

# Corporate Taxes and State Economic Growth

Peter S. Fisher

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When a business contemplates a major facility expansion or relocation, they naturally ask themselves: Where is the best place for this facility to be? When evaluating alternative locations, a firm will consider a wide range of factors that affect its costs, productivity or sales: access to markets and to suppliers; transportation costs; energy costs; access to a pool of labor with appropriate education and skills; wage rates; health care costs; the quality of schools, recreation opportunities, climate and other amenities important in attracting skilled labor; the quality of state and local government services, such as public safety and infrastructure; and state and local taxes.

Proponents of business tax breaks claim that taxes are a significant factor in the location choices of businesses, and that a state can tax-cut its way to economic growth and generate tax revenue in the process. As we will see, there are good reasons to be skeptical of such a claim on the face of it, and several decades of research on the relation between state taxes and growth confirm that such claims are vastly overblown and misleading. Business tax breaks turn out to be an expensive and inefficient way to attempt to stimulate a state economy.

### **State Corporate Taxes are a Small Part of the Cost of Doing Business**

State corporate tax breaks are alleged to have substantial influence on a corporation's decision about where to expand or to locate a new plant. There is good reason to be skeptical of such claims at the outset, for a simple reason: Differences in state corporate income taxes from one state to another are usually trivial when stacked up against differences in other costs of doing business. Businesses take many factors into account when making an investment location decision: access to markets and to suppliers; transportation costs; access to a pool of labor with appropriate education and skills; wage rates; energy costs; land acquisition costs; access to supporting business services; the quality of local schools, recreation facilities, climate and other amenities important in attracting and keeping skilled labor; proximity to university research facilities; quality of state and local government services and fiscal stability of government.

State and local taxes on businesses (corporate income taxes, sales taxes, local property taxes) represent only about 1.8 percent of total business costs on average for all states.<sup>1</sup> Corporate income taxes, in turn, are only about 9.5 percent of state and local taxes on businesses, according to one estimate.<sup>2</sup> A large corporate tax break that reduces corporate income tax revenue by half thus represents a cost savings to the average firm of 50 percent times 9.5 percent times 1.8 percent or just .09 percent. In other words, such a sizeable corporate income tax break would reduce total business costs by just nine-hundredths of 1 percent in the average state.

Now let us imagine a business planning the location of a new facility. After considering all the non-tax differences between State X and other states — labor skills, energy costs, access to markets, etc. — the

firm determines that State X is not the best location. It is difficult to imagine that the tiny reduction in business costs produced by even a large corporate income tax break could offset all the disadvantages in such a case and tip the balance in favor of State X, in anything but a very small number of instances. Yet this is precisely what must happen, lots of times involving lots of jobs, for the tax breaks to generate significant job growth. For all those other instances where State X is already the best location, based on all other considerations, the tax breaks obviously do not change the decision but are merely a windfall.

We need not rely on this common sense presumption that tax differences can have little effect on location decisions and state growth, however. There has been a large body of research investigating precisely this question. It is to this research that we now turn.

### **Research Shows At Most a Small Effect of Taxes**

If taxes affect business location decisions, then states with lower taxes should experience more rapid growth, other things equal. The last phrase, “other things equal,” turns out to be crucial. Anyone can make a list of states with higher tax rates, for example, and another list with lower tax rates, and then see which set of states grew faster over some time period. Many people, in fact, have done just that, but such an exercise proves absolutely nothing about causality. Such “research” is no more useful than a “study” I conducted showing that states with names of six letters or less grew faster than ones with long names.

As we pointed out above, a great many factors influence business location decisions and state economic growth rates. To discern the separate effect of tax levels, researchers must use statistical techniques to hold all these other factors constant. The question is: If two states are similar in terms of labor skills, access to markets and materials, labor and energy costs, etc., will a difference in taxes on business produce a difference in the rate at which the state grows? Statistical techniques have become increasingly sophisticated over the past 25 years, allowing for better ways of controlling for other location determinants and more reliable answers to this question.

Two summaries of the research, in 1988 (by Newman and Sullivan) and 1991 (by Bartik), produced something of a consensus on the independent effect of state taxes on state growth. The research conclusions were expressed in terms of an “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 -.3).

Not everyone agreed with this consensus position. Economists Therese McGuire (1992) and Dick Netzer (1997), in particular, pointed out the inconsistencies among the studies and remained skeptical that taxes had any significant effect. Since that time, additional studies have been conducted and several summaries and reviews of those studies have been published. Phillips and Goss (1995), running a meta-regression study on Bartik’s literature, seemed to confirm the reasons for Bartik’s findings. Later in the 1990s the Federal Reserve Bank of Boston commissioned a series of reviews of the economic development literature. Wasylenko (1997), looking at the most recent tax studies as well as those reviewed by Bartik, concluded that the likely impact of taxes is somewhat smaller, an elasticity of -.2 being his best estimate. Other reviews of the literature since then indicate that the research continues to produce mixed results.<sup>3</sup>

One of the problems with the vast majority of studies is that they have relied on rather inadequate measures of state taxes on business, usually some measure of the average rate on all businesses. One of

the most sophisticated and recent studies was based on a set of effective tax rates for 15 different manufacturing sectors, the tax rates measuring the net effect of the state and local system of business taxes and incentives on a firm's rate of return on a new plant investment in that state (Funderburg et al, 2013). This is important, because a firm is presumably concerned about the effect of alternative locations on the firm's bottom line, and this depends not on some overall "business tax rate" but on the taxes and tax incentives that apply to a new facility.

The data for this study covered five periods (1990, 1992, 1994, 1996 and 1998) with industry-specific and time-specific tax rates and growth rates for each of 20 states. The large number of observations allowed the researchers to effectively control for the unmeasured characteristics of each state — its climate, its location relative to markets and suppliers, energy costs, the quality of education and other public services, the regulatory system — through state "fixed effects" variables. The model measured the extent to which a state's effective tax rate on new investment for typical firms in a particular manufacturing industry, such as transportation equipment, was a significant predictor of a state's growth in value added in that industry. The model, in other words, was designed to detect the maximum effect of a state's system of taxes and incentives, at the state and local level combined, on that state's manufacturing growth.

The conclusion of this research was that the elasticity of state manufacturing growth with respect to state and local taxes and incentives was between -.35 and -.53. In other words, a 10 percent cut in total state and local business taxes on manufacturers could be expected to produce about a 3.5 to 5.3 percent increase in state manufacturing activity. This elasticity is within the range that Bartik posed in 1991. The researchers also found incentives alone had a much lower elasticity, -.12, that was not even statistically significