

borne by business *owners*. This would not be a severe problem in comparing states as long as state tax systems did not differ substantially in how much they rely on taxes that are more shiftable versus less shiftable. The severance tax stands out because it falls on only one kind of business and is assumed to be shifted to consumers, most of whom reside in other states. This is correctable, however, by recomputing the effective business tax rate. In Table 1.1, we show total taxes falling on business and the effective tax rate—taxes falling on business as a share of state GDP—as calculated by COST for fiscal year 2011, and recalculated by us, subtracting state severance tax revenue from the total.

The point to be made here is that it is possible to come up with reasonable estimates of the overall, average level of taxation of business by state. There is no need to substitute arbitrary and complicated scoring systems rating the “tax climate,” with much mischief hidden in the details of measurement and the weighting schemes, when a simple measure of tax levels is available. The more important issue, however, is whether even overall measures of the level of business taxation such as those shown in Table 1.1 indicate anything about the *competitiveness* of a state for business investment. For a number of reasons detailed in this chapter, and explored further in the concluding chapter, we argue that they do not.



**TABLE 1.1 STATE AND LOCAL TAXES ON BUSINESS, FY 2011: EFFECTIVE TAX RATES WITH AND WITHOUT SEVERANCE TAXES**

	COST Report			Excluding Severance Taxes		
	Amount (\$ billions)	Percent of GSP	Rank	Amount (\$ billions)	Percent of GSP	Rank
Alabama	\$ 6.9	4.9%	24	\$ 6.8	4.8%	23
Alaska	6.1	15.4%	1	1.9	4.7%	27
Arizona	10.8	4.9%	24	10.8	4.9%	20
Arkansas	4.0	4.5%	34	3.9	4.4%	36
California	89.9	5.3%	16	89.9	5.3%	13
Colorado	10.1	4.5%	34	10.0	4.4%	35
Connecticut	7.4	3.6%	47	7.4	3.6%	47
Delaware	2.2	3.7%	46	2.2	3.7%	46
Florida	41.2	6.3%	8	41.1	6.3%	3
Georgia	14.8	4.2%	41	14.8	4.2%	40
Hawaii	3.0	5.9%	12	3.0	5.9%	7
Idaho	2.2	4.6%	31	2.2	4.6%	31
Illinois	28.3	4.8%	27	28.3	4.8%	24
Indiana	10.3	4.2%	41	10.3	4.2%	42
Iowa	6.0	4.7%	29	6.0	4.7%	26
Kansas	5.9	5.5%	14	5.8	5.4%	11
Kentucky	6.9	5.1%	18	6.6	4.8%	22
Louisiana	9.7	4.5%	34	9.0	4.2%	43
Maine	3.0	6.9%	5	3.0	6.9%	2
Maryland	9.3	3.8%	45	9.3	3.8%	45
Massachusetts	14.9	4.3%	40	14.9	4.3%	39
Michigan	14.6	4.4%	38	14.5	4.4%	38
Minnesota	11.1	4.5%	34	11.1	4.5%	33
Mississippi	4.9	6.2%	9	4.8	6.1%	5
Missouri	9.1	4.2%	41	9.1	4.2%	41
Montana	1.9	6.0%	11	1.6	5.1%	14
Nebraska	3.9	4.9%	24	3.9	4.9%	19
Nevada	6.1	5.3%	16	5.8	5.1%	16
New Hampshire	2.6	4.6%	31	2.6	4.6%	30
New Jersey	21.8	5.1%	18	21.8	5.1%	15
New Mexico	4.1	6.6%	7	3.3	5.3%	12
New York	63.5	6.2%	9	63.5	6.2%	4
North Carolina	12.9	3.5%	49	12.9	3.5%	49
North Dakota	3.4	10.4%	2	1.5	4.6%	29
Ohio	20.1	4.8%	27	20.1	4.8%	25
Oklahoma	6.4	5.1%	18	5.6	4.4%	34
Oregon	5.9	3.5%	49	5.9	3.5%	50
Pennsylvania	25.3	5.0%	22	25.3	5.0%	17
Rhode Island	2.4	5.6%	13	2.4	5.6%	9
South Carolina	6.7	5.0%	22	6.7	5.0%	17
South Dakota	1.6	4.6%	31	1.6	4.6%	32
Tennessee	10.0	4.4%	38	10.0	4.4%	37
Texas	56.8	5.1%	18	54.1	4.9%	21
Utah	3.9	3.6%	47	3.8	3.5%	48
Vermont	1.6	7.3%	4	1.6	7.3%	1
Virginia	13.8	4.0%	44	13.8	4.0%	44
Washington	16.3	5.5%	14	16.3	5.5%	10
West Virginia	3.6	6.9%	5	3.0	5.8%	8
Wisconsin	10.5	4.7%	29	10.5	4.7%	28
Wyoming	2.9	9.3%	3	1.9	6.0%	6
United States	643.9	5.0%		629.2	4.9%	

## Chapter 2: ALEC's *Rich States, Poor States*

One of the newer attempts at ranking states, *Rich States, Poor States: ALEC-Laffer State Economic Competitiveness Index*, celebrated its fifth anniversary in 2012.<sup>25</sup> Written by Arthur Laffer and others and published by the American Legislative Exchange Council (ALEC), *Rich States, Poor States* embodies the policy agenda that ALEC pushes to state legislators: reduction or abolition of progressive taxes, fewer investments in education and other public services, a smaller social safety net, and weaker or non-existent unions. These are the policies, ALEC claims, that promote economic growth.

Despite the long-established body of evidence regarding the sources of growth, *Rich States, Poor States* consistently fails to acknowledge where state prosperity comes from and the vital role of state government investments in ensuring effective economic development. Its focus instead is on measures that would produce growth without development, or would merely facilitate the greater accumulation of wealth by those already the richest. By “growth without development,” we mean an increase in state GDP or jobs, where the gains are captured in higher profits rather higher wages, or where job gains are at the low end of the wage scale and displace better paying jobs. The ALEC-Laffer strategies are exclusively those that would lower taxes on corporations and the wealthy, reduce public sector revenues

(and hence public investments in education, health and infrastructure), and suppress wages by eliminating minimum wages and weakening the bargaining power of workers. Yet their proposals claim that all of these measures would make states, and their populations, richer.

The centerpiece of *Rich States, Poor States*, in fact the subtitle of the report itself, is the ALEC-Laffer State Economic Competitiveness Index, which consists of two separate state rankings, one based on past performance, the other allegedly portraying the outlook for future growth. (Despite the subtitle of the report, there is actually no Competitiveness Index that combines the two; there are simply the two rankings.) The Economic Outlook Ranking (EOR) combines state rankings on 15 “fiscal and regulatory policy variables” that the report claims have been shown to be significantly related to the ability of a state to compete successfully for business activity and growth. Each state’s overall ranking is based simply on the sum of its 15 rankings (i.e., they are weighted equally).

The Economic Performance Ranking (EPR) is based similarly on the sum of rankings on separate measures, in this case just three: absolute domestic migration, per capita income growth, and non-farm payroll growth between 2000 and 2010. It is not clear why the authors narrow the ranking to just these three measures

since elsewhere in the report they focus considerable attention as well on other performance measures, notably growth in state Gross Domestic Product (GDP), overall population growth, and state and local government tax revenue.

### **The Economic Competitiveness Index Fails to Predict Growth**

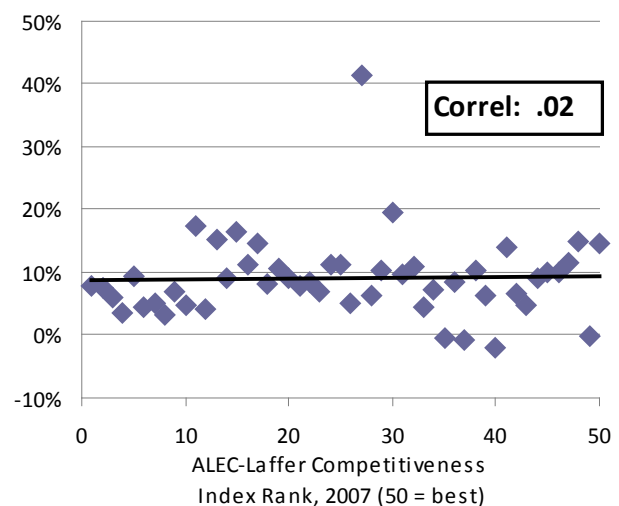
ALEC has been publishing its index since 2007. The obvious question, then, is: How well do the outlook rankings predict state economic performance since 2007? Rather than focus on the best and worst eight or ten states, as *Rich States, Poor States* is wont to do, we consider all 50 states, ranked from 1 as least competitive according to the 2007 index to 50 for the most competitive.<sup>26</sup> We will look at scatter plots showing the state's ALEC rank versus growth on various economic performance measures so that a trend line fitted to the data shows by its steepness whether higher-ranked states do better or worse on a particular measure. The five performance measures illustrated—non-farm employment, per capita personal income, population growth, state Gross Domestic Product, and state revenue—are the principal ones relied on by ALEC in its Economic Performance Ranking and in its discussions of state performance throughout their report.<sup>27</sup>

As the charts below show, the ALEC Outlook Ranking fails to predict economic performance on four key measures of growth. On the horizontal axis, the states are arrayed according to their ALEC ranking, from the “worst” state at position

1 to the “best” state at number 50. The vertical axis shows where each state fell on some measure of economic performance. If the ALEC outlook ranking worked as advertised, the trend line shown in each graph would slope up and to the right: the better a state's ranking, the better the performance. The correlation would be positive and significantly greater than zero (the maximum possible being a value of 1.0, which would be a perfect correlation).<sup>28</sup>

Let's look first at a key measure of economic growth: change in state GDP. As Figure 2.1 shows, there is virtually no relationship between the ranking in 2007 and a state's five-year rate of growth in GDP; the correlation is insignificant at 0.02, almost zero. The states are all over the place, and there is no tendency for better ranked states to do any better or any worse than lower ranked states.

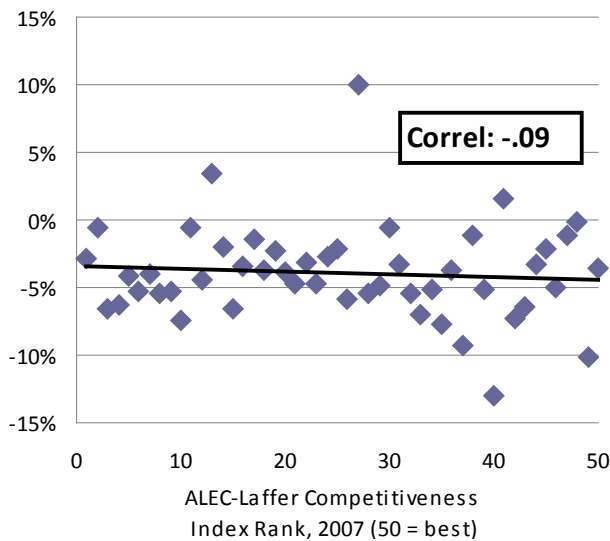
**FIGURE 2.1. PERCENT CHANGE IN STATE GDP, 2007-2011**



WHAT DO THE BUSINESS CLIMATE RANKINGS REALLY TELL US?

Next, consider the growth in non-farm employment, shown in Figure 2.2. Here the correlation is slightly stronger but still not statistically significant, and actually negative (-0.09): in other words, the higher a state was ranked on the A-L Index in 2007 the worse its job creation record over the next five years.

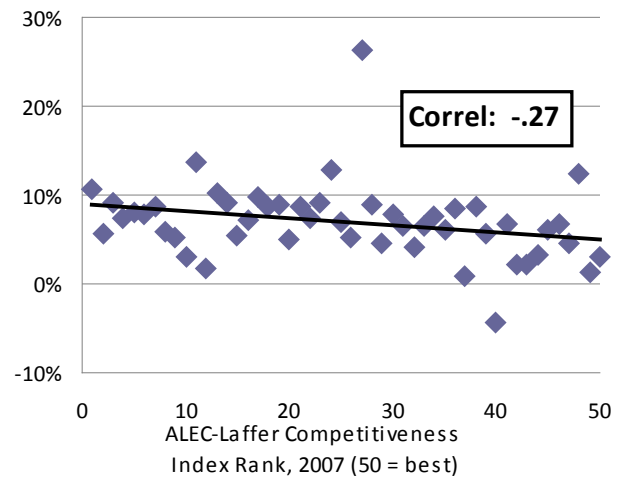
**FIGURE 2.2. PERCENT CHANGE IN NON-FARM EMPLOYMENT, 2007-2011**



Most tellingly, since the ALEC-Laffer report is about policies to enhance state prosperity, the 2007 Economic Outlook Ranking is actually a decent predictor of how state per capita income will change from 2007 to 2011—but in the opposite direction from what the report claims. The more “competitive” a state was according

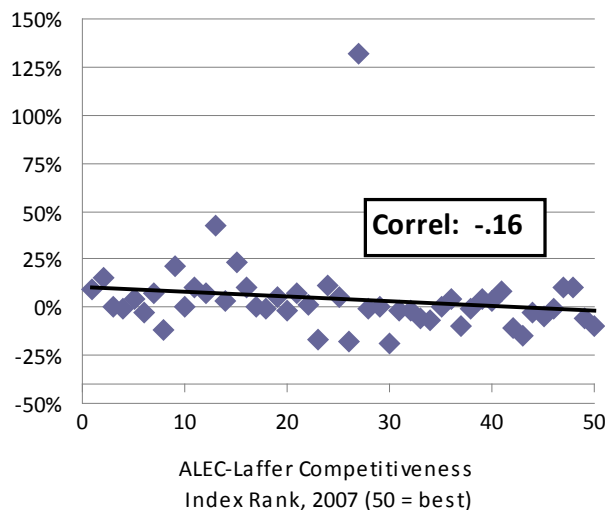
to ALEC, the less its per capita income grew (see Figure 2.3). The negative correlation of -.27 is statistically significant.<sup>29</sup>

**FIGURE 2.3. PERCENT CHANGE IN PER CAPITA INCOME, 2007-2011**



Finally, Laffer et al claim that states that follow their policy prescriptions will experience more growth and higher incomes, which in turn will translate into greater government revenue. Not surprisingly, since we have already established that a high ranking on the Economic Outlook Ranking is actually associated with lower job growth and lower incomes, the ALEC-Laffer claim about fiscal benefits is also contradicted by the evidence. As Figure 2.4 illustrates, the better a state was rated in the Economic Outlook Ranking, the smaller its growth in state and local revenue.

**FIGURE 2.4. PERCENT CHANGE IN STATE & LOCAL GOVERNMENT REVENUE, 2007-2011**



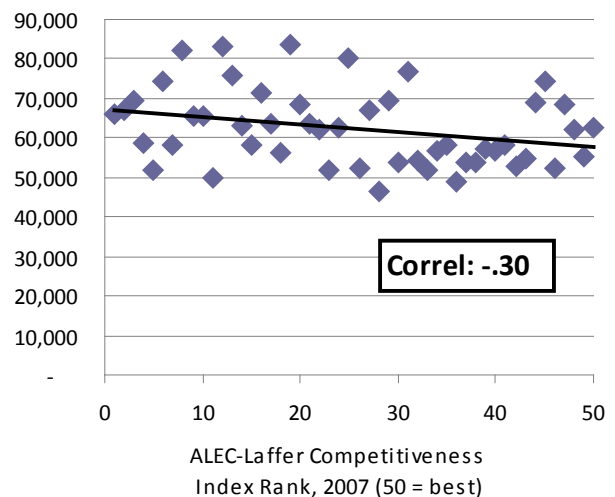
Population growth turns out to be the only measure on which the ALEC-Laffer Index performs as advertised: states ranked higher on the index in 2007 experienced greater population growth from 2007 to 2011. But population growth—the net effect of births minus deaths, in-migration minus out-migration—is not a measure of economic performance. It may be driven in part by the economy, in that people should be drawn to states with more and better jobs. But this is obviously not what is happening here, given that the states with the greatest population growth actually had the worst job creation and income growth.

It makes sense as well to test the ALEC rankings against two other measures of the standard of living of the state's population: median family income and the poverty rate. The ALEC report, after all, purports to tell us what causes some states to become

richer, others poorer. Here we consider both the level of income or poverty each year from 2007 to 2011 and the change in income or poverty over that period.

Once again, actual results are the opposite of the ALEC claim. The more a state's policies mirrored the ALEC low-tax/regressive taxation/limited government agenda, the lower the median family income. This is true for every year from 2007 through 2011; Figure 2.5 below shows the results just for 2011. The relationship is not only negative each year, it also became worse over time: the better a state did on the ALEC Outlook Ranking, the more family income declined from 2007 to 2011. The correlation,  $-.30$ , is statistically significant.

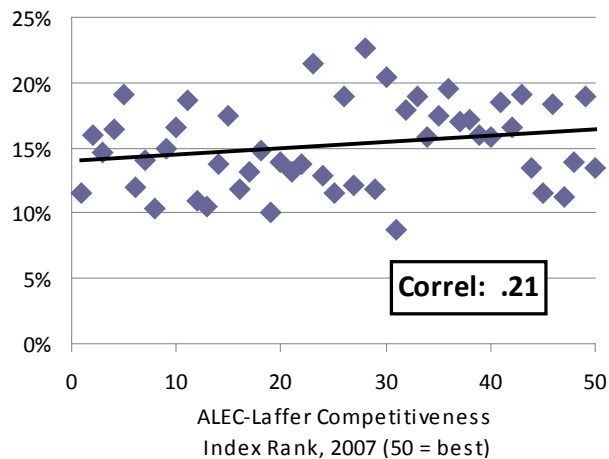
**FIGURE 2.5. MEDIAN FAMILY INCOME, 2011**



The story repeats itself when we consider state poverty rates. The more a state followed the Alec-Laffer policies, the higher

its poverty rate, every year from 2007 to 2011. Figure 2.6 shows the relation for 2011. And again, the situation became worse over time: the more competitive a state according to the Economic Outlook Ranking, the more the poverty rate increased from 2007 to 2011. The correlation of .21 is marginally statistically significant.<sup>30</sup>

FIGURE 2.6. POVERTY RATE IN 2011



All of the above calculations represent an improvement over the methods of Laffer and company in *Rich States, Poor States*. Instead of focusing only on the top and bottom six or nine or ten states, where the cutoffs are selective and arbitrary, we consider all 50 states and compute a correlation coefficient. Still, while we demonstrate a negative relationship between ALEC's recommendations and a stronger economy, we do not pretend that such correlations establish causality. But Laffer argues that the relationship is so strong between the policies of *Rich*

*States, Poor States* and beneficial outcomes that it will show up repeatedly in simple correlations. Clearly the evidence, when examined using a more objective and reliable approach, does not support this conclusion.

### **The Index Components Do No Better at Predicting Growth**

The ALEC-Laffer Index fails to predict a state's success over the 2007-2011 period because it focuses on factors that matter little, if at all. This becomes even clearer when we examine the individual components of the index, and compare their predictive ability to a factor that is much more relevant: state economic structure.

Consider the ALEC-Laffer component variables. In the 2011 edition of *Rich States, Poor States*, they focus particular attention on six factors they say "have consistently stood out as the most important in predicting where jobs will be created and incomes will rise:" personal income taxes, corporate income taxes, the sales tax, estate and inheritance taxes, total taxes, and right-to-work laws. Does this assertion hold up when the analysis controls for other possible causes through a more sophisticated statistical analysis?

Or does the overall economy matter more? State economies are thoroughly integrated within the national and international economies. One would expect that the state economies faring best from 2007 through 2011 would be those with the

largest proportionate shares of high-growth national and worldwide industries and/or those least exposed to declining sectors.

To test this argument, we adopted the approach of Kolko et al in devising a measure of how well a state was poised to grow.<sup>31</sup> 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 2011 if each state sector were to grow (or decline) at the same rate as it did nationally between 2007 and 2011. 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 expected?

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 2011. We examined growth in output (state GDP), 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. This allowed us to answer the question: Did the ALEC-Laffer EOR ranking influence the rate at which states grew, on any of these measures, holding constant the composition of the state economy?

It did not. The EOR failed to have a statistically significant effect on any of the measures of growth, with one exception: the *worse* the state's EOR in 2007, the *more* per capita income grew in the subsequent five-year period (though this effect was only marginally significant). This finding corroborates the relationship depicted in Figure 2.3, with better-ranked states having slower growth in per capita income. 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 large and statistically significant effect for every measure of growth. (For the results of all of the statistical tests described in this section, see Appendix C.) Much of this effect, no doubt, has to do with the resilience of resource-based economies during this period, and is 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.

We then decided to see if the ALEC-Laffer policy prescriptions fared any better if we focused on its components instead of the overall rank. In place of the EOR, we included in the statistical model five variables deemed most important by Laffer et al: the top personal income tax rate, the top corporate income tax rate, sales taxes per \$1,000 of personal income, the existence of estate and inheritance taxes, and “right-to-work” status. The results are the same: none of the five components helps explain why some states grew faster in terms of state GDP, jobs, per capita

income, median family income, or median annual wages, from 2007 to 2011, or why some states had poverty rates that increased more than others. Once again, the composition of the state economy was a highly statistically significant factor in all cases.

Finally, we decided to test further the relationship between the ALEC-Laffer EOR and state prosperity, as measured by our income, wage, and poverty variables. Here we looked not at growth rates, but at the average level of income, wages, or poverty during the five year period 2007-2011. Because we are not looking at changes over time, economic structure at the start of the period is less relevant. For control variables, we used education level (the percent of adults with a bachelor's degree or higher) and the level of urbanization (percent of the population living in a metropolitan area). We know that historically education level is the single most important predictor of income. It is also to be expected that incomes and wages are higher in urban areas, in part because of the higher cost of living there and the concentration of higher wage jobs. The results show that education level is a very strong predictor of income and wage levels, and of poverty rates. Urbanization, on the other hand, is statistically significant only in predicting the median annual wage. The ALEC-Laffer EOR fails to have any predictive power with one exception: The worse a state's ranking, the higher the median annual wage.

Will the 2011 Economic Outlook Rankings perform any better in predicting economic

prosperity over the next five years? There is little reason to think so. The ranking is based on the same measures<sup>32</sup>, and, as we have seen, it succeeds in predicting state performance only in a negative sense: the more "competitive" are state policies according to the 2007 ALEC ranking, the lower the growth in a state's per capita income and the lower the level of wages.

### ***Small Businesses and Personal Income Tax Rates***

Laffer and ALEC routinely invoke the "small businesses are hurt" argument against proposals to make the tax system less regressive. In *Rich States, Poor States*, their argument is that personal income tax increases affect many small business owners because they are organized as proprietorships or pass-through entities (partnership, S corporations, and LLCs) and therefore pay income taxes as persons, not corporations.

In fact, the personal income tax is more small-business friendly than the sales tax or the property tax. The sales tax hits new, small, or marginally profitable businesses harder because it taxes business purchases: sales tax liabilities do not vary with profits. The property tax also can be more of a problem for the new business; property taxes are due on business and personal property (which is often the collateral and the source of initial equity for many a new business) whether the business is in infancy and still struggling to earn a profit, or established and profitable. Income taxes,



on the other hand, are low or nonexistent in the early years of a business when it is showing losses; they are payable only to the extent that a business has gotten off the ground and is generating a profit, and even then will often remain low, or nonexistent, for years as the early losses are carried forward.

Clearly if a state wants to encourage entrepreneurship and help young and small businesses, it should shift taxes from sales and property to income. But *Rich States, Poor States* would have us do the reverse. It's another example of how ALEC and Laffer are fixated against progressivity (which most affects high-income individuals and larger corporations) and will employ any argument, valid or not, against it.

As evidence for the claim that "eliminating the personal income tax is good for state growth," Laffer cites three academic studies.<sup>33</sup> One, by Mark, McGuire and Papke, turns out not to be about state-level policy and growth as implied by Laffer but about local taxes and growth within a metropolitan area; furthermore, their research found *no* statistically significant relation between the personal income tax rate and population growth, and did not even consider the effect of the personal income tax on job growth or business location.<sup>34</sup> The second, by Timothy Bartik, estimated the effect of the corporate income tax, not the personal income tax, on new plant locations. Thus, contrary to Laffer's claim, neither of these two articles provides any support for his proposed elimination of

the personal income tax. The third article, by Poulson and Kaplan, was not published in a refereed academic journal but rather in the house organ of the conservative think tank, the Cato Institute; it did not include controls for any of the major non-tax factors influencing growth (such as wage rates or public expenditures) and cannot be considered a credible analysis of the independent effects of income tax rates.<sup>35</sup>

In summary, the policy prescriptions in *Rich States, Poor States* do nothing to explain why some states created more jobs than others, or why some states experienced more growth in income per person than others, from 2007 through 2011. Indeed, the policies that make up the ALEC-Laffer Economic Outlook Ranking are not a recipe for growth and prosperity, but more likely quite the opposite.

### ***Government Has an Important Role to Play in the Economy***

Laffer et al would have us believe that government has no useful role to play in the economy, so that reductions in state revenue, no matter how drastic, have no consequences. The fervent anti-government bias in this report is evident throughout, in statements such as this: "The bottom line is governments don't create resources; they redistribute resources...Every resource given to someone by the government represents a resource being taken away from someone else by the government."<sup>36</sup> Apparently the interstate highway system is not a resource; public school buildings are

not resources; an educated workforce is not a resource; state employment offices, public hospitals, fire trucks, water and sewer systems, libraries, national parks, the court system – none of these things are resources. Or perhaps Laffer is just arguing that the taxes and other revenues used to create these resources should be abolished and people should buy their own schools, parks, libraries, fire departments, district courts, and water treatment plants on the private market. The absurdity of either position is self-evident.

Laffer and company do not even concede a role for government in economic stabilization. They claim that all transfer payments—unemployment compensation, welfare, food stamps, Social Security—provide no economic stimulus because they are entirely offset by tax increases necessary to fund them. The fact that safety-net spending automatically increases during a recession leads to a “sharper drop in output,” they claim, and “an increase in unemployment benefits is expected to lead to a rise in unemployment.” Any introductory economics text will explain how these programs function as automatic stabilizers, sustaining consumer demand at a time when the private market economy is failing to produce full employment, and thereby reducing the severity of the business cycle.<sup>37</sup>

Analyses also show that an increase in taxes on upper-income households to finance an increase in transfer payments would have a net positive effect on the economy. Increased spending induced by

transfer payments is much higher than the reduction in spending caused by taxing high incomes. Increases in food stamps or unemployment compensation in fact have five times the stimulus effects of cuts in taxes on high-income households.<sup>38</sup> Progressivity is good for the economy, a truth quite inconvenient for ALEC.

### ***The Estate Tax Has Nothing to do with Growth***

Any doubts that the main objective of *Rich States, Poor States* is political—cutting taxes on business owners and high-income people in order to redistribute income upwards—are put to rest by the fact that the report devotes an entire chapter (one of only four) to a condemnation of the most progressive tax of all: the estate tax. The federal estate tax currently exempts the first \$5 million of an estate (\$10 million for a couple). As a result of this large exemption, only about 0.13 percent of U.S. adults dying in 2011 had a taxable estate.<sup>39</sup> It is a tax on the extremely wealthy.

Nowhere are logic and evidence stretched farther than in this chapter’s attempts to tag estate and inheritance taxes as “job killers” that “strangle economic growth.” Once again Laffer et al cite a simplistic correlation—states without estate taxes had higher growth—and then claim that this proves abolishing the estate tax will produce growth. They then devote considerable time to the state of Tennessee, a state that scores very well on most aspects of their Economic Outlook

Ranking but has had lackluster economic performance, which they then deduce must be due entirely to the fact that it has an estate tax. They then conclude—with no evidence whatsoever—that if Tennessee had abolished its estate tax it would have grown at the same rate as the average no-income tax state and would therefore have 200,000 to 220,000 more jobs.

This claim has been thoroughly debunked by the Institute on Taxation and Economic Policy, which notes that Laffer is “asserting that no other differences between Tennessee and the other no-income tax states can possibly explain Tennessee’s slower economic and employment growth,” ignoring many more plausible explanations, including the fact that four of the no-income tax states have booming extractive sectors (Alaska, Wyoming, Nevada and Texas).<sup>40</sup>

How does it help a state economy to have rich people die within its borders instead of somewhere else? Here Laffer and company are quite vague, asserting that states with an estate tax are losing “enormous amounts of accumulated wealth,” and that this wealth would have created jobs, alleviated poverty, and increased tax revenue. How this happens goes unstated. But the wealth typically held by retirees is not the kind of capital normally used in job creation. The wealth that drives prosperity, as we pointed out earlier in this report, consists of real assets: natural resources, plant and equipment, public infrastructure, human capital, technological knowledge. By contrast, large estates typically consist of real estate, stocks and bonds, mutual funds,

and other financial assets—ownership instruments of real assets that could be located anywhere in the world. The future use of those assets is unaffected by where the person who used to own them died.

Finally, dead people are not entrepreneurial, though the heirs of the estate might be. But the decision as to if, where and how those heirs invest the assets is likewise unaffected by the location of the estate. How exactly would a decision of a wealthy household to move to Florida in the closing years of life affect how much the household’s heirs, who could be located anywhere in the world, invest in businesses in Tennessee? It would not, nor would the decision to remain in Tennessee increase the heirs’ investments in that state. But for every taxable estate in Tennessee, the additional tax revenue would indeed be invested in Tennessee—in schools, in roads, and other public assets that are essential for economic growth.

### ***Taxes Have Little to do with Migration***

Over their lifetimes, the majority of Americans do not move far: most remain in the state they grew up in.<sup>41</sup> Of those who do move, many move to a neighboring state. Those who move farther away do so for many reasons: job availability, climate, marriage or proximity to family, housing costs, and other factors. We know this because researchers for many years have been studying migration patterns and what determines where people move. This

research consistently finds that taxes have little to do with migration decisions.<sup>42</sup> This should not be surprising; people are averse to moving because it is costly—finding a new job, selling and buying a home, leaving family and friends.

Ignoring the large body of careful research about the causes of migration, Laffer and his co-authors again resort to unsupported assertions and spurious correlations. They claim, predictably, that high personal income taxes and estate or inheritance taxes are major causes of out-migration and state population loss (or lagging growth). They also make the astounding claim that “taxes never redistribute wealth, but they do redistribute people,” which could happen, strictly speaking, only if *all* of those with incomes above the median fled a state in response to progressive taxation, thwarting the state’s attempt at redistribution. The regressive taxation that they favor, meanwhile, would redistribute income upwards—giving the rich a larger share of after-tax income.

Contradicting these claims by Laffer et al is a substantial body of serious research. A study published in 2011 of the New Jersey 2.6 percent income tax surcharge on those with incomes over \$500,000 found that “exposure to the new tax did not affect migration rates.”<sup>43</sup> Furthermore, the surcharge generated nearly \$1 billion in additional annual revenue (so much for the Laffer Curve effect) and had a modest effect in reducing income inequality. In other words, the tax did redistribute income, but did not redistribute people.

Similarly, Maryland’s imposition of a new higher tax rate on those with incomes above \$1 million did not cause the massive flight of wealth predicted by some. The decline in the number of millionaire filers after the new tax rate went into effect was largely the result of the Great Recession: there were simply fewer people with million-dollar-plus incomes, in Maryland and everywhere else. Furthermore, a few hundred wealthy taxpayers had been leaving the Maryland tax rolls every year (because they died or left the state) prior to the tax increase, for any number of reasons; even if all of the slight increase in out-migration in 2008 and 2009 were induced by the tax increase and not any of the other possible causes (e.g., Baby Boomer retirements kicking in), it would represent merely two percent of the high-earner tax filers.<sup>44</sup>

Another recent study focused on the elderly, a group that one might think would be more likely to migrate in response to tax differences because they are not tied to a location by a job. This analysis of data from four decennial censuses (1970 to 2000), over a period when a number of states enacted or expanded tax preferences for the elderly (such as exempting income from private pensions or Social Security) led the authors to conclude: “Across all of these samples, specifications and tax measures, our results are overwhelming in their failure to reveal any consistent effect of state income tax breaks on elderly migration.”<sup>45</sup>

Even in metropolitan areas split by a state line, where tax differences could most easily

tip the balance and cause in-migrants to pick a city in the lower-tax part of a metro area, research has shown that location choices are affected very little by tax differences.<sup>46</sup>

In sum, those who have conducted serious studies that actually test Laffer's assertions—with large samples over long time frames, and generally in the peer-reviewed literature—consistently find that taxes have little to do with rates of migration into and out of states. This is probably why Laffer falls back on anecdotes (including why he himself moved from California to Tennessee), spurious correlations (California and Hawaii, with nice weather but high taxes, lost population, while Alaska, with bad weather but low taxes, gained population), and unsupported claims.

### ***Tax Cuts Reduce Revenue***

Arthur Laffer's claim to fame is the invention of the Laffer Curve, supposedly sketched out on a napkin for the benefit of Dick Cheney in a Washington, D.C. bar in 1974, and reproduced in the ALEC report not once but twice. The curve is based on an alleged truism: If you tax a particular thing at 100 percent, you will generate zero revenue (e.g., if wages were taxed at 100 percent, no one would work). Therefore, at some point, as the tax rate approaches 100 percent, increasing the rate will decrease revenue. Once in this "prohibitive range," a state could increase revenue by cutting taxes, which is the effect Laffer wants to claim. The curve—which is shown as a

sketchy graphic, not a precise chart—invariably is drawn so that it appears that this prohibitive point is reached at about a 50 percent tax rate.

There are so many things wrong with this depiction and the conclusions drawn from it that it is difficult to know where to begin. First, states tax corporate income in the single digits. Second, Laffer provides no empirical evidence showing at what tax rate the curve starts to bend back, though he implies that we are already there.

Third, Laffer's curve lacks any nuance or complexity: The point at which a rate increase leads to a reduction instead of an increase in revenue—if there is such a point at all—will vary dramatically depending on which commodity or activity is taxed, and by which jurisdictions. Finally, there is no guarantee that the fundamental premise is even true; a tax equal to 100 percent of the price of, say, cigarettes, is quite feasible, and would generate a great deal of revenue. Those addicted to cigarettes would still buy them, even if the tax effectively doubles the price.

This does not deter Laffer and company from making this statement on page xi of the 2011 edition: "Economists have observed a clear Laffer Curve effect with respect to cigarette taxes." Their evidence? States with higher cigarette taxes sell fewer cigarettes than neighboring states with lower taxes. Laffer apparently is counting on the reader not remembering what the Laffer Curve, which he just explained, actually predicts. A reduction in number

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of units sold is not a demonstration of the Laffer effect at all; the Laffer effect is a *reduction in total revenue*.

All competent research on the effect of taxes on cigarette consumption shows that cigarettes are well within what Laffer calls the “normal range,” where an increase in the state tax rate *increases* revenue. Yes, fewer cigarettes are sold in Illinois (Laffer’s example) than would be the case with a lower tax. This is due both to reduced purchases by residents near the borders who buy their cigarettes in a lower tax state, and to some reduction in cigarette use by others. But the loss in sales is more than offset by the gain in tax revenues from the purchases that are still made. If state cigarette taxes are the best example of the Laffer effect ALEC could come up with, its argument is in serious trouble. (Not to mention research that finds higher cigarette prices reduce the number of teenagers who start smoking, thereby reducing long-term state costs for Medicaid.)

Since the focus of *Rich States, Poor States* is on state policies that affect economic growth, let’s examine how the Laffer Curve relates to state taxation of business. Are state taxes in the “normal range,” so that increased tax rates will increase revenue? Or are effective tax rates so high in some states that they fall in the “prohibitive range,” where tax increases would reduce revenue? The latter is certainly what Laffer and company would like us to believe, though they present no credible evidence that this is the case. Keep in mind that states tax corporate and personal income at

single-digit rates. The Institute on Taxation and Economic Policy has documented that the most profitable Fortune 500 corporations pay an average of just 3.0 percent of their profits in income tax to the states.<sup>47</sup> (It has also been documented that the same companies pay actual federal income taxes of only about half the statutory rate of 35 percent.)

In fact, we need only look at the large accumulation of empirical evidence, cited earlier, on the effect of taxes on state economic growth, to realize that states are well within the normal range. As we saw, state economic growth is clearly inelastic with respect to state and local taxes: a 10 percent tax cut leads to perhaps a 3 percent increase in growth. But a 3 percent increase in the tax base is obviously not enough to make up for a 10 percent cut in taxes per unit of tax base. Moreover, the revenue loss begs the issue of how to keep the budget balanced and sustain the same level of public services.<sup>48</sup>

Most importantly, the effect of tax rate increases on revenue depends crucially on what government does with the revenue.<sup>49</sup> In the Laffer model, the implicit assumption is that revenue is simply frittered away on waste and abuse. In fact, of course, it is spent, and government spending can have a substantial positive effect on economic activity and hence on the tax base if used to fund education, job training, or infrastructure improvements that stimulate economic growth and a larger business tax base. Therefore tax increases can increase revenue, especially if the revenue is devoted

to investments that enhance the prospects for long term growth. And tax cuts reduce revenue, and reduce it even more to the extent that the revenue loss results in cuts to investments needed for long-term growth. Tax cuts and windfall incentives have a real and substantial cost.

### **Laffer's Research Methods are Faulty**

Laffer et al acknowledge, after a fashion, our point that serious research on the determinants of state growth requires controlling for a broad range of possible factors. On page 13, they point out correctly that “correlation is not the same thing as causation.” They also state correctly that it is necessary to isolate the effect of the factor of interest (say taxes) from all other factors that influence growth. This is the reason serious research relies on multiple regression analysis—to control for other factors and isolate the effect of taxes. However, Laffer et al spend the rest of *Rich States, Poor States* citing simple correlations as support for their position.

In fact, their admonition regarding causal inferences on page 13 is violated just two paragraphs later. A report by the Institute on Taxation and Economic Policy (ITEP)<sup>50</sup>, concludes that income taxes are not a significant cause of population growth or decline, a conclusion supported by a number of academic studies relying on the kinds of research principles just outlined on page 13 of *Rich States, Poor States*.<sup>51</sup> Laffer's response to this refutation of the *Rich*

*States, Poor States* argument is to employ his favorite “research” technique, which is even more simplistic than calculating a correlation: he compares the average population growth of the nine states with no income tax to growth in the nine states with the highest top personal income tax rates. Such a comparison is meaningless because it assumes that nothing else going on in these states could explain their growth rates: not birth rates, housing prices, wage rates, job availability, public education quality, climate, or recreational and cultural opportunities. None of these factors it seems was worth considering; it all must have come down to income taxes.

The results of serious, peer-reviewed research do not apparently interest Laffer. *Rich States, Poor States* instead proceeds to argue for the powerful effect of taxes on business location on the basis of two kinds of claims: (1) unequivocal assertions with no evidence or research whatever cited in support of them, and (2) simple correlations of the kind that he acknowledges are inadequate and often misleading.

### **ALEC's Response to Us Misses the Mark**

In February, 2013, ALEC struck back at its critics in a report by Eric Fruits and Randall Pozdena called *Tax Myths Debunked*. A portion of that document was devoted to the research reported in this chapter (which was first released in brief form in August 2012 and then in long form

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in November 2012 in our study entitled *Selling Snake Oil to the States: The American Legislative Exchange Council's Flawed Prescriptions for Prosperity*.<sup>52</sup>

The first criticism leveled in *Tax Myths* is directed at our analysis of the factors leading to economic growth and rising incomes among the states between 2007 and 2012. The authors of *Tax Myths Debunked* appear to have completely misunderstood what was done in our analysis; their criticism seems to assume that our model was predicting changes in the share of employment by sector. Instead we were simply using the states' 2007 economic structures – measured by employment shares – to see if they predicted growth in GDP, employment, and personal income. Fruits and Pozdena's criticisms make no sense and are completely off base; 2012 state GDP cannot be a cause of 2007 economic structure, which is the circularity they argue undermines our analysis.

A second criticism was directed at the scatter plots and associated correlations in Figures 2.1 through 2.6. Since all ALEC provided was the state rankings (without index numbers showing their relative strength or weakness), we correlated those rankings with the measures of performance that ALEC emphasizes: growth in GDP, employment, and income. Fruits and Pozdena argue a technical point here: the formula used to calculate the correlation between two continuous variables (the Pearson coefficient) is different from the formula used to calculate the correlation

between two rankings (the Spearman coefficient). We had one ranked variable (ALEC's Economic Outlook Ranking or EOR), and one continuous variable (our data on the states' various outcomes), and used the Pearson coefficient.

To respond to this criticism, we converted our continuous variables to ranks, and then applied the Spearman coefficient. The conclusions are the same. Where there was no statistically significant relation using the Pearson formula (as was the case when we looked at the EOR as a predictor of growth in GDP or jobs), there was also no significant correlation using the Spearman. Where there was a statistically significant and negative relation (ALEC's high ranked states have lower per capita and median family incomes) using the Pearson measure, the same result occurred with the Spearman.<sup>53</sup>

In only one instance did results change, and not favorably for ALEC: Our original analysis showed a negative but not statistically significant relation between EOR and the growth in state revenues. The analysis substituting state ranks in revenue growth found a negative and statistically significant effect as measured by the Spearman coefficient.

Finally, *Tax Myths* presented an alternative to the analyses in *Selling Snake Oil to the States*, correlating the state EOR each year with the June value of the "state coincident indices" published monthly by the Federal Reserve Bank of Philadelphia for each state. The coincident indices are based on



four measures of the health of the state economy: non-farm employment, average hours worked in manufacturing, the unemployment rate, and wage and salary disbursements. Fruits and Pozdena found a strong correlation between a state's EOR and the value of the coincident index.

The state coincident indices are designed for tracking the trajectory of a state's economy over time – whether it is sliding into recession or on a path to recovery – and are pegged to a value of 100 for every state as of 1992. They are used to compare states, but only in terms of the changes in the index over time. So the value of the index as of 2008 is a measure of that state's growth rate from 1992 to 2008, since every state started at 100. However, a high value for state X in 2008 does not mean that state X has a healthier economy than state Y with a lower value in 2008, because state Y could have started out with a much higher level of prosperity in 1992 and still have higher incomes and wages than state X in 2008, despite growing more slowly.

Furthermore, the correlations performed by Fruits and Pozdena are taken as evidence that ALEC policies, as represented by EOR, cause economic health, but they have done it backwards, in effect trying to demonstrate that conformance to ALEC policies in 2008 caused states to grow more rapidly from 1992 to 2008! So why didn't they look at the policies in place as of 2008 and see if they predicted economic growth from 2008 to 2012? The answer is, because the correlations between the EOR in 2008

and changes in the state coincident index subsequent to that are near zero. This is not the result they were looking for.

We have argued here that a more sophisticated approach to identifying the effects of a state's EOR would entail a statistical analysis that controls for economic structure. In fact, a Philadelphia Federal Reserve Bank economist, in an article about the state coincident index, explains how state economic structure is an important determinant of the path of a state economy, as measured by changes in that index over time.<sup>54</sup> In our regression model discussed earlier, we included the change in the state coincident index from 2007 to 2012 as one of the variables to be predicted, along with growth in GDP, jobs, income, and poverty. The results were much the same as the other analyses reported above: When the composition of a state's economy is controlled for, neither the EOR nor any of the five ALEC policy variables has a statistically significant relationship to the rate of improvement in the state's economy over this period as measured by the state coincident index (see Appendix C).

In sum, nothing in *Tax Myths* undercuts any of the analyses or conclusions in this chapter. In fact, the authors' misinterpretation of our use of economic structure variables and misuse of the Philadelphia Federal Reserve Board's state coincident indices serve only to further confirm the shoddiness of the research sponsored by ALEC.

## Conclusion

*Rich States, Poor States* purports to provide a recipe for economic growth and “policies that lead to prosperity.” One could reasonably assume that such a report would explain what states can do to increase wages and incomes, since for most Americans work is the principal route to anything approaching prosperity. Instead, *Rich States, Poor States* is full of advice on measures to lower wages. According to ALEC, state minimum wage laws are a bad thing and unions are to be avoided.

The policies promoted by Laffer et al also entail cutting or eliminating progressive taxes, and cutting public services. To attain the highest EOR would require a state to have no individual or corporate income tax, no estate or inheritance tax, no state

minimum wage, severe tax and expenditure limits, very limited public services, and be a so-called “right-to-work” state.

The evidence and arguments cited to support the beneficial effects of these policies range from deeply flawed to nonexistent. We conclude that the actual purpose of *Rich States, Poor States* is to sell the ALEC-Laffer package of policies—fiscal austerity, regressive taxation and wage suppression—in the sheep’s clothing of economic growth. In actuality, the book provides a recipe for economic inequality and declining incomes for most citizens and for depriving state and local governments of the revenue needed to maintain public infrastructure and education systems that are the underpinnings of long-term economic growth. Their policy prescriptions don’t work.

## Chapter 3: *The U.S. Business Policy Index*

Since 1996, the Small Business and Entrepreneurship Council (SBEC), based in Washington D.C., has produced its annual Small Business Survival Index. The 17<sup>th</sup> annual report was released in December of 2012 and renamed the *U.S. Business Policy Index* (USBPI).<sup>55</sup> The report is subtitled, “Ranking the States on Policy Measures and Costs Impacting Small Business and Entrepreneurship.” Unlike most of the other indexes reviewed here, the USBPI is not claiming to be an assessment of the overall business climate in a state, but rather a narrower measure of how well a state, through public policies, creates a nurturing environment for entrepreneurial activity and the development of small businesses.

The USBPI is the creation of Raymond Keating, chief economist for the Council. The Council’s mission is “securing policies, resources, and educational initiatives that encourage entrepreneurship and small business growth.” The Council has advocated replacing the graduated federal income tax with either a flat income tax, a national sales tax, or a value added tax. Generally, the Council lobbies for lower taxes at the federal and state levels. It has also published reports critical of government spending, of unions, and of government regulation. It opposed the Affordable Care Act, favored denying the U.S. Environmental Protection Agency the power to adopt regulations aimed at

curbing greenhouse gases, and favored the balanced budget amendment. It blames federal policies, including “a vast increase in government spending,” for the recession of 2007-09 and the weak recovery.<sup>56</sup>

### ***Are the Measures that Make Up the USBPI Appropriate?***

While the index purports to be a measure of how well state government supports small businesses and entrepreneurship, the authors apparently believe that there are in fact no government programs or policies that are supportable. The index consists of 46 measures that are described as “government-imposed or government-related costs impacting small businesses and entrepreneurs.” The index, in other words, is largely a measure of how much a state taxes or regulates business. State spending on infrastructure, the quality of the education system, small business development centers or entrepreneurship programs at public universities, technology transfer or business extension programs, business-university partnerships, small business incubators, state venture capital funding—none of these public activities is included in the USBPI.

The composition of the index is shown below (with the measures grouped by us, not the Council). On tax measures, the USBPI rates lower tax rates or no tax

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at all more highly, along with indexing rates (adjusting for inflation), having less progressive rates, and having a tax limitation statute. Being a right-to-work state, having no state minimum wage or a state minimum wage no higher than the federal, and the absence of paid family leave improve a state's ranking. Less regulation (particularly of health insurance), fewer government employees, less government spending, school choice, a lower crime rate, and the absence of renewable energy mandates (renewable portfolio standards) are all good things in this index. Many of their measures are "0-1" variables – the state either has such a tax or tax feature or it doesn't; in all cases a value of "1" is assigned to what they view as the bad alternative, because on their index a higher score is always worse. Estate or inheritance taxes are the exception; the SBEC despises these taxes so much that their presence earns a score of "5" instead of "1".

### Composition of the USBPI Index

#### *Personal Income Tax*

1. Top personal income tax rate (after accounting for the effect of federal deductibility in the five states that allow it)
2. Top capital gains tax rate on individuals
3. Top tax rate on dividends and interest
4. Individual alternative minimum tax ("1" if state imposes AMT)<sup>57</sup>
5. Personal income tax rates indexed ("1" if state fails to index rates)
6. Progressivity of personal income tax: difference between top and bottom rate
7. Deduction for contributions to a health savings account ("1" if no deduction)

#### *Corporate Income Tax*

1. Top corporate income tax rate
2. Top capital gains tax rate on corporations
3. Additional income tax imposed on S-Corporations beyond the top personal income tax rate
4. Corporate alternative minimum tax ("1" if state imposes AMT)
5. Progressivity of corporate income tax: difference between top and bottom rate

#### *Consumption Taxes*

1. State and local sales, gross receipts and excise taxes (excluding gas tax) as a share of personal income
2. Internet access tax ("1" if state has such a tax)
3. State mandates collection of sales tax on internet purchases ("1" if state has such a law)
4. Wireless service sales tax
5. Gas tax (cents per gallon)
6. Diesel tax (cents per gallon)

#### *Other Taxes*

1. Estate or inheritance taxes ("5" if a state imposes either of these taxes)
2. State and local property taxes as a share of personal income
3. Unemployment insurance tax (maximum rate applied to state wage base as a share of state average annual pay)
4. Tax limitation status ("1" if a state has no forms of tax limitation)

#### *Labor Protections*

1. Workers' compensation benefits per \$100 of covered wages
2. Right-to-work status ("1" for non-right-to-work state)
3. Minimum wage (based on how much the state minimum wage exceeds the federal minimum)
4. Paid family leave ("1" for states that mandate any paid leave)

**Health Care Regulation**

1. State mandate for guaranteed issue of health insurance for the self-employed (“1” if a mandate is imposed)
2. State mandate for community rating in the small group health insurance market (“1” if a community rating is required)
3. State mandate for guaranteed issue of health insurance for the individual market (“1” if a mandate is imposed)
4. State mandate for community rating in the individual health insurance market (“1” if a community rating is required)
5. State has high-risk pool (“1” if there is no high risk pool)
6. Number of other state health care mandates (.05 points each)

**Government Services**

1. State and local government full-time equivalent employees per 100 residents
2. Index of per capita state and local government expenditures
3. Index of the five-year growth rate in per capita state and local government expenditures
4. Index of per capita state and local government debt
5. Index of revenue from the federal government as a share of total state and local government revenue (higher is worse because it is “unreliable” and likely to be “spent in a more wasteful fashion)
6. Highway cost efficiency: Cost-effectiveness score ranging from 0.05 (best) to 2.50 (worst)
7. School choice and state standards: score from 0 to 3 based on reforms that raise standards and allow more “choice and competition” in the form of private school vouchers, charter schools, home schooling, and on-line learning.

**Other Measures**

1. State tort liability costs (based on the Pacific Research Institute’s Tort Liability Index)
2. State version of federal Regulatory Flexibility Act (“1” for states with no regulatory flexibility statute, “0” for “full and active regulatory flexibility statutes,” “0.5” for partial flexibility)
3. Electricity cost (index of revenue per kilowatt-hour for electric utilities)
4. Renewable energy portfolio standards (“1” if a mandate, “0.5” if a goal)
5. Crime rate (FBI crime rate per 100 residents)
6. E-verify of workers’ immigration status (“1” if state mandates that employers use E-verify)
7. Protecting private property: Grade assigned for eminent domain reform legislation

**Small Business, Innovation and Public Policy**

The rationales offered by the SBEC for including these measures demonstrate the USBPI’s single-minded focus on government regulation and taxation. However, what do we actually know about the impact of public policies on small business formation, innovation, or growth?

Small business growth and survival are not synonymous with entrepreneurial activity, though SBEC appears to treat them so. Many small businesses are not entrepreneurial in the sense of being innovative; much new retail activity, for example, is merely responding to the growth of consumer markets in a cookie-cutter fashion.<sup>58</sup> Those who have studied the development of innovation and entrepreneurial activity find that it is

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generated by some combination of human capital (an educated workforce), financial capital (the availability of venture capital and higher risk loans), ideas, and a set of intangibles that foster an entrepreneurial culture or climate. One attempt to measure the relative influence of these factors found that the level of education in the workforce, the level of patent activity and innovation research grants (as a measure of ideas), and the availability of capital together explained 60 percent of the variation in state entrepreneurial activity.<sup>59</sup>

Of these factors known to boost entrepreneurial activity, the public sector has most influence over human capital, which of course requires investment of tax dollars in public education and university research. However, the variables in the USBPI are largely irrelevant to the development of innovation, and in fact are counterproductive to the extent that they favor smaller government expenditure.

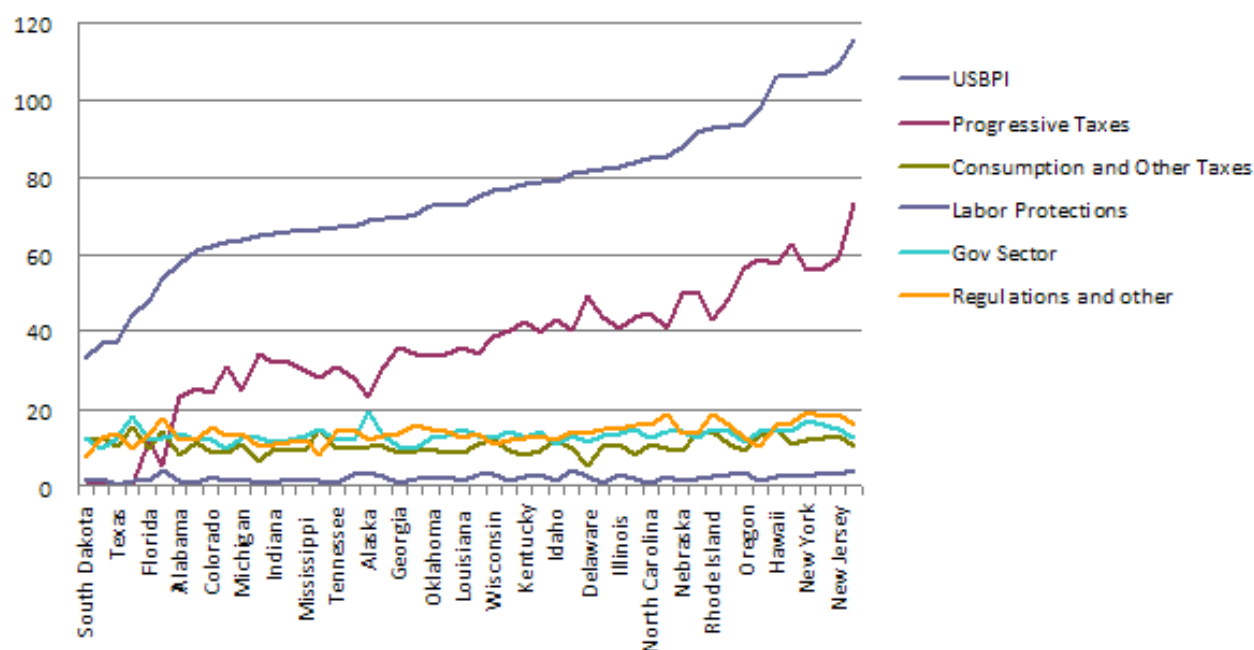
### *What Drives the USBPI?*

What really drives the index? That is, which ones have the most influence on whether a state ranks high or low? To answer this question, we combined the 46 variables into 5 categories: 12 dealing with progressivity of taxes, 9 with consumption taxes and other more regressive taxes, 4 with labor policies, 8 with the size of government, and 13 with government regulations and other factors. Comparing how each of these groups stacks the states

up alongside the USBPI, we find that the 12 variables measuring the progressivity of taxes really drive the overall index. (The 12 are the personal income tax variables, with the exception of the HCSA deduction, the 5 corporate income tax variables, and the estate/inheritance tax variable.) The remaining 34 are little more than random noise. When the 12 measures of progressive taxes are combined, the state scores range from zero (in Wyoming, with no individual or corporate income taxes and no estate or inheritance tax) to 73.4 (in California). The ranges between the lowest and highest scores on the other categories is a fraction of this amount, ranging from just 3.7 points for the labor policy variables to 11.8 points for government regulation.

Figure 3.1 graphically demonstrates our finding. The 50 states are arranged along the horizontal axis from the best state on the left (South Dakota, with the lowest overall USBPI score) to the worst on the right, with the highest score. The vertical axis shows the number of points awarded for the variables in each of the five groups we created. It is clear that four sets of variables show no tendency to rise along with the total score; the best states rate about the same on these measures as the worst states. The only thing that makes a difference, and that causes some states to rank high and others low in the overall USBPI, is state's score on tax progressivity. That is, the USBPI rates regressive states high and progressive states low.

FIGURE 3.1 USBPI DRIVEN MOSTLY BY STATE SCORES ON PROGRESSIVE TAXES



Does the USBPI actually predict of which states will perform best in terms of innovation and entrepreneurship? To answer this question we compared the states' overall USBPI scores with their performance against five measures of economic dynamism as calculated by the Information Technology and Innovation Foundation (ITIF) as part of its "New Economy Index."<sup>60</sup> ITIF's state scores are based on: the number of fast-growing firms as a percentage of all firms; the number of independent inventor patents per 1,000 working-age people; the number and value of initial public stock offerings; the number of individuals starting new businesses as a percentage of the population; and the number of business startups and failures as a percentage of total business establishments. We find that

the correlations between these measures and the USBPI are quite weak, and in no case approached statistical significance even at the 10 percent level. In other words, the USBPI does not appear to be measuring things that contribute to higher rates of innovation and entrepreneurship.

In the end, the USBPI is, at best, a crude index of the level of progressive taxes in a state and little more. The SBEC believes, apparently, that the most crucial determinant of the viability of small businesses in a state, and the vitality of the entrepreneurial sector, is the level and degree of progressivity of individual and corporate income taxes and the presence of estate/inheritance taxes. In fact, a state tax system that relies heavily on progressive income taxes is probably the most

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supportive of new business and innovation. Start-ups and young firms typically lose money, and owe no income taxes as a result. By contrast, firms must pay sales and property taxes no matter what their level of profitability, so states that depend more heavily on those taxes create a heavier burden on start-ups and young businesses in those critical formative years.

The USBPI purports to measure how well state government supports and nurtures entrepreneurship and small business

development. Instead, it is actually a rough measure of the level of progressive taxes. As such, it leaves out most of the factors that actually have a significant impact on small business survival and entrepreneurship. Not surprisingly then, it bears little relation to how states actually perform on measures of innovation and new business formation. Creating the index, however, allows the SBEC to argue for regressive taxation, and for less government in general. But the USBPI is irrelevant as a guide to state policy towards small business.



# Chapter 4: Beacon Hill's *State Competitiveness Report*

The Beacon Hill Institute at Suffolk University in Boston first published a "State Competitiveness Report" in 2001. The most recent version, for 2012, was its twelfth annual report, and was released in April 2013 just as this report was going to press.<sup>61</sup> The analysis below was based on the eleventh edition; however, there are no apparent changes in methodology in the twelfth edition. All of the reports consist of an "index of competitiveness."

The Beacon Hill Institute describes itself as "the research arm of the Department of Economics at Suffolk University." The Institute asserts that, to be competitive, a state should have "in place the policies and conditions that ensure and sustain a high level of per capita income and its continued growth."<sup>62</sup> Its index attempts to measure the extent to which each state in fact has such policies and conditions in place, which in turn should predict how well that state performs in terms of per capita income.

## ***What Measures Make up the Competitiveness Index?***

The Beacon Hill overall competitiveness index is built from 45 variables organized into eight sub-indexes. (The variables in the twelfth edition are identical with the exception of "foreign direct investment.") The sub-indexes and component variables

are listed below with "+" or "-" to indicate whether the variable is assumed to have a positive or negative effect on competitiveness. For example, taxes have a negative sign, indicating that higher taxes produce a lower index value, while budget surplus has a positive sign, meaning that larger surpluses produce a higher index. The higher the overall index value, the better, or the more "competitive."

### ***Government and Fiscal Policies***

- State and local taxes as a percent of personal income (-)
- State workers' compensation premium rates (-)
- State bond rating (composite of S&P's and Moody's, scale 1-25), (+)
- Budget surplus as a percent of gross state product (+)
- Average weekly unemployment benefit (-)
- Full-time-equivalent state and local government employees per 100 residents (-)

### ***Security***

- Crime index per 100,000 inhabitants (-)
- Percent change in crime index, 2009-2010 (-)
- Murders per 100,000 inhabitants (-)
- Score on the Better Government Association's "Integrity Index"<sup>63</sup> (+)

### ***Infrastructure***

- Cell phones per 1,000 residents (+)
- High-speed broadband lines per 1,000 residents (+)
- Air passengers per capita (+)
- Travel time to work (-)
- Electricity prices per kilowatt hour (-)
- Average rent of two-bedroom apartment (-)

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### **Human Resources**

- Percent of population without health insurance (-)
- Percent of population aged 25 and over that graduated from high school (+)
- Unemployment rate, not seasonally adjusted (-)
- Students enrolled in degree-granting institutions per 1,000 residents (+)
- Percent of adults in the labor force (+)
- Infant mortality rate in deaths per 1,000 live births (-)
- Total active physicians per 100,000 inhabitants (+)
- Percent of 4<sup>th</sup> grade public school students at or above “proficient” in mathematics (+)

### **Technology**

- Academic science and engineering R&D per \$1,000 of Gross State Product (+)
- NIH support to institutions, per capita (+)
- Patents per 100,000 inhabitants (+)
- Science and engineering graduate students per 100,000 residents (+)
- Science and engineering degrees awarded per 100,000 residents (+)
- Scientists and engineers as percent of the labor force (+)
- Employment in high technology industries as a percent of total employment (+)

### **Business Incubation**

- Deposits in commercial banks and savings institutions per capita (+)
- Venture capital investment per worker (+)
- Employer firm births per 100,000 inhabitants (+)
- Initial public stock offerings: dollars per capita (+)
- Percent of labor force that is represented by unions (-)
- Minimum wage (-)
- Pacific Research Institute’s Tort Liability Index (-)
- Cost of labor adjusted for educational attainment (-)

### **Openness**

- Exports per capita (+)
- Incoming foreign direct investment per capita<sup>64</sup> (+)
- Percent of population born abroad (+)

### **Environmental Policy**

- Toxic release inventory, on-site and off-site, total (new and original industries), pounds per sq. mile (-)
- Greenhouse gas emissions (million metric tons of carbon equivalent per 1,000 sq. miles) (-)
- Air quality, measured by percent of days in a year rated good or average (-)

## **Are the Variables Appropriate?**

### **Confusing Cause and Effect**

The most serious problem with BHI’s indices is that they mix causal and outcome variables indiscriminately. They claim that their index measures the “policies and conditions” in a state that make it more likely to compete successfully for economic growth, and their validity test is how well it predicts increases in per capita income. Yet a number of BHI’s variables are in fact measures of the *outcomes* or *components* of economic growth, not the causes of it, such as the share of adults in the labor force, budget surpluses, initial public offerings, exports, and firm births. Economic growth creates more job opportunities and higher labor force participation rates; the latter is a result of, not a cause of, growth. Similarly, government budget surpluses are a *result* of robust income and revenue growth, not a cause. (In fact, a budget surplus can be a drag on economic growth.) The growth of

new firms and the volume of exports are *components* of overall economic growth, not a cause.

Similarly, a number of the variables are simply correlates of high income: the percent of households with cell phones or high-speed broadband, bank deposits per capita, and the prevalence of high-paid workers (scientists and engineers, high-tech workers). Not surprisingly, where people earn more money, they have more money in the bank. And of course states with lots of high wage workers have higher per capita income.

Other BHI variables measure the results of slow growth or low income, such as the percent of households who are uninsured and the infant mortality rate. Surely high infant mortality rates are a result of poverty, not a cause of poverty, and one has obviously proven nothing by finding that that states with high unemployment rates have lower average incomes. Of course they do; losing your job is a sure-fire way to lower your income. And a high unemployment rate is usually the *result* of slow economic growth, or economic decline, not a cause of it.

For other variables in BHI's index, the direction of causality is ambiguous. High bond ratings are partly the result of economic prosperity, which brings with it a growing tax base, ample tax revenues and lower probabilities that governments will default on debt. At the same time, they may be indicative of sound government budgeting practices. Either way, they may

indicate stability of tax rates and spending, which may be appealing to businesses. Low rents might be appealing to someone considering relocation, but they may also reflect a long-term sluggishness in the local economy. Rents, in fact, are sometimes used by economists to measure the overall attractiveness of a locality, since high rents are sustainable only where there is high demand for housing and enough good-paying jobs to support the payments. People want to live there, and can afford to. High rents may be the result of past growth, though they may also at some point become a constraint on future growth.

As Richard Sims has pointed out, the inclusion of variables that measure outcomes, or results of high or low income rather than causes, "...is profoundly circular logic and is equivalent to saying 'we measure things that indicate how well off you are, therefore if you increase these things you will be better off.'"<sup>65</sup> The mishmash of causal and outcome variables used in the BHI makes the meaning of the index incomprehensible.

### Dubious Variables

Other variables are questionable for other reasons. Air travelers per capita is supposed to be a "sign of a developed infrastructure." Surely what is important to business is the frequency of non-stop flights to important destinations (being a hub for a major airline helps a lot), and lots of competition producing low air fares. Passengers per capita just doesn't capture what is important, and can be strongly influenced

by high tourist travel (e.g., Las Vegas or Orlando), or by an airport's location in one state within a multi-state metro area (e.g., the Cincinnati/Northern Kentucky Airport in Covington, Kentucky). Then there is the indicator of percent of population that is foreign born, included on the grounds that "the more foreigners relative to the native-born population, the more motivated the workforce." This is a dubious supposition.

### *Scaling and Weighting*

Every measure in the BHI indexes carries an identical weight of one within its sub-index. This weighting scheme is described without justification by BHI as "democratic," a term one is not likely to encounter in the typical statistics text. Statisticians generally prefer criteria such as "valid," "reliable," or "consistent." Each measure is also normalized so that it has a mean value of 5.0 and a standard deviation of 1.0. The BHI sub-indexes are simple averages of the component normalized variables.

The report states that each sub-index is then normalized in the same fashion, so each sub-index score has a mean of 5.00, and each state's overall score is a simple average of the eight normalized sub-indexes. (The sub-index scores presented in the report, despite claims to the contrary on page 8, are the simple averages *before* normalization.) This normalization creates the same degree of variability for each variable, and then for each sub-index. Combined with the equal weighting, this guarantees that each variable within a sub-index contributes in the same proportion

to the overall sub-index, and then each sub-index contributes identically to the variation in the overall index.

Is this even-handedness a virtue? It does prevent a situation such as we found with the USBPI, where the tax variables exhibited large variation, while others varied little, so that the state rankings were driven almost entirely by a handful of tax measures. With BHI's index, at least we know that each variable indeed counts the same. But this is a virtue only if it is true that each variable *should* contribute equally. As with the choice of weights, the decision to normalize is entirely arbitrary unless there is a valid reason to force equality of contribution. Such decisions should be made on the basis of actual knowledge of the relative importance of the variables in producing growth, or some other outcome.

In the case of the BHI index, the normalization and weighting produce some effects that are counterintuitive, to say the least. For example, the percent of the population that is foreign born has a very doubtful connection to economic growth, yet it is twice as important in determining the overall state BHI score as the state's average price of electricity, unambiguously a real business cost. This is because the foreign born measure is one-third of the "openness" sub-index, while electricity prices count for just one-sixth of the "Infrastructure" sub-index, and then these two sub-indexes are weighted equally in the overall index. As a result, the fact that electric rates are twice as high in Illinois as in Idaho is more than offset by the fact that

12.3 percent of the Illinois population is foreign born, compared to only 4.8 percent in Idaho.<sup>66</sup> (Remember: the foreign born are supposedly more motivated.)

### ***Does BHI's Index Work?***

To its credit, BHI does put the index to the test, and it reports the results of a regression analysis that attempts to predict differences in real per capita income across states at a point in time on the basis of their BHI competitiveness. BHI reports a coefficient of \$1,893 on the index, statistically significant at the 1% level, which indicates that an increase of one point on the overall index (which would be a quite sizeable increase, since the scores range from 3.48 to 7.34) is associated with \$1,893 higher per capita income.<sup>67</sup> Interestingly, they dropped a variable included in earlier editions: per capita income the previous year.

On the basis of its one, dubious regression analysis, BHI concludes: "In short, competitiveness really does matter" (p. 10). It should not be surprising that there is a correlation between the index and higher per capita income; after all, about a third of the component variables are either correlates of high income (such as the percent of households with cell phones, bank deposits per capita, percent of population without health insurance, or the prevalence of high-paid workers), or are components or results of economic growth (exports, budget surpluses, labor force participation, the unemployment rate) – in other words, measures of outcomes,

not of causes, of economic growth and prosperity. BHI's regression analysis may prove nothing more than the obvious fact that higher income predicts higher income.

### ***Conclusion***

Since BHI's overall Competitiveness Index is an odd collection of potential causal variables, outcomes variables, components of growth, correlates of income, and other unjustified measures, it is of no use as a guide to public policy.

## Chapter 5: The Tax Foundation's *State Business Tax Climate Index*

The Tax Foundation (TF) published its first State Business Tax Climate Index (SBTCI) in May 2003. Its second annual report incorporated several substantial methodological revisions, and a few modest changes have been made in the years since. Here we focus on the 2013 index, released in October 2012.<sup>68</sup> The Foundation is headquartered in Washington, DC.

The TF claims that its index was developed “using the economic tax literature as our guide” (p. 9). There is indeed a very large body of economic research on the effects of taxes on business investment and location decisions. Almost all of these studies are based on economic theory and common sense: that if taxes affect decisions, it is because they affect a firm’s bottom line. These studies therefore compare how much businesses pay in state and local taxes in different states or localities. How much they actually pay is the combined result of multiple and interacting features of the state, local and federal tax codes, as well as economic development incentives. What better way of summarizing the effects of all these tax features than to measure how they actually produce a tax liability?

The TF, on the other hand, despite claims to the contrary, ignores the consensus approach to assessing business taxes in

the economic literature and attempts to portray the effect of state and local tax law on business profits in an entirely different fashion: by stirring together no less than 118 features of the tax law and producing out of that stew a single, arbitrary index number. That number turns out to bear very little relationship to what businesses actually pay. While the TF asserts that they are not attempting to measure tax levels, but rather “tax competitiveness,” they provide no evidence that the specific tax features that comprise their index matter to businesses apart from their effect on the bottom line: the level of taxes they pay. In defending the importance of the business tax climate in determining a state’s competitiveness they make this assertion: “Most importantly, taxes diminish profits.... A state with lower tax costs will be more attractive to business investment.”<sup>69</sup> They want us to believe they are measuring something called business tax climate that is different from business tax levels, yet are unable to define how tax climate is different and throughout the report confound the two.<sup>70</sup>

The Foundation makes a prodigious leap of logic. First it claims that because the economic literature shows *statistically* significant effects of taxes on business location decisions (when measuring, in

various ways, the actual *amount* businesses pay) that these effects are of large *practical* significance. More importantly, it then assumes that because of these statistical effects, apparently anything purporting to measure state tax climates is therefore a useful, valid and important predictor of state tax competitiveness, no matter how arbitrary and ridiculous the measure.

The SBTCl report at times makes much of the issue of tax neutrality. A neutral tax is one that does not create incentives for firms or individuals to change their behavior—to invest more or less, to work more or less, to locate in one place rather than another, to employ more or less labor or more or less capital, for example. While neutrality is an accepted standard for evaluating taxes among economists (unless changing behavior is one of the goals of tax policy, as it frequently and legitimately is), the TF is not consistent in applying it. It states, for example: “States that levy neither a corporate income tax nor a gross receipts tax achieve a perfectly neutral system in regard to business income and so receive a perfect score.... States that do impose a corporate income tax generally will score well if they have a low rate. States with a high rate or a complex and multiple-rate system score poorly.”<sup>71</sup>

This argument has a number of flaws. While a zero corporate income tax is in one sense neutral by definition, in a broader sense it is anything but. A state with no corporate income tax must levy other taxes to finance government. It may mean

that they have a higher property tax as a result, which penalizes capital-intensive businesses. Nor must a tax system be “low” to be “neutral.” A tax system that produces substantial revenue in a way that doesn’t create preferences for different conduct can be quite neutral. The TF argument makes it clear what it really values: low taxes, not neutral taxes.

### ***What Measures Make up the SBTCl?***

There are five multi-variable indexes within the SBTCl: the corporate income tax index, the individual income tax index, the sales tax index, the unemployment insurance tax index, and the property tax index. Each of these five components is weighted to produce the overall SBTCl, with the individual income tax weighted 33.1 percent, the sales tax 21.5 percent, the corporate income tax 20.1 percent, the property tax 14.0 percent, and the unemployment insurance (UI) tax 11.4 percent. These weights are based on the variability of the state scores for each component; the income tax shows the most variability, the UI tax the least. The TF asserts that this weighting “improves the explanatory power” of the index, without providing any evidence to support the claim.

The TF methodology guarantees that the index will have the maximum variability across states, much more variability than is actually produced by the overall state and local tax systems that are supposedly represented in the index. The net effect of

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overweighting for variability is to make taxes look more important in location decisions than they really are.

It would make a great deal more sense to weight the factors according to their relative effect on the after-tax income of businesses. The Ernst & Young/COST average tax study,<sup>72</sup> for example, measures the relative importance of various business taxes; considering the five taxes that make up the SBTCI, property taxes accounted for 45.9 percent of the state and local taxes businesses pay, the sales tax 30.8 percent, the corporate income tax 8.7 percent, the individual income tax 6.7 percent and the UI tax 7.7 percent. These data from COST are far more valid weightings because they are derived from actual tax revenues as reported in the U.S. Census Bureau's State and Local Government Finances series.

To understand the importance of the weights assigned to each factor, we took each state's SBTCI score for each of the five components and then produced an overall score using COST's weightings instead of the Tax Foundation's variability measure. The differences are striking; six states' rankings changed by 20 or more positions, and another 11 states by 10 to 19 positions. For example, Washington fell from 6<sup>th</sup> to 28<sup>th</sup>, Texas from 9<sup>th</sup> to 29<sup>th</sup>, while New Mexico rose from 38<sup>th</sup> to 15<sup>th</sup> and Hawaii from 37<sup>th</sup> to 20<sup>th</sup>.

Not only that, but the TF approach results in the index weights changing from one year to the next. This makes it difficult to sort out whether a state's change in rank was

due to changes in policy or just changes in the weights given to the five components. If the SBTCI scores for 2013 were re-weighted using the 2011 weights, for example, 33 of the 50 states would have seen a change in rank, 12 of them by 2 or more positions.

Obviously the weights matter tremendously. This illustrates just one problem with the index number approach to ranking: combining dozens of diverse measures, and then scaling and weighting them, leads to an index that has little meaning or consistency. If one simply measured the total taxes paid, there would be no need to scale or weight, and these problems would disappear. But the TF sticks with its system because it enables the Foundation to heavily penalize states with more progressive tax systems above all, while concealing this objective in an arbitrary system of scaled and weighted numbers.

Each of the five components is a simple average of two sub-indexes, one related to tax rates and the other to the tax base. The sub-indexes, in turn, are constructed from a number of measures. Where the measures are continuous variables such as tax rates, they are re-scaled such that the lowest rate is given a value of 10 (the best score) and the highest rate a value of 0 (the worst score). A tax rate that is, say, 80 percent of the highest rate, would have a score of 2; a rate that is halfway between the highest and lowest rates would have a score of 5. Where the measures are 0-1 variables (1 if the state has a positive tax feature, 0 if it does not), these 0-1 variables are weighted 20 percent in the sub-index total, the scalar



variables 80 percent. The varying number of sub-index components results, however, in an apparently accidental variation in weights given individual components.

### ***The Corporate Income Tax Index***

The corporate income tax index is composed of two equally-weighted sub-indexes: the tax rate index, and the tax base index.

The corporate tax rate sub-index is composed of three measures:

1. The top marginal tax rate (lower is better)
2. The number of tax brackets (fewer is better)
3. The taxable income level at which the highest rate kicks in (lower is better)

The latter two are intended to measure “the economic drag created by multiple-rate corporate income tax systems.” It is unclear why multiple-rate systems are likely to create an “economic drag.” The hypothesis that such trivial details as the number of tax brackets has a meaningful economic impact is certainly not supportable. The goal appears to be to skew the sub-index to punish states with progressive rate structures (since flat income taxes have no brackets). If a state went from two brackets to none (a flat rate), it would automatically get the top score possible on two of the three measures (2 and 3).

The corporate base sub-index is composed of three measures, each weighted equally:

1. The number of years allowed for carrying net operating losses backward

and forward (more is better), with penalties for states that cap the amount of NOL carried backward or forward

2. A potpourri of seven other tax base variables:
  - a. Using federal income as the state base (good)
  - b. Conforming with federal depreciation schedules (good)
  - c. Conforming with federal depletion allowances (good)
  - d. Imposing an alternative minimum tax (bad)
  - e. Allowing the deduction of foreign taxes (good)
  - f. Indexing brackets in a graduated tax (good)
  - g. Adopting the throwback rule. (bad)
3. Use of tax credits, with states penalized for offering investment tax credits, jobs tax credits, and R&D tax credits

In creating this sub-index, the Tax Foundation throws a wide variety of base measures together with no regard to their relative effects on tax payments. For example, allowing a corporation to deduct all or a portion of federal taxes from state taxable income can have a large effect on state tax liability, yet this feature, which once appeared in only a minor way in the SBTICI, is now absent entirely.<sup>73</sup>

Apportionment rules can also drastically alter tax liability. Consider a manufacturer that sells computers worldwide; in a state that apportions only on the basis of sales within the state, only a tiny share of U.S. profits will be taxed, while a state that also takes payroll and property into account

might well tax majority of the computer maker's domestic profits. Amazingly, apportionment rules and weights appear nowhere in the SBTCl.

Consider the combined effects of these features of the SBTCl on the ranking of a particular state like Iowa, which allows a deduction for federal taxes and employs single-factor apportionment (again, both are excluded by TF's index. On the other hand, Iowa also offers all of the kinds of tax credits for which TF penalizes a state. The combined effect of Iowa's deductions, apportionment and tax credits is to leave some large and very profitable Iowa corporations with a negative tax liability year after year (because of a refundable credit), so that Iowa ranks near the bottom among the states in corporate income taxes as a share of state GDP. Yet the Tax Foundation says Iowa has the next-to-worst corporate tax system in the country.

### ***The Individual Income Tax Index***

The individual income tax index is constructed in similar fashion. It includes local income taxes, in the few states where these are allowed, as well as state income taxes. The rate sub-index is made up of four factors:

1. The top marginal tax rate
2. The income level at which the top bracket kicks in (lower is better)
3. The number of brackets, with the standard deduction and exemptions considered equivalent to an additional bracket (fewer is better)
4. The average width of brackets (narrower is better)

To the Tax Foundation, no income tax at all is best (earning the state a perfect score). Second best is a low, flat rate. Factors 2, 3 and 4 all reward states according to how close their rate structure approaches a flat rate: a small number of narrow brackets means the top bracket kicks in at a fairly low level so that most taxpayers find themselves in this one bracket. The worst thing a state can do, according to the TF, is construct a really progressive income tax with broad brackets continuing into the upper reaches of income. Thus the rate sub-index is all about penalizing states with progressive rate structures. Since the income tax is the only progressive component of state tax systems (for those states that have a graduated income tax), this means penalizing states for attempting to mitigate the regressivity of consumption and property taxes by establishing some progressivity in the income tax.

The individual income tax base sub-index consists of three equally-weighted factors:

1. The marriage penalty (bad)
2. "Double taxation" of capital income (bad)
3. Five other issues: use of federal income as the base (good), existence of an alternative minimum tax (AMT, bad), bracket indexing (good), recognition of LLCs and S-Corps (good), and the existence of a credit for other state taxes and foreign taxes to avoid "double taxation" (good)

Several of these factors also reflect a preference for lower taxes on higher income taxpayers. In particular, low or zero taxes on capital income and the absence

of an alternative minimum tax reduce the effective tax rates on the very rich. The weighting of the factors is quite arbitrary; the marriage penalty is one-third of the sub-index while the AMT is only seven percent, for example.

### ***The Sales Tax Index***

The sales tax index consists of two equally-weighted sub-indexes:

1. Rate: The average combined state and local sales tax rate in the state
2. Base: The base sub-index includes three components:
  - a. the extent to which the sales tax applies to business inputs (the less the better)
  - b. the breadth of the tax as it applies to final consumer purchases (the more a state taxes a broad range of services, and taxes gasoline and groceries, the better)
  - c. the existence and rate of excise taxes on motor fuels, tobacco, spirits and beer (all excise taxes are bad).

The SBTCI sales tax index is indeed a strange creature. A sales tax on natural gas is a good thing, while a gasoline excise tax is bad. Excise taxes are bad, TF writes, because they drive consumers to shop in neighboring states for tobacco or alcohol, but a sales tax applied to food is good because it raises a lot of revenue, allowing the rate to be lowered. Apparently people who live near state lines don't drive to neighboring states to buy food, even though

it is a much larger share of the household budget than alcohol, and apparently higher excise tax revenue does not enable a state to have a lower sales tax rate, even when both revenue sources flow into the general fund.

The Tax Foundation seems completely undeterred by the huge increase in regressivity recommended by taxing groceries—it asserts that the exemption mostly benefits grocers. Given that harm to business is TF's driving principle throughout the SBTCI, it is odd that TF opposes the grocery chains here. Nor does the Tax Foundation bother to explain how taxing groceries and services promotes economic development. Nor do they mention how tiny a fraction of the state's economy consists of border-city convenience stores, and how small a loss they suffer when some fraction of the goods they sell are covered by excise taxes and some fraction of that fraction is lost to a neighboring state with lower taxes. Despite all these peculiarities, the sales tax base comprises 10.75 percent of the total SBTCI (half of the sales tax index, which is weighted 21.5 percent), so it matters a lot in the overall ranking.

### ***The Unemployment Insurance Tax Index***

The UI index consists of two equally-weighted factors.

1. Rates: the various minimum and maximum tax rates, including the most favorable and least favorable schedules,

and the taxable wage base (lower is better in all cases)

2. Base: experience rating formula, charging methods, and other issues

The Tax Foundation here remains true to the overriding principle governing the SBTCI: lower taxes are better no matter what. The Unemployment Insurance Tax Index rewards states for lower UI tax rates regardless of the condition of the state's UI trust fund. States with trust funds teetering towards insolvency would be rewarded with a higher ranking for pushing the fund over the brink by imprudently lowering taxes. Such a move would, of course, necessitate higher tax rates in the future, but no matter. Fiscal responsibility does not really enter into this sub-index.

### *The Property Tax Index*

As with the others, the property tax index consists of two equally-weighted sub-indexes, for the base and the rate.

1. The rate sub-index has three components:
  - a. Property tax collections per capita (40 percent)
  - b. Property tax collections as a percent of state personal income (40 percent)
  - c. A capital stock tax or corporate franchise tax measure (remaining 20 percent)
2. The base sub-index is the sum of seven 0-1 variables, each one indicating the absence or presence of a tax on some form of wealth or assets, with 0 being the best score, 7 the worst:

- a. Intangible property tax
- b. Inventory tax
- c. Real estate transfer tax
- d. Estate tax
- e. Inheritance tax
- f. Generation-skipping transfer tax
- g. Gift tax

Given the wide variation in property tax practices and the inadequacy and inconsistencies in state property tax data, the first two measures – property tax collections per capita and as a percent of state personal income – are reasonable summary comparative measures of the importance of property taxes in lieu of data on rates. But together they account for only 40 percent of the property tax index. The remaining 60 percent consists of a set of penalties applied to states that use various measures to tax the wealth of individuals and businesses. Taxes on intangible property, estates, inheritances, and gifts in particular are highly progressive, falling mostly on the wealthiest households. Once again, the net effect of the index is to reward states with low taxes and especially with more regressive tax systems.

Property taxes are, of course, a legitimate part of a measure of the state's business tax climate. Yet the property tax index here makes no attempt to sort out the business share of property taxes; taxes on residential property make up a major share of property tax revenue. Furthermore, half the index is based mostly on various wealth taxes and other taxes falling primarily on individuals. Only the capital stock tax and the inventory tax are clearly solely business taxes. The TF makes little attempt to provide a rationale

for inserting personal wealth and property taxes into a business climate ranking, even though these account for a majority of the overall property tax index.

### ***How Well Does the SBTCI Measure Business Tax Levels?***

The TF presents its index as a measure of the state business tax climate, arguing that it measures features of the tax system that actually impact the competitiveness of the tax system. And throughout the report they make it clear that it is really the level of taxes that makes a system competitive. Thus it is fair game to evaluate how well the SBTCI tracks actual differences in the amount of taxes businesses pay in one state versus another. In Table 5.1 we compare the state's score on the SBTCI with one of the more defensible measures of actual business tax levels: the Council on State Taxation study, with severance taxes subtracted.

The results of the comparison are rather startling. Of the TF's top 10 states, only one actually ranks among the ten states with the lowest share of state GDP going to business taxes. For example, the TF's highest score, for the state with supposedly the most business-friendly tax system, went to Wyoming. But the Equality State ranks 45<sup>th</sup> by COST's numbers; only five states have higher effective business tax burdens. Of the TF's 10 worst-rated states, only three were among the 10 states COST found have the highest effective business tax rates. The

TF's top 10 states had an average ranking of 30<sup>th</sup> by COST, while the TF's worst 10 states actually fared a little better, with an average COST ranking of 29<sup>th</sup>.

The correlation between the two measures is -.05 (negative, but not statistically significant); in other words, there is really no relation at all. It is hard to imagine how the SBTCI could do much worse in terms of measuring the actual amount of taxes businesses pay in one state versus another.

There is no point, really, in trying to assess whether the SBTCI successfully predicts which states will do better in attracting business investment, creating jobs, or the like. If it does, it is purely by accident, for the index does not even measure the effect of a state's tax system on the firm's cost of doing business, as we have seen with the COST cross-walk. So even if the index appeared to be correlated with growth, one could not conclude, as the Tax Foundation would like, that lower taxes cause growth. The index does not measure tax rates to begin with, or even correlate with relative business tax levels. As a tool for assessing public policy, it is fatally flawed, notwithstanding its carefully groomed appearance of plausibility and academic credentials (however spurious).

**TABLE 5.1 THE SBTCI VERSUS ERNST AND YOUNG/COST BUSINESS TAXES**

<i>State</i>	<b>SBTCI: 2012 &amp; 2011 Ave</b>		<b>E&amp;Y / COST: FY2011</b>	
	<i>Score</i>	<i>Rank</i>	<i>Pct. of GSP</i>	<i>Rank</i>
Alabama	5.26	21	4.8%	28
Alaska	7.41	4	4.7%	24
Arizona	5.13	28	4.9%	31
Arkansas	4.94	31	4.4%	15
California	3.63	48	5.3%	38
Colorado	5.46	16	4.4%	16
Connecticut	4.50	40	3.6%	4
Delaware	5.76	12	3.7%	5
Florida	6.87	5	6.3%	48
Georgia	4.88	34	4.2%	11
Hawaii	4.84	35	5.9%	44
Idaho	5.22	22	4.6%	20
Illinois	5.29	20	4.8%	27
Indiana	5.97	11	4.2%	9
Iowa	4.43	41	4.7%	25
Kansas	5.14	27	5.4%	40
Kentucky	5.19	23	4.8%	29
Louisiana	4.94	32	4.2%	8
Maine	4.74	37	6.9%	49
Maryland	4.33	43	3.8%	6
Massachusetts	5.15	26	4.3%	12
Michigan	5.37	18	4.4%	13
Minnesota	4.20	44	4.5%	18
Mississippi	5.39	17	6.1%	46
Missouri	5.56	15	4.2%	10
Montana	6.28	8	5.1%	37
Nebraska	4.97	30	4.9%	32
Nevada	7.44	3	5.1%	35
New Hampshire	6.33	6	4.6%	21
New Jersey	3.44	50	5.1%	36
New Mexico	4.74	37	5.3%	39
New York	3.58	49	6.2%	47
North Carolina	4.15	45	3.5%	2
North Dakota	4.93	33	4.6%	22
Ohio	4.56	39	4.8%	26
Oklahoma	4.99	29	4.4%	17
Oregon	5.62	14	3.5%	1
Pennsylvania	5.33	19	5.0%	33
Rhode Island	4.03	47	5.6%	42
South Carolina	4.80	36	5.0%	33
South Dakota	7.56	2	4.6%	19
Tennessee	5.71	13	4.4%	14
Texas	6.11	9	4.9%	30
Utah	6.07	10	3.5%	3
Vermont	4.14	46	7.3%	50
Virginia	5.16	24	4.0%	7
Washington	6.28	7	5.5%	41
West Virginia	5.15	25	5.8%	43
Wisconsin	4.40	42	4.7%	23
Wyoming	7.65	1	6.0%	45

## Chapter 6: Representative Firm Models

The past two years have seen the first editions of two new rankings of state business taxes that take an entirely different approach from the indexes described in the preceding chapters. These new rankings rely on the representative firm method developed by various academic researchers. First, theoretical representative firms are mathematically constructed from publicly available information on the financial characteristics of actual firms in particular sectors, primarily sectors that are relatively “footloose” or able to operate profitably in a variety of geographic areas. Then those firms are subjected to the tax systems of all 50 states. (The primary author of this study has created and published findings from such a model.)<sup>74</sup>

Such models can measure the tax that would be incurred by making an investment—a new plant, a facility expansion—as well as the tax paid by an existing business. The effective tax rates are likely to be quite different for new versus established firms because of the prevalence of economic development incentives tied to new capital investment or jobs.

When done properly, this is a legitimate approach to measuring interstate business tax differences. The financial characteristics of the firm – the mix of asset types, capital intensity and profitability – will determine how the various state and local taxes and

incentives impact the firm’s bottom line. This is far better than the “one size fits all” weighting of tax features that occurs with the tax climate index approach. Because states vary widely in their reliance on different taxes – income versus property versus sales, property taxes on real property only versus machinery and equipment and inventory – different kinds of business activity can be taxed at very different overall rates within the same state, and the same kind of business can be taxed very differently in different states. By using a variety of representative firms, differences can be revealed that would otherwise remain hidden in broad measures of total business taxes. Since most of the business tax climate rankings focus on competitiveness, it makes sense to measure tax differences as they impact specific kinds of footloose firms. By contrast, businesses whose location decisions are driven by local market conditions, such as retail, hospitality, utilities, and many services, could have a major impact on a state’s overall business tax level but are largely irrelevant to the state’s ability to attract footloose industries.

There are two major representative firm studies we examine here. The Council on State Taxation (COST) in April 2011 released *Competitiveness of State and Local Business Taxes on New Investment* prepared by the accounting firm Ernst & Young.<sup>75</sup>

This was followed by the Tax Foundation's release in February 2012 of *Location Matters*, prepared in conjunction with the accounting firm KPMG.<sup>76</sup> The COST report focuses only on the tax impact on new investment, although it ignores incentives. The Tax Foundation study looks at both mature firms and new firms, and includes consideration of incentives.

### ***COST's "Competitiveness of State and Local Business Taxes on New Investment"***

The COST study estimates the taxes paid as a result of five types of new facility investment: headquarters, research and development, office and call center, durable goods manufacturing, and non-durable goods manufacturing. The state and local taxes modeled include corporate income taxes, gross receipts taxes, sales taxes on business inputs, property taxes, and net worth or franchise taxes. It does not include unemployment insurance taxes or excise taxes, or any taxes that impact only certain sectors such as insurance premium taxes, severance taxes, or utility gross receipts taxes (nor does it model representative firms in those sectors). The firms modeled are C corporations; the results thus have no bearing on investments by pass-through entities such as S corporation or LLCs. The firm is assumed to already have facilities located in the state in question (and in other states). The study calculates an effective tax rate, or ETR, for a theoretical new or expansion facility investment in each of the 50 states. The ETR is stated as the percentage reduction in the firm's

30-year return on investment as a result of state and local taxes.

The COST study develops ETRs for each of the five facility types, but then fails to provide the disaggregated data to readers. Unfortunately, it does not show, for each state, the ETR for each facility type and for each of the three major tax types: sales, corporate income, and property. Instead, it only shows two overall ETRs per state, with the ETRs for each of the five firms weighted by either capital investment or jobs. For example, the non-durable manufacturing facility ETR counts for 42 percent of the total when weighted by capital, 18 percent when weighted by jobs.

The limitations of the COST approach are spelled out in the report itself. The most significant, considering that it is attempting to measure the effective tax rate on new investment, is the absence of any consideration of tax incentives. Neither statutory tax credits – investment tax credits, job creation credits, and research and development credits – nor discretionary tax incentives, such as property tax abatements, are included in the model. Nor does the model incorporate geographically targeted incentives such as those available in enterprise zones or tax increment financing districts.

The failure to include tax incentives has a major effect on the ranking of states by ETR. In another study of 20 states using a representative firm model that included statutory and discretionary tax incentives, the reduction in taxes brought about by incentives ranged from 0 in two states



to 44 percent in another two states and 90 percent in one.<sup>77</sup> Clearly, inclusion of incentives would change state rankings substantially.

Other important tax features are omitted even though they can significantly affect tax liabilities, such as the treatment of foreign source income and the existence (or absence) of combined reporting. The latter, admittedly, depends on the particular firm and its willingness to use one or more of the profit-shifting strategies that are made moot by combined reporting. This makes it difficult to incorporate the effects of combined reporting, or its absence, into a statewide estimate for all firms in a sector.

The report also acknowledges that the results of a hypothetical firm model such as this can be quite sensitive to some key assumptions that have to be made. Perhaps most important is the destination of sales. The representative firms are assumed to sell in national (or worldwide) markets, so that only 5 percent of sales from the new facility are in the home state, regardless of the state. California accounts for about 13.5 percent of national GDP, North Dakota about 0.2 percent. It does not make sense to assume a California firm sells only 5 percent of its output in California and a North Dakota firm sells 5 percent of its output in North Dakota. The report provides examples of how state rankings change if the sales assumption is changed to 20 or 100 percent in-state. A manufacturer that sells all or most of its output in the same state would face a very different ETR, especially in states that apportion taxable profits solely on the basis of the destination of sales.

Another significant issue is that the property tax rate assumed for a state is the rate in the largest city. Ideally, one would construct a state average property tax rate for manufacturing, for example, by dividing total property taxes collected statewide on manufacturing property by the state total market value of manufacturing property. Such data is difficult or impossible to come by in many states. Still, it is possible to approximate a statewide average by weighting city tax rates by city manufacturing assessed value, and other methods. In a recent study of seven states, the author of this report estimated state average property tax rates in this fashion. Table 6.1 below shows how those rates compared with the rate in the largest city used in the COST study.<sup>78</sup> The degree of measurement error ranged from 0 to 65 percent. Clearly, this is enough to change a state's ETR and its ranking significantly, since the COST report cited earlier found that property taxes account for 40 percent of overall taxes on businesses (corporate and non-corporate).

**TABLE 6.1. STATE AVERAGE MANUFACTURING PROPERTY TAX RATES CAN VARY SIGNIFICANTLY FROM THE TAX RATE IN THE LARGEST CITY**

	Statewide Average	Largest City Rate	Error
Maryland	1.3%	2.0%	55%
New Jersey	1.8%	1.7%	-7%
New York	3.7%	3.9%	5%
North Carolina	1.1%	1.1%	0%
Ohio	1.8%	2.2%	23%
Pennsylvania	2.5%	4.1%	65%
West Virginia	1.7%	1.7%	-2%

In summary, while the COST study approach is clearly far superior to any of the index-number ranking schemes discussed in chapters 2 through 5, its value is clearly limited by two major shortcomings: no accounting for any tax credits or other tax incentives, and the bias introduced by the property tax measure.

### ***The Tax Foundation’s “Location Matters”***

For its representative firm analysis, the Tax Foundation created seven theoretical facilities: a corporate headquarters, a research and development facility, a retail store, a call center, a distribution center, a capital-intensive manufacturer, and a labor-intensive manufacturer. The retail store and the distribution center distinguish this study from the COST analysis, though both cases could be questioned – a retail facility is not usually considered footloose (it has to be located where disposable income will support it), and a distribution center is going to focus first on logistics and transportation costs, which may severely limit the geographic options. Like the COST study, the TF’s representative firms are all C Corporations (even the clothing store).

The state and local taxes modeled include corporate income taxes, gross receipts taxes, sales taxes on business inputs, property taxes, net worth or franchise taxes, and unemployment insurance taxes. The inclusion of UI taxes also distinguishes this study from the COST report. A more important difference is that the Tax Foundation assumes the firms

have all of their payroll and property in the taxing state (with the exception of the corporate headquarters), but their sales distributed across the 50 states. The sales are distributed among states in proportion to their shares of national economic activity, clearly a more realistic assumption than the COST assumption of five percent in-state sales across the board.

The COST study makes a more realistic assumption about the distribution of a firm’s payroll and property: that it has facilities and employees in a number of states. The COST report does not spell out exactly where the other facilities are assumed to be located or how this affects the issue of throwback sales, however.<sup>79</sup> The Tax Foundation admits that its assumption—a firm with facilities and workers in only one state, selling to all 50 states—is unrealistic. Multistate corporations will typically have facilities in a number of states. This can affect tax differences between states because several states allow the deduction of other state income taxes. In the Tax Foundation study, this feature is of no value because the firms are assumed not to pay taxes elsewhere since they do not have material nexus in any other state (with the exception of the headquarters facility).

The Tax Foundation assumption also means that states with “throwback” are severely penalized, particularly if they are also single sales factor states. In such states, profits are apportioned on the basis of the destination of sales, but sales to states (or to the federal government) where the firm has no tax

nexus and hence no tax liability are “thrown back” to the state in question as if they are in-state sales. The report acknowledges this problem, pointing out that the states with the highest effective tax rates on mature firms tend to be single-sales-factor states with throwback provisions.<sup>80</sup>

Unlike the COST study, the Tax Foundation disaggregates its findings for each state for each of the 14 theoretical facilities (a mature firm and a new firm in each of the seven sectors). However, the COST study produces an average effective tax rate for a state in a quite defensible fashion: it weights the five representative firms either by that sector’s share of capital investment, or that sector’s share of jobs. By contrast, in calculating its score for each state, the Tax Foundation weights all seven sectors equally and averages them. The independent clothing store, with 25 employees counts as much in a state’s overall score as a labor-intensive manufacturer with 300 employees, or a corporate headquarters with 200 employees.

The most significant advantage of the Tax Foundation approach is that it includes statutory or “as of right” tax incentives such as investment tax credits, job creation tax credits, research and development credits, withholding tax rebates, and property tax abatements. They do not include geographically targeted incentives, such as those available in enterprise zones and tax increment financing districts, or discretionary (or competitively) awarded incentives. Where targeted or discretionary

incentives are not widespread, compared to statutory incentives, this is the reasonable approach. However, enterprise zones and TIF districts have become very common in some states; failure to include these programs biases the results against such states.

The Tax Foundation approach to property taxes represents only a slight improvement over the COST approach. Whereas COST uses the property tax rate in the largest city in the state, the Tax Foundation uses the largest city (where it locates the corporate headquarters, the R&D facility, and the retail store) and a smaller city, generally with population under 500,000 (where it locates the call center, the distribution center, and the manufacturers).

The crucial importance of weighting is revealed in Table 6.2. The Tax Foundation’s overall score for each state (averaging the seven numbers equally) is shown, along with the results for new firms weighted instead by COST’s shares (where each sector’s effective tax rate is weighted by the importance of that sector, either share of new capital investment, or of new jobs). For the alternative weighting we consider only the five sectors that appear in both reports, with the durable goods manufacturing weight applied to capital-intensive manufacturing (autos, for example) and the non-durable goods manufacturing weight applied to labor-intensive manufacturing (textiles, for example). The retail store and the distribution center, arguably not belonging in the list of footloose sectors anyway, are excluded.

**TABLE 6.2 EFFECTS OF RE-WEIGHTING THE TAX FOUNDATION'S RESULTS**

State	Tax Foundation: Overall Results for Seven New Firms		Effective Tax Rates for the Tax Foundation's Five Footloose New Firms, Weighted by COST's shares of total new capital investment or jobs					
	Index Score	Rank	Capital			Jobs		
			TETR	Rank	Rank Change	TETR	Rank	Rank Change
Alabama	86.4	19	10.3%	13	6	12.4%	12	7
Alaska	81.1	17	10.5%	14	3	13.7%	19	-2
Arizona	114.9	31	15.8%	40	-9	17.9%	33	-2
Arkansas	69.6	8	9.4%	9	-1	9.8%	8	0
California	133.8	45	22.5%	48	-3	23.9%	48	-3
Colorado	135.1	47	20.1%	47	0	22.5%	46	1
Connecticut	109.3	30	12.8%	26	4	17.2%	28	2
Delaware	80.5	16	8.2%	6	10	11.2%	9	7
Florida	122.8	36	17.4%	42	-6	20.0%	41	-5
Georgia	66.7	6	8.2%	5	1	8.6%	5	1
Hawaii	151.4	50	31.0%	50	0	27.4%	50	0
Idaho	116.0	32	14.5%	37	-5	18.6%	37	-5
Illinois	94.2	24	11.5%	19	5	14.6%	21	3
Indiana	80.1	15	13.0%	29	-14	14.7%	22	-7
Iowa	126.8	41	12.6%	25	16	17.2%	30	11
Kansas	141.6	48	16.2%	41	7	21.3%	44	4
Kentucky	69.4	7	10.0%	11	-4	9.2%	6	1
Louisiana	52.8	2	3.8%	2	0	9.7%	7	-5
Maine	87.3	20	11.6%	21	-1	13.0%	17	3
Maryland	134.7	46	23.4%	49	-3	25.5%	49	-3
Massachusetts	128.2	43	14.0%	36	7	18.8%	39	4
Michigan	96.6	25	9.3%	8	17	11.3%	10	15
Minnesota	119.6	35	12.8%	28	7	18.2%	34	1
Mississippi	89.3	21	13.1%	30	-9	13.5%	18	3
Missouri	97.0	26	11.1%	16	10	16.2%	26	0
Montana	93.8	23	13.9%	35	-12	17.2%	29	-6
Nebraska	31.7	1	2.4%	1	0	1.7%	1	0
Nevada	124.8	38	20.1%	46	-8	23.5%	47	-9
New Hampshire	91.0	22	12.3%	23	-1	15.2%	23	-1
New Jersey	104.9	27	11.7%	22	5	15.7%	25	2
New Mexico	80.0	14	13.6%	33	-19	15.3%	24	-10
New York	124.4	37	12.8%	26	11	17.3%	31	6
North Carolina	79.9	13	9.8%	10	3	12.8%	16	-3
North Dakota	83.5	18	11.6%	20	-2	14.0%	20	-2
Ohio	58.7	3	6.4%	3	0	8.6%	4	-1
Oklahoma	65.3	5	8.9%	7	-2	7.6%	3	2
Oregon	106.3	28	15.1%	39	-11	18.7%	38	-10
Pennsylvania	145.9	49	13.5%	31	18	19.1%	40	9
Rhode Island	128.4	44	13.6%	32	12	18.5%	36	8
South Carolina	119.4	34	14.7%	38	-4	17.9%	32	2
South Dakota	77.7	11	11.5%	18	-7	12.7%	15	-4
Tennessee	108.7	29	13.8%	34	-5	16.5%	27	2
Texas	127.7	42	17.7%	43	-1	20.6%	43	-1
Utah	76.7	10	10.8%	15	-5	12.7%	14	-4
Vermont	79.2	12	11.4%	17	-5	11.9%	11	1
Virginia	125.9	39	19.9%	45	-6	22.3%	45	-6
Washington	126.3	40	18.7%	44	-4	20.2%	42	-2
West Virginia	118.5	33	12.5%	24	9	18.4%	35	-2
Wisconsin	59.8	4	6.4%	4	0	5.5%	2	2
Wyoming	73.3	9	10.2%	12	-3	12.7%	13	-4

Applying the COST capital-share weighting, (where durable and non-durable manufacturing are weighted nearly the same), 11 states change in rank by 10 or more positions, and another 17 states change by 5 to 9 positions. New Mexico, for example, fell from 14<sup>th</sup> to 33<sup>rd</sup> and Indiana from 15<sup>th</sup> to 29<sup>th</sup>, while Michigan rose from 25<sup>th</sup> to 8<sup>th</sup> and Iowa from 41<sup>st</sup> to 25<sup>th</sup>. Since it is these overall averages by state that are likely to be bandied about by the press and state policy makers, the choice of weights should not be arbitrary, but should reflect the relative importance of those sectors in the economy. The COST weights do just that, weighting sectors by how much of the nation's new capital investment in a given year was in manufacturing versus R&D, for example.

Applying the COST jobs weighting emphasizes manufacturing less and call centers more, and the changes in rank are not as substantial. This weighting is a little less justifiable, however, because the distinction between capital- and labor-intensive manufacturing is not really the same as durable versus non-durable goods manufacturing. Some food production, for example, is quite capital intensive, but obviously non-durable.

## Conclusions

The representative firm approach shows considerable promise. When read carefully, it explains why crude "one size fits all" business climate ratings have no real-world applicability. In turn, understanding the wide variability of company inputs

and costs helps dispel the misleading impressions left by business climate studies that single-variable "silver bullets" can shape something as complex as a state economy.

Despite their advantages, however, representative firm studies are sensitive to key input assumptions: how the theoretical firm's payroll, property and sales are distributed among the states, how different sectors are weighted when combining them to produce an overall state tax rate, which taxes and tax incentives are included, and what property tax rate is taken to be representative of a state. The characteristics of the representative firms are also crucial. It is doubtful that five hypothetical firms can be taken to adequately represent the range of businesses for which states compete. It may well be that the asset composition of call centers, R&D facilities, and corporate headquarters are not highly variable. But within manufacturing, which represented 82 percent of the new capital investment in the COST study, there is large variation from one industry to another and from small to large firms.

An earlier representative firm model developed by the author of this study focused exclusively on manufacturing and created 32 representative firms: a small and a large firm in each of 16 manufacturing industries. There was considerable variation in firm characteristics that affect tax liabilities, such as the shares of assets in different categories. Land and buildings, for example, are subject to the property tax everywhere but not generally the sales tax,

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while machinery and equipment are subject to the property tax in some places but not in others, and to sales tax in some states but not others. A few states tax inventory as property. As a result, the differences in tax rates among sectors within a given state were often larger than the differences among states for a given sector. Firm size can be important as well, not just because it is associated with a different asset structure within the same industry, but also because some incentives are available only for large investments, while others are capped and hence of greater relative value to small firms.

The COST and the Tax Foundation representative firm findings should be used with considerable caution. We would hope that future versions of these studies overcome the deficiencies noted above. Most can be remedied relatively easily, including the modeling of a larger number of representative firms. In the meantime, it should give us considerable pause that these two studies, employing the same general methodology and even the same economic sectors (with two exceptions), should come up with such different results due to the differences in the key assumptions made. When we compare the COST overall ranking of states (where the sectors are weighted by the shares of capital) with the TF ranking for new firms (where the sectors are weighted equally), we find that the rankings differ by 10 places or more for 26 of the 50 states. Another 10 change rank by 5 to 9 positions. (Things are even worse when we use the jobs weighting: 29 states change

rank by 10 or more positions.) There is no way of knowing which study results more accurately reflect the actual tax differences among states.

One might suspect that the differences between the two studies are due primarily to the Tax Foundation's arbitrary equal weighting of the sectors. One would be wrong. Table 6.3 compares the COST overall state rankings with the Tax Foundation's rankings when the latter's effective tax rates (ETR) for the five similar sectors are weighted by the COST shares of capital investment. The table therefore compares two different measures of effective tax rates on new investment by firms in basically the same five sectors, weighted the same. The disparities between the two studies actually increase. The average percentage difference in effective tax rates between the two studies was 57 percent. Fully 32 of the 50 states change rank by 10 or more positions, with the average state changing 15 places up or down.

Clearly the results of these representative firm models are highly sensitive to the underlying inputs used to calculate effective tax rates. Given that the COST approach is more defensible on some issues, the Tax Foundation on others, serious reliance on these studies should wait until methodological improvements have been implemented.

**TABLE 6.3 COST VERSUS TAX FOUNDATION: EFFECTIVE TAX RATES AND STATE RANKING WHEN RESULTS FOR FIVE REPRESENTATIVE FIRMS ARE WEIGHTED BY SHARES OF CAPITAL INVESTMENT**

State	COST Study		Tax Foundation Study		Pct Diff	Difference
	ETR	Rank	ETR	Rank	in ETR*	in Rank**
Alabama	9.7%	43	10.3%	13	6%	30
Alaska	7.2%	25	10.5%	14	37%	11
Arizona	9.3%	39	15.8%	40	52%	-1
Arkansas	8.9%	36	9.4%	9	6%	27
California	7.7%	29	22.5%	48	98%	-19
Colorado	6.8%	18	20.1%	47	99%	-29
Connecticut	8.9%	38	12.8%	26	36%	12
Delaware	5.7%	8	8.2%	6	36%	2
Florida	7.4%	27	17.4%	42	80%	-15
Georgia	6.6%	16	8.2%	5	21%	11
Hawaii	10.8%	46	31.0%	50	97%	-4
Idaho	7.7%	30	14.5%	37	61%	-7
Illinois	4.6%	5	11.5%	19	85%	-14
Indiana	6.8%	19	13.0%	29	62%	-10
Iowa	6.4%	14	12.6%	25	65%	-11
Kansas	11.2%	48	16.2%	41	36%	7
Kentucky	6.5%	15	10.0%	11	42%	4
Louisiana	11.1%	47	3.8%	2	98%	45
Maine	3.0%	1	11.6%	21	118%	-20
Maryland	6.3%	12	23.4%	49	115%	-37
Massachusetts	8.2%	32	14.0%	36	52%	-4
Michigan	7.2%	24	9.3%	8	25%	16
Minnesota	6.0%	10	12.8%	28	72%	-18
Mississippi	10.2%	44	13.1%	30	25%	14
Missouri	7.1%	22	11.1%	16	44%	6
Montana	6.1%	11	13.9%	35	78%	-24
Nebraska	9.4%	41	2.4%	1	119%	40
Nevada	8.2%	33	20.1%	46	84%	-13
New Hampshire	5.4%	7	12.3%	23	78%	-16
New Jersey	7.5%	28	11.7%	22	44%	6
New Mexico	16.6%	51	13.6%	33	20%	18
New York	7.1%	23	12.8%	26	57%	-3
North Carolina	8.6%	34	9.8%	10	13%	24
North Dakota	7.3%	26	11.6%	20	45%	6
Ohio	4.4%	3	6.4%	3	37%	0
Oklahoma	8.8%	35	8.9%	7	2%	28
Oregon	3.8%	2	15.1%	39	119%	-37
Pennsylvania	7.1%	21	13.5%	31	62%	-10
Rhode Island	11.5%	49	13.6%	32	17%	17
South Carolina	8.9%	37	14.7%	38	49%	-1
South Dakota	6.4%	13	11.5%	18	57%	-5
Tennessee	10.3%	45	13.8%	34	29%	11
Texas	6.9%	20	17.7%	43	88%	-23
Utah	6.7%	17	10.8%	15	47%	2
Vermont	7.8%	31	11.4%	17	38%	14
Virginia	5.4%	6	19.9%	45	115%	-39
Washington	9.4%	40	18.7%	44	66%	-4
West Virginia	9.7%	42	12.5%	24	25%	18
Wisconsin	4.5%	4	6.4%	4	35%	0
Wyoming	5.8%	9	10.2%	12	55%	-3

\*Absolute value of the difference in ETR divided by the average of the two ETR's

\*\*COST ranking minus TF ranking

## Chapter 7: Conclusions

All of the rankings reviewed in this report are based on some measure or index of the business tax level or tax climate in the states, or on a broader assessment of the business climate in which taxes are an important component. All purport to measure something important to economic growth. But there is a startling level of disagreement among them as to which states have the most and least favorable taxes.

Four of the rankings are based on a composite score derived from many disparate measures. The U.S. Business Policy Index (USBPI), the Beacon Hill Institute's State Competitiveness Index (SCI), and the Tax Foundation's State Business Tax Climate Index (SBTCI) all include over 40 separate measures, while ALEC's Economic Outlook Ranking (EOR) includes 15. Such attempts to combine widely different variables into a single metric are fraught with problems; for one thing, the weights assigned to different measures before they are combined into a single index are arbitrary, and yet have profound effects on the final ranking.<sup>81</sup>

However, there is a far more fundamental problem. These arbitrary weightings are assigned to data that often fail to measure, or measure well, what they claim to measure. The USBPI is, in fact, almost entirely about taxes on upper

income residents rather than about state programs or policies that actually assist entrepreneurship or small business growth. The SBTCI is a large and complex undertaking but ends up generating a number that has little relation to the actual taxes falling on new business investment in a state. The SCI is a hopeless mishmash of causal and performance variables and the end result is useless as a predictor of anything. And ALEC's EOR ignores the major factors that enhance productivity and a state's ability to generate widely shared prosperity and instead focuses on regressive tax and wage suppression variables that accord with its agenda but actually coincide with negative effects on personal income.

It is clear that the audience for all four of these indexes is state policy makers. None of the organizations is bashful about drawing conclusions for public officials; they argue, in so many words: "Our index is a guide to what you need to change in state policy in order for your state to prosper." And the factors that make up the indexes clearly are designed to promote a particular political agenda: low and more regressive taxes, spending cuts, lower wages, and less regulation.

Given the many problems with these four index rankings, it is not surprising that they often produce very different rankings of a



given state (see Appendix B). Massachusetts is ranked number 1 on the SCI, but gets a lowly 38 on the USBPI. While Alabama is next to the bottom on the SCI, it is number 7 on the USBPI. Alaska is ranked 4<sup>th</sup> best on the SBTCI but 38<sup>th</sup> on EOR. If a state is looking to advertise its friendly business climate, 32 could find at least one list that put them in the top 15, and 22 states have at least one top 10 ranking. If state business lobbyists are trying to argue for cutting business taxes, in 31 they could find a list that ranks their state in the bottom 15, and in 24 states in the bottom 10.

The other rankings discussed in this study are not index numbers, but instead are attempts to measure a single thing: the actual amount or rate of taxes paid by businesses in each state, or considering locating or expanding in a state. We saw the results of the Ernst & Young/COST (E&Y) estimates of average business taxes in Chapter 1, and in Chapter 6 we examined the representative firm models, which produce four different rankings based on effective tax rates (ETR): the KPMG/Tax Foundation (KPMG) rates for new versus mature firms, and the Ernst & Young/COST (E&Y) tax rates weighted by capital or by jobs.

These attempts to measure actual taxes are far more defensible than the index number rankings. Even with the representative firm models, however, effective rates for very different kinds of firms and facilities must be weighted or averaged to come up with an overall measure. While the weights used are logical and defensible, they still

highlight the difficulties inherent in any attempt to summarize the overall average level of business taxation in a state.

Indeed, the representative firm analyses produce state rankings with even greater disparities among states than the index rankings. Maine is ranked #1 on both of the ETR measures, but 49<sup>th</sup> by E&Y's average tax rate. Nevada is 4<sup>th</sup> best according to KPMG's mature-firm measure, but 35<sup>th</sup> on the E&Y average. Nebraska is best for new firms on KPMG's ranking, but 41<sup>st</sup> on the E&Y ETR measure weighted by capital. If a state is looking to advertise its low taxes, 37 could find a measure on which they are among the lowest 15, and 25 could find a measure that ranks them among the lowest 10. Conversely, those arguing for lower taxes on business could find, in 39 states, a measure that ranks them among the highest 15 states, and 27 could find a measure placing them in the highest 10.

These disparate results are in part due to the inherent methodological difficulties involved and the different ways in which the groups addressed those difficulties. But they clearly also reflect the fact that the very concept of an average business tax level, or business tax climate, is suspect. Even within the same state, effective tax rates can vary dramatically depending on the financial characteristics of an industry, or the size and age of the firm. It also can depend crucially on whether one is considering an established firm or a new enterprise, or a branch plant expansion of a firm that already has a presence in the state or one previously located entirely

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outside the state, and whether the firm is multi-state or multi-national or operates only within the state. Finally, effective tax rates can vary enormously depending upon where a firm chooses to locate, because rents, property prices, and property tax rates vary enormously and local property taxes are the costliest taxes paid by businesses.

That the desirability of a state's tax system is specific to the characteristics of the firm becomes clear if one examines the tax rate estimates produced by the representative firm models. There are 7 mature firms and 7 new businesses modeled in E&Y's *Location Matters*; for the average state its best ranking among the 14 firms ranked 34 positions above its worst. For 40 of the 50 states, at least one kind of firm is among the best 10 states, and for 36 states at least one firm is among the 10 worst.

It is also instructive to examine the correlations among the various measures. Considering first the four tax climate index rankings, Beacon Hill's SCI fails to correlate with any of the other measures, not surprisingly (see Appendix B). The other three, however – the EOR, USBPI, and SBTCI – are highly correlated with one another, reflecting their common ideological purpose and their focus on regressive taxation. But none of the four fare well when compared with the measures of actual tax levels; of the 20 possible correlations, only 3 are statistically significant. This simply confirms our point: using ideological approaches to measure business taxes produces results that bear

little relation to the real world, to the taxes businesses actually pay.

Among the five business tax measures, the degree of correlation is weak as well. In only two of the ten possible comparisons is the correlation statistically significant: between the two KPMG measures, and between the two E&Y measures.

For all these reasons, we question whether the entire enterprise of measuring an overall business tax climate for a state can be valid or useful. State tax systems are complex, and interact in complex ways with the asset structure and geographic characteristics of firms. The favorability of a state's tax system to an economic development project can be measured accurately only when the details of the business and facility are taken into account. Clearly the representative firm models have the most promise because they can reflect at least some of this variability. But even here, the summary measures are of doubtful value. A recent representative firm study that calculated effective state and local tax rates on a new plant investment by small and large firms in 16 manufacturing industries found that, on average among 18 states modeled, the tax rate on the highest-taxed firm was *five times* the tax rate on the lowest-taxed firm within a given state.<sup>82</sup>

These problems have not stopped researchers from investigating whether state business climate rankings “work.” Kolko, Neumark and Mejia compared various business climate indexes to state growth, as measured in five ways: by two

different total employment metrics, state GDP, total payroll, and employment in new establishments.<sup>83</sup> Three of the indexes they tested are discussed in this study: the SCI, the SBTCI, and the USBPI. The authors included a number of control variables in their model (economic structure, climate, population density), and tested five different time periods. All told, they ran 25 statistical tests for each index (five growth variables times five time periods). The SCI variable was not statistically significant, even at the marginal 10 percent level, in any of the 25 tests.<sup>84</sup> The USBPI was significant (but only at the marginal 10 percent level) in only 3 of the 25 tests.

The SBTCI performed better, but was still significant at the 5 percent level or better in only 6 of the 25 tests, and at the 10 percent level in another 7. Even this dubious achievement – failing to pass the standard 5 percent criterion for statistical significance in three-fourths of the cases – begs the question: What does this prove? For it is not at all clear what the SBTCI is measuring to begin with, and it shows little relation to any of the clearly superior measures of business taxes. Furthermore, a more recent test of the predictive power of both the personal and corporate tax components of the SBTCI was conducted by John Anderson.<sup>85</sup> He found that once other state-specific factors were controlled for, “the tax index variables have no discernible effect on state GDP growth.”

We emphasize again: state and local taxes are a very small share of business costs—less than two percent—and we know from

decades of research that other, non-tax considerations dominate most business location decisions. These factors include the availability of labor with the needed skills, wage rates, proximity to suppliers and markets, access to transportation hubs, and energy costs, as well as factors affecting the ability to hire, attract and retain workers and their families—the quality of public school systems, cultural and recreational amenities, and environmental quality. All that said, one size does not fit all: the variables that matter most in any given project differ greatly depending on what a company makes or does and what part of the company will reside in the proposed facility.

State and local governments have a great deal of power to affect the other 98+ percent of companies’ cost structures, particularly in the education and skill levels of the workforce, the efficiency of infrastructure, and the quality of public services generally. These critical roles of states and cities are often neglected in the single-minded pursuit of tax cutting as an economic development policy. The business tax rankings examined here, particularly the index rankings that ignore any constructive role for the public sector, are worse than meaningless – they distract policy makers from the most important responsibilities of the public sector and help to undermine the long run foundations of state economic growth and prosperity.

# Endnotes

- <sup>1</sup> For more on the COSMA/Grant Thornton history, see chapter 3 of Greg LeRoy, *The Great American Jobs Scam: Corporate Tax Dodging and the Myth of Job Creation*. Berrett-Koehler, 2005 and online at <http://www.greatamericanjobsscaml.com/chapter-3.pdf>
- <sup>2</sup> Peter Fisher with Greg LeRoy and Philip Mattera. *Selling Snake Oil to the States: The American Legislative Exchange Council's Flawed Prescriptions for Prosperity*. Good Jobs First and the Iowa Policy Project, 2012, at <http://www.goodjobsfirst.org/sites/default/files/docs/pdf/snakeoiltothestates.pdf>
- <sup>3</sup> Greg LeRoy, *The Great American Jobs Scam: Corporate Tax Dodging and the Myth of Job Creation*. Berrett-Koehler, 2005, page 81.
- <sup>4</sup> The Beacon Hill Institute published a *Metropolitan Area Competitiveness Report*, but discontinued it after the 2007 report, released in May 2008.
- <sup>5</sup> "Rankings of State Business Climates: An Evaluation of Their Usefulness in Forecasting," *Economic Development Quarterly*, vol. 2, no.2, May 1988, pp. 138-52. page 139.
- <sup>6</sup> See Corporation for Enterprise Development, *Taken for Granted: How Grant Thornton's Business Climate Index Leads States Astray*. Washington, D.C., 1986; and Robert Atkinson, "Understanding Business Climate Studies: Their Use and Validity." *Economic Development Review*, Winter 1990, pp. 46-49.
- <sup>7</sup> Robert G. Lynch. *Rethinking Growth Strategies: How State and Local Taxes and Services Affect Economic Development*. Washington, D.C.: Economic Policy Institute, 2004.
- <sup>8</sup> Paul W. Bauer, Mark E. Schweitzer and Scott Shane. "State Growth Empirics: The Long-Run Determinants of State Income Growth." Federal Reserve Bank of Cleveland Working Paper. May 2006.
- <sup>9</sup> Michelle Bensi, David Black and Michael Dowd. "The Education/Growth Relationship: Evidence from Real State Panel Data." *Contemporary Economic Policy*, April 2004.
- <sup>10</sup> Josh Bivens, *Failure by Design: The Story behind America's Broken Economy*. Washington, D.C., Ithaca, N.Y.: Cornell University Press, 2011, p. 67.
- <sup>11</sup> This is based on data averaged over three years 2005-2007 from two sources: U.S. Internal Revenue Service, Statistics of Income, Integrated Business Data for all U.S. Corporations, partnerships, and non-farm proprietorships, showing total deductions for business costs on tax returns, at <http://www.irs.gov/uac/SOI-Tax-Stats-Integrated-Business-Data>; and a 2009 report by the Council on State Taxation, which estimates total state and local taxes paid by businesses, available at <http://www.cost.org/Page.aspx?id=69654>
- <sup>12</sup> Council on State Taxation (see note 3). This is the average proportion over the three non-recessionary years 2005 to 2007; the fraction is lower in recession years.
- <sup>13</sup> 50 percent times 9.5 percent times 1.8 percent equals .09 percent. This is the average over all types of business, which is the relevant figure for considering the impact of a particular tax cut on overall business activity. The impact of a corporate income tax cut on corporations only would be somewhat larger; however, considering corporations only, state and local taxes are only 2.3 percent of total corporate business expenses at most(see Michael Mazerov and Mark Enriques, "Vast Majority of Large Maryland Corporations Are Already Subject to Combined Reporting in Other States," Center on Budget and Policy Priorities, November 9, 2010, Note 4), while the state and local corporate income tax represents about 19 percent of corporate state and local tax payments, according to IRS data, so the impact of a 50 percent corporate income tax cut is still very small: 50 percent times 19 percent times 2.3 percent equals 0.22 percent.

- 14 Robert Newman and Dennis Sullivan, "Econometric Analysis of Business Tax Impacts on Industrial Location: What Do We Know, and How Do We Know it?" *Journal of Urban Economics*, vol. 23, 1988, pp. 215-34; Timothy Bartik, *Who Benefits from State and Local Economic Development Policy?* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1991; Michael Wasylenko, "Taxation and Economic Development: The State of the Economic Literature," *New England Economic Review*, March/April 1997, pp. 37-52.
- 15 See, among others, Alan Peters and Peter Fisher. "The Failures of Economic Development Incentives." *Journal of the American Planning Association*, vol. 70, no. 1: Winter 2004, pp. 27-38; J. William Harden and William H. Hoyt, "Do States Choose Their Mix of Taxes to Minimize Employment Losses?" *National Tax Journal*, March 2003, pp. 7-26; James Alm and Janet Rogers, "Do State Fiscal Policies Affect State Economic Growth?" *Public Finance Review*, July 2011; Daphne Kenyon, Adam Langley, and Bethany Paquin. *Rethinking Property Tax Incentives for Business*. Cambridge, MA: Lincoln Institute for Land Policy, 2012; Richard Funderburg, Timothy J. Bartik, Alan H. Peters, and Peter S. Fisher. "The Impact of Marginal Business Taxes on State Manufacturing." Forthcoming in the *Journal of Regional Science*, December, 2013.
- 16 Timothy Bartik, *Who Benefits from State and Local Economic Development Policy?* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1991, p. 8.
- 17 See Michael Mazerov, "Cutting State Corporate Income Taxes is Unlikely to Create More Jobs," Center on Budget and Policy Priorities, Sept. 14, 2010, at <http://www.cbpp.org/cms/index.cfm?fa=view&id=3290>
- 18 Elise Gould and Heidi Shierholz, "The Compensation Penalty of 'Right-to-Work' Laws," Briefing Paper, the Economic Policy Institute, Washington, D.C., February 17, 2011.
- 19 Gordon Lafer, "'Right to Work': The Wrong Answer for Michigan's Economy," EPI Briefing Paper, Washington, D.C.: The Economic Policy Institute, September 15, 2011. <http://www.epi.org/files/2011/BriefingPaper326.pdf>
- 20 Dale Belman, Richard Block and Karen Roberts, "Economic Impact of State Differences in Labor Standards in the United States, 1998-2000," East Lansing, Michigan, Michigan State University, Jan. 21, 2011, posted on the Employment Policy Research Network blog.
- 21 Lonnie Stevans, "The Effect of Endogenous Right-to-Work Laws on Business and Economic Conditions in the United States: A Multivariate Approach," *Review of Law and Economics*, vol. 5, no. 1, 2009, pp. 595-612.
- 22 For a review of the research on the employment effects of increases in the minimum wage, see Liana Fox, "Minimum Wage Trends: Understanding Past and Contemporary Research," Briefing Paper #178, Washington, D.C. Economic Policy Institute. October 24, 2006. <http://www.epi.org/publication/bp178/>
- 23 U.S. Bureau of Labor Statistics, Characteristics of Minimum Wage Workers: 2011, at <http://www.bls.gov/cps/minwage2011tbls.htm#4>
- 24 Andrew Phillips, Robert Cline, Thomas Neubig, and Hon Ming Quek. *Total State and Local Business Taxes: State-by-State Estimates for Fiscal Year 2011*. Ernst and Young and the Council on State Taxation. July 2012.
- 25 Arthur B. Laffer, Stephen Moore, and Jonathan Williams. *Rich States, Poor States: ALEC-Laffer State Economic Competitiveness Index*. Washington, D.C.: American Legislative Exchange Council, 2012 (fifth edition).

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- 26 While the report gives a value of 1 for most competitive, we reverse the values so that the charts appear in the normal fashion with the lowest value on the left and the highest value on the right – i.e., so that 1 is at the zero point and indicates a low competitiveness and 50 is at the far right and indicates a high competitiveness.
- 27 We use net growth in population rather than “absolute domestic migration,” (the measure used in their performance ranking) because the latter term is not defined by ALEC and because much is made of population growth throughout the report.
- 28 The Economic Outlook Ranking is not an index number, but simply a rank. Thus the scatter plots and correlations show the relation between a state’s rank on one measure (EOR) and its economic performance represented by a continuous variable such as percent change in state GDP. ALEC has argued that ranks should be correlated with ranks, using the Spearman rank correlation coefficient rather than the Pearson correlation coefficient used here. The conclusions are the same, as we discuss later in this chapter.
- 29 It is statistically significant at the 5 percent level.
- 30 It is statistically significant at the 10 percent level.
- 31 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.
- 32 The only change from the first to the fifth edition is that the 16th measure in 2007, “Education Freedom Index Score,” was omitted in 2011.
- 33 *Rich States, Poor States*, 5th edition, p. 24.
- 34 Stephen Mark, Therese McGuire, and Leslie Papke, “The Influence of Taxes on Employment and Population Growth: Evidence from the Washington, D.C. Metropolitan Area,” *National Tax Journal*, v. 53, no. 1, March 2000, pp. 105-123.
- 35 A number of research studies published in peer-reviewed academic journals have investigated the question of the role of state personal income taxes in state economic growth; most have found little or no effect, or inconsistent effects, but one did find a statistically significant negative effect (Randall Holcombe and Donald Lacombe, “The Effect of State Income Taxation on Per Capita Income Growth,” *Public Finance Review*, May, 2004). The preponderance of evidence from all of these studies taken together is that higher personal income taxes have little effect or no measurable effect on business location decisions or state economic growth.
- 36 *Rich States, Poor States*, 5th edition, p. 16.
- 37 Even Social Security plays this role to an extent because it provides an alternative source of income for those age 62 to 69 who hadn’t planned to retire but find themselves without work due to a recession.
- 38 Alan S. Blinder and Mark Zandi, “How the Great Recession Was Brought to an End.” *Moody’s Economy.com*, July 27, 2010. At <http://www.economy.com/mark-zandi/documents/End-of-Great-Recession.pdf>
- 39 Urban-Brookings Tax Policy Center, “Taxable Estate Tax Returns as a Percentage of Adult Deaths, Selected Years of Death, 1934-2011,” Nov. 30, 2011, at <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=52&Topic2id=60>
- 40 Institute on Taxation and Economic Policy, “Repealing Estate Tax Will Not Create an Economic Boom,” Washington, D.C., April, 2012.
- 41 Jeffrey Thompson, *The Impact of Taxes on Migration in New England*. Political Economy Research Institute, University of Massachusetts, Amherst. April 2011. [http://www.peri.umass.edu/fileadmin/pdf/published\\_study/Migration\\_PERI\\_April13.pdf](http://www.peri.umass.edu/fileadmin/pdf/published_study/Migration_PERI_April13.pdf)

- 42 For a review of this research, see Robert Tannenwald, Jon Shure, and Nicholas Johnson, "Tax Flight is a Myth: Higher State Taxes Bring More Revenue, Not More Migration." Washington, D.C.: Center on Budget and Policy Priorities, August 4, 2011, at <http://www.cbpp.org/files/8-4-11sfp.pdf>.
- 43 Cristobal Young and Charles Varner. "Millionaire Migration and State Taxation of Top Incomes: Evidence from a Natural Experiment." *National Tax Journal*, vol. 64, no. 2, pt. 1, June 2011, p. 221.
- 44 See Institute on Taxation and Economic Policy, "Five Reasons to Reinstate Maryland's 'Millionaire Tax'" Washington, D.C., March 9, 2011; and Tannenwald et al, "Tax Flight is a Myth."
- 45 Karen Conway and Jonathan Rork, "No Country for Old Men (or Women) – Do State Tax Policies Drive Away the Elderly?" *National Tax Journal*, vol. 65, no. 2, June 2012, p. 244.
- 46 Paul Coomes and William Hoyt. "Income Taxes and the Destination of Movers to Multistate MSAs." *Journal of Urban Economics*, vol. 63, no. 3, pp. 920-937.
- 47 "Corporate Tax Dodging in the 50 States, 2008-2010." Institute on Taxation and Economic Policy, December 2011. <http://www.itep.org/pdf/CorporateTaxDodgers50StatesReport.pdf>
- 48 To use a simple example of how a tax cut reduces revenue when demand is inelastic, consider that a tax of \$1 on 100 packs of cigarettes raises \$100; a tax of 90 cents (a 10 percent cut) applied to 103 packs (a 3 percent increase in sales) produces \$93.
- 49 See Zsolt Becsi, "The Shifty Laffer Curve." *Economic Review*, vol. 85, no. 3, 2000.
- 50 Institute on Taxation and Economic Policy, "'High Rate' Income Tax States Are Outperforming No-Tax States," Washington, D.C., February, 2012. <http://www.itep.org/pdf/junkeconomics.pdf>
- 51 W. Robert Reed and Cynthia L. Rogers, "Tax Cuts and Employment Growth in New Jersey: Lessons from a Regional Analysis," *Public Finance Review*, May 2004. Andrew Leigh, "Do Redistributive State Taxes Reduce Inequality?" *National Tax Journal*, March 2008. Cristobal Young and Charles Varner, "Millionaire Migration and State Taxation of Top Incomes: Evidence from a Natural Experiment," *National Tax Journal*, June 2011. Stephen T. Mark, Therese J. McGuire, and Leslie E. Papke, "The Influence of Taxes on Employment and Population Growth: Evidence from the Washington, D.C. Metropolitan Area," *National Tax Journal*, March 2000. Jeffrey Thompson, "The Impact of Taxes on Migration in New England," Political Economy Research Institute, University of Massachusetts, Amherst, April 2011.
- 52 Portions of this research were first reported in the summer of 2012 in a short piece called "The Doctor is Out to Lunch," which is the document referenced in *Tax Myths Debunked*. A larger report was released in November of 2012 by Good Jobs First and the Iowa Policy Project; it was called *Selling Snake Oil to the States: The American Legislative Exchange Council's Flawed Prescriptions for Prosperity*. This full report was certainly known to ALEC well before *Tax Myths* was released. The *Snake Oil* report was incorporated into this book.
- 53 When Spearman correlations are calculated between the EOR rank and the state ranking on the various measures of economic performance, the results are as follows: For state GDP growth (Figure 2.1): .11 (not significant); for non-farm employment growth (Figure 2.2): .04 (not significant); for change in per capita income (Figure 2.3): -.38 (significant); for government revenue (Figure 2.4): -.36 (significant); for median family income in 2011 (Figure 2.5): -.30 (significant); and for the poverty rate in 2011 (Figure 2.6): .20 (marginally significant). The only variable whose correlation was substantially different was the negative relation between the ALEC rank and state revenue growth, which is statistically significant at the 5 percent level when using the Spearman correlation
- 54 Theodore Crone, "What a New Set of Indexes Tells Us About State and National Business Cycles." Federal Reserve Bank of Philadelphia, Business Review Q1 2006. [http://www.philadelphiafed.org/research-and-data/publications/business-review/2006/q1/Q1\\_06\\_NewIndexes.pdf](http://www.philadelphiafed.org/research-and-data/publications/business-review/2006/q1/Q1_06_NewIndexes.pdf)

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- 55 Raymond J. Keating. U.S. Business Policy Index 2012: Ranking the States on Policy Measures and Costs Impacting Small Business and Entrepreneurship. Washington, D.C.: The Small Business and Entrepreneurship Council, December, 2012, at: <http://www.sbecouncil.org/resources/publications/business-policy-index-2012/>. Interestingly, their web site also includes a link to “The Small Business Tax Index,” but it simply takes you to the 2011 Small Business Survival Index.
- 56 USBPI 2012, p. 4.
- 57 A “0” is assigned otherwise, as is the case with all binary variables in the index.
- 58 Stephen Goetz and David Freshwater. “State Level Determinants of Entrepreneurship and a Preliminary Measure of Entrepreneurial Climate.” *Economic Development Quarterly*, vol. 15, no. 1, Feb. 2001, pp. 58-70.
- 59 Goetz and Freshwater.
- 60 Information Technology and Innovation Foundation, The 2012 State New Economy Index, Washington, D.C., December, 2012. <http://www.itif.org/publications/2012-state-new-economy-index>
- 61 The Beacon Hill Institute. *Twelfth Annual State Competitiveness Report*. Boston, MA: Suffolk University. 2013. <http://www.beaconhill.org/Compete12/PRCompete12StateFinal.html>. The Eleventh edition can be found here: <http://www.beaconhill.org/CompetitivenessHomePage.html>.
- 62 BHI *11th Annual State Competitiveness Report*, p. 7.
- 63 The Better Government Association produces an index intended to “describe the extent to which each state has protected itself against possible corruption and made its processes open and accountable to its citizens.” It is based on a review of laws regarding freedom of information, whistleblower protection, campaign finance, gifts, and conflicts of interest. See [http://www.bettergov.org/pdfs/IntegrityIndex\\_10.22.02.pdf](http://www.bettergov.org/pdfs/IntegrityIndex_10.22.02.pdf).
- 64 The twelfth edition substitutes a supposed proxy for foreign direct investment: employment in majority-owned U.S. affiliates in state as a percent of total employment.
- 65 Richard Sims, “A Grain of Salt: A Critical Review of the Beacon Hill Institute’s State Competitiveness Report.” Washington, D.C.: Institute on Taxation and Economic Policy, 2003.
- 66 These figures are from the 2001 version of BHI’s state competitiveness index, because in that year, the raw data for each variable for each state was included in the report. In the latest report, we are told only the normalized scores.
- 67 The twelfth edition includes the same regression analysis, this time with a coefficient of \$2,339.
- 68 Scott Drenkard & Joseph Henschman. 2013 State Business Tax Climate Index. Background paper, number 64. Washington, D.C.: The Tax Foundation, October 2013 [sic]. <http://taxfoundation.org/article/2013-state-business-tax-climate-index>
- 69 Tax Foundation, *2013 State Business Tax Climate Index*, p. 4.
- 70 For example, on page 3, after citing examples of businesses supposedly relocating because of tax climate, they provide this summary: “When a state imposes higher taxes than a neighboring state, businesses will cross the border to some extent. Therefore, states with more competitive tax systems score well in the *Index* because they are best suited to generate economic growth.” In other words, better tax climate equals lower taxes.
- 71 Tax Foundation, *2013 State Business Tax Climate Index*, p. 11.



- 72 Andrew Phillips, Robert Cline, Thomas Neubig, and Hon Ming Quek. *Total State and Local Business Taxes: State-by-State Estimates for Fiscal Year 2011*. Ernst and Young and the Council on State Taxation. July 2012.
- 73 The measure “Deductibility of taxes paid” in the 2013 edition describes only the deduction for taxes paid to “foreign taxing authorities,” allowed in 21 states. Only 5 states allow the deduction for taxes paid to the federal government, which are not mentioned anywhere in the corporate tax index.
- 74 For a discussion of the merits of this method and citations to early uses, see Peter Fisher and Alan Peters, “Measuring Tax and Incentive Competition: What is the Best Yardstick?” *Regional Studies*, 31 (8), 1997, pp. 751-764.
- 75 Robert Cline, Andrew Phillips, and Thomas Neubig. Competitiveness of state and local business taxes on new investment: Ranking states by tax burden on new investment. Washington, D.C.: Ernst & Young and the Council on State Taxation, April 2011. <http://www.cost.org/Page.aspx?id=69994> This is not to be confused with the annual Ernst & Young/COST report Total State and Local Business Taxes discussed in Chapter 1 and elsewhere.
- 76 Tax Foundation in collaboration with KPMG LLP. Location Matters: A Comparative Analysis of State Tax Costs on Business. Washington, D.C.: 2012. <http://www.scribd.com/doc/83192302/Location-Matters>
- 77 Alan Peters and Peter Fisher, *State Enterprise Zones Programs: Have They Worked?* Kalamazoo, Michigan: Upjohn Institute for Employment Research, 2002, pp. 62-63.
- 78 The state average property tax rate calculations were prepared as part of the report *Growing Pennsylvania’s High-Tech Economy: Choosing Effective Investments*, Washington, D.C., Good Jobs First, January, 2010. The state average rates were for 2008, while the largest city rates were for 2009; property tax rates generally change little from year to year, so it is doubtful that this affects comparability.
- 79 Email inquiries regarding methodological details to the three authors at Ernst and Young went unanswered.
- 80 Throwout rules, where sales to states where the firm has no nexus are excluded from the denominator in the sales factor, have the same effect: they result in allocating 100 percent of sales to the home state when the firm is assumed to have no tax nexus elsewhere. A Wisconsin analysis of corporate tax returns found that the average apportioning corporation in Wisconsin (which requires 50 percent throwback) had about 16 percent of total sales to states where it did not have tax nexus (Wisconsin Department of Revenue, *Corporate Tax Climate: A Comparison of Nineteen States*, 1995).
- 81 For a detailed discussion of the many problems with index rankings, see Appendix A to the first edition of *Grading Places*.
- 82 Richard Funderburg, Timothy J. Bartik, Alan H. Peters, and Peter S. Fisher. “The Impact of Marginal Business Taxes on State Manufacturing.” Forthcoming in the *Journal of Regional Science*. Effective tax rates were based on tax systems as of 1998. There is no reason to believe within-state variability in effective tax rates has diminished since then. The rates included generally available tax credits and local property tax abatements.
- 83 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.

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- <sup>84</sup> Statistical significance at the 10 percent level means that there is a 10 percent probability that the relationship occurred purely by chance. The lower the level, the more likely that the relationship is causal. In academic research, scholars typically employ a standard of 5 percent or better– i.e., the probability that the relationship occurred by chance is only 1 in 20 or even better 1 in 100 – to safely reject the hypothesis that no causal relation exists.
- <sup>85</sup> John E. Anderson. “State Tax Rankings: What Do They and Don’t They Tell Us?” *National Tax Journal*, vol. 65, no. 4 (Dec, 2012): pp. 985-1010.
- <sup>86</sup> Alexandru Voicu and Michael Lahr. “Creating a Cost-of-Doing Business Index.” Mimeo. New Brunswick, N.J.: Rutgers University.

# Appendix A: Creating an Index

Any index must deal with the problem of how to combine disparate measures into a single index number. This involves up to three steps. First, the variables may be ranked, re-scaled, or standardized. Second, the variables may be weighted. Finally, the weighted (or unweighted) variables are added together or averaged to create the index.

Suppose we wish to create an index based on two variables: the amount of the state minimum wage in excess of the federal minimum wage, and the top state corporate income tax rate. The raw measures for three imaginary states are shown in Table D.1.

**TABLE D.1 THE RAW MEASURES**

	State minimum wage above federal	Top rate: state corporate income tax
State A	\$0.25	0%
State B	\$0.00	8%
State C	\$0.25	5%

Various possibilities for creating an index based on these two variables are illustrated in Table D.2. In all cases, the index authors assume that lower is better on both measures, and the index is constructed such that the state with the lowest index value is “best;” that state receives a ranking of “1” on the overall index.

**TABLE D.2 COMBINING RAW MEASURES TO CREATE AN INDEX**

	Component Measure		Index	Rank on Index
	Minimum wage	Top tax rate		
Index A: Add raw measures				
State A	0.25	0	0.25	1
State B	0	8	8	3
State C	0.25	5	5.25	2
Index B: Add rankings of raw measures				
State A	2	1	3	1
State B	1	3	4	2
State C	2	2	4	2
Index C: Add weighted rankings				
<i>Weights</i>	3	1		
State A	6	1	7	2
State B	3	3	6	1
State C	6	2	8	3
Index D: Add re-scaled measures				
State A	10	0	10	1
State B	0	10	10	1
State C	10	6.3	16.3	3
Index E: Add standardized measures				
State A	5.7	3.7	9.4	1
State B	3.6	6.1	9.7	2
State C	5.7	5.2	10.9	3

Index A skips the first two steps, and simply adds the raw variables together. Because the minimum wage varies from 0 to .25, while the tax rate varies from 0 to 8, the index is driven almost entirely by the tax rate variable; the minimum wage variable

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counts for little. To get around this problem, some indexes rank, re-scale or standardize the measures. These procedures produce a set of variables with similar or identical variability (which may or may not be an improvement).

Index B is constructed by ranking each state (where 1 is “best”) on the raw measures and then simply adding the ranks together; the lowest total index score indicates the best overall ranking.

Index C is a variant of B; before adding the rankings together, the minimum wage ranking is multiplied by its weight of 3.0 and the tax rate ranking is multiplied by its weight of 1.0.

Index D is an example of re-scaling the variables by assigning the “worst” state on a particular measure a value of 10, the “best” state a value of 0, and pro-rating the remaining states. In this example, State C gets a 6.3 because its tax rate is 63% of the way between the worst and the best. The re-scaled measures are then simply added together; alternatively, they could be weighted and then added.

Index E is an example of standardizing the variables so that they have the same mean and standard deviation. In our example, the raw measures are standardized to a mean of 5.0 and a standard deviation of 1.0. The standardized variables are added together, with or without weighting. (Standardization to a mean of zero and standard deviation of one is accomplished by subtracting the mean value of a variable across all states from the value for a particular state,

and dividing the result by the standard deviation of that variable; to convert this to a scale with a mean of 5.0 instead of zero, one simply adds 5 to the result.)

Ranking, re-scaling, and standardizing the variables will produce somewhat different rankings, but any of these procedures will reduce the influence of variables with large and varying values compared to variables with small values or high variability. By standardizing the variables so they have equal means and standard deviations, one ensures that each variable contributes identically to the variation in the overall index score.

Is re-scaling or standardizing necessarily an improvement? Suppose all states have pretty much the same score on a particular measure. One could argue that that measure doesn’t really distinguish one state from another and it shouldn’t have much influence on the overall index. Standardizing the measure could be seen as artificially creating variation (standard deviation) where little actually exists. However, this is really an empirical question. It is possible that if one is trying to predict growth rates, for example, a measure with large variation will exert little influence on growth rates simply because it is irrelevant, while small differences in another measure will have large effects on growth because that measure is critical to location decisions. Thus in the absence of empirical evidence of the relative importance of different variables, the choice of re-scaling or standardizing procedure is as arbitrary as the choice of weights, since re-scaling or standardizing does in

fact change the weight of a given factor. The argument in favor of standardizing is that the weighting is more transparent, since with raw numbers the large variation in influence of various factors may not be apparent (or at least hard to discern).

It is possible to create an index using regression analysis. For example, one can estimate an equation predicting differences in state growth rates based on various state characteristics and actual state growth. The resulting equation produces a predicted growth rate for each state based on its characteristics and the estimated coefficients, and these growth rates could simply be divided by the mean growth rate and multiplied by 100. The result is a set of index numbers, where the average state has an index value of 100.

Interestingly, such an index still has problems. When one asks whether a given difference in ranking is statistically significant, the correct answer depends on the significance of the differences in the underlying variables. As a result, the overall index will not necessarily possess the characteristics one would desire. For example, suppose State A and State B have similar index scores that are not significantly different from each other. State C may have a higher score that is significantly different from A but not from B, and D may have a score that is significantly lower than A and B but not C. Even though C is better than A, and A is better than D, one cannot conclude that C is better than D. See Voicu and Lahr, 1998.<sup>86</sup>

# Appendix B: The Overall State Rankings

**TABLE B.1: OVERALL STATE RANKINGS ON 9 INDEXES**

**State Ranks (1=best or lowest)**

State	Business Tax or Business Climate Index				E&Y/COST Ave Tax*	Representative Firm Models			
	RSPS - EOR	USBPI	BHI: SCI	TF: SBTCI		KPMG/TF New Firms	KPMG/TF Mature Firms	E&Y/COST ETR Cap	E&Y/COST ETR jobs
Alabama	18	7	49	21	28	19	13	43	44
Alaska	38	19	36	4	24	17	23	25	12
Arizona	2	10	32	25	31	31	14	39	42
Arkansas	15	34	34	33	15	8	30	36	39
California	41	50	31	48	38	45	34	29	35
Colorado	7	9	3	18	16	47	33	18	14
Connecticut	39	42	26	40	4	30	21	38	32
Delaware	22	33	24	14	5	16	24	8	5
Florida	14	5	18	5	48	36	19	27	26
Georgia	8	21	30	34	11	6	3	16	16
Hawaii	45	45	20	37	44	50	49	46	43
Idaho	9	31	16	20	20	32	38	30	30
Illinois	42	35	44	29	27	24	45	5	8
Indiana	12	13	43	11	9	15	43	19	21
Iowa	27	44	8	42	25	41	40	14	18
Kansas	29	28	12	26	40	48	47	48	48
Kentucky	46	29	46	24	29	7	18	15	15
Louisiana	21	25	40	32	8	2	10	47	46
Maine	44	46	28	30	49	20	27	1	1
Maryland	32	36	23	41	6	46	8	12	25
Massachusetts	26	38	1	22	12	43	44	32	34
Michigan	16	11	25	12	13	25	25	24	22
Minnesota	35	40	4	45	18	35	39	10	13
Mississippi	23	15	50	17	46	21	37	44	40
Missouri	17	22	33	16	10	26	36	22	24
Montana	33	32	27	8	37	23	20	11	7
Nebraska	34	39	6	31	32	1	9	41	37
Nevada	11	2	37	3	35	38	4	33	28
New Hampshire	20	20	11	7	21	22	26	7	6
New Jersey	43	49	48	49	36	27	41	28	31
New Mexico	28	26	41	38	39	14	22	51	51
New York	49	47	29	50	47	37	42	23	27
North Carolina	19	37	21	44	2	13	7	34	36
North Dakota	24	16	2	28	22	18	15	26	23
Ohio	47	18	45	39	26	3	5	3	3
Oklahoma	13	23	35	35	17	5	16	35	38
Oregon	36	43	17	13	1	28	28	2	2
Pennsylvania	37	24	39	19	33	49	50	21	20
Rhode Island	48	41	19	46	42	44	46	49	49
South Carolina	25	14	47	36	33	34	32	37	33
South Dakota	3	1	13	2	19	11	2	13	11
Tennessee	5	17	38	15	14	29	29	45	45
Texas	10	3	15	9	30	42	12	20	19
Utah	1	8	5	10	3	10	6	17	17
Vermont	50	48	14	47	50	12	31	31	29
Virginia	6	12	7	27	7	39	11	6	10
Washington	31	6	9	6	41	40	17	40	47
West Virginia	40	30	42	23	43	33	48	42	41
Wisconsin	30	27	22	43	23	4	35	4	4
Wyoming	4	4	10	1	45	9	1	9	9

\*Severance taxes excluded

**TABLE B.2. SPEARMAN RANK-ORDER CORRELATIONS AMONG NINE RANKINGS**

	Business Tax or Business Climate Index				Representative Firm Models				
	RSPS - EOR	USBPI	BHI: SCI	TF: SBTCI	E&Y/COST Ave Tax*	KPMG/TF New Firms	KPMG/TF Mature Firms	E&Y/COST ETR Cap	E&Y/COST ETR Jobs
RSPS - EOR	1.00	0.73	0.20	0.54	0.42	0.13	0.46	0.00	0.00
USBPI		1.00	(0.01)	0.71	0.08	0.11	0.50	0.00	0.06
BHI: SCI			1.00	0.11	0.15	(0.23)	0.11	0.22	0.20
TF: SBTCI				1.00	0.08	0.03	0.28	0.16	0.25
E&Y/COST Ave Tax*					1.00	0.21	0.27	0.27	0.24
KPMG/TF New Firms						1.00	0.49	0.15	0.21
KPMG/TF Mature Firms							1.00	0.16	0.17
E&Y/COST ETR Cap								1.00	0.97
E&Y/COST ETR Jobs									1.00

\*Severance taxes excluded

Note: Highlighted correlations are statistically significant at the 5% level or better.

# Appendix C: Predictive Ability of the Economic Outlook Ranking

## Results of Regression Equations: Value of Coefficients and Statistical Significance

### TESTING EFFECTS OF ECONOMIC OUTLOOK RANKING ON GROWTH

Explanatory Variables	Dependent Variables: Growth Rates, 2007-2011						
	State GDP	Non-farm Employment	Coincident Index	Per Capita Income	Median Family Income	Median Annual Wage	Poverty Rate
2006 Economic Structure	.0267***	.0205***	.0302***	.0162***	.0253***	.0073**	-.0530***
A-L 2007 Economic Outlook Ranking	-.0003	.0000	.0000	.0007*	.0001	-.0003	.0000
Adjusted R <sup>2</sup>	.17	.41	.21	.22	.39	.06	.26
Significance of the F statistic	.004	.000	.002	.001	.000	.082	.000

### TESTING EFFECTS OF EOR COMPONENTS ON GROWTH

Explanatory Variables	Dependent Variables: Growth Rates, 2007-2011						
	State GDP	Non-farm Employment	Coincident Index	Per Capita Income	Median Family Income	Median Annual Wage	Poverty Rate
2006 Economic Structure	.0270***	.0204***	.0293***	.0182***	.0270***	.0079**	-.0534***
Sales tax per \$1,000 of income	-.0012	-.0002	-.0002	-.0001	-.0002	.0002	.0013
Top personal income tax rate	.2425	-.0307	-.0433	.3139	.2004	-.0698	-.3908
Top corporate income tax rate	-.3528	-.0035	.1391	-.1144	-.3724	-.1676	.3173
Estate/ inheritance tax (1=yes)	.0013	.0001	.0162	.0019	.0034	-.0066	-.0063
Right-to-work status (1=yes))	.0310	.0075	.0237	.0035	.0009	.0020	-.0285
Adjusted R <sup>2</sup>	.17	.37	.17	.13	.37	.09	.22
Significance of the F statistic	.025	.000	.029	.058	.000	.123	.009

### TESTING EFFECTS OF EOR RANKING ON INCOME LEVELS

	Dependent Variables: Average Level 2007-11			
	Per Capita Income	Median Family Income	Median Annual Wage	Poverty Rate
Level of urbanization	14.17	51.85	66.20***	.03
Percent of adults with BA degree or higher	74937***	122896***	36826***	-.37***
A-L 2007 Economic Outlook Ranking	25.52	49.63	48.00*	.00
Adjusted R <sup>2</sup>	.52	.52	.58	.27
Significance of the F statistic	.000	.000	.000	.000

NOTE: For the EOR, a ranking of 1 is “best”; thus a positive coefficient means that the higher and therefore worse the EOR, the greater the effect.

\*Significant at the 10% level

\*\*Significant at the 5% level

\*\*\*Significant at the 1% level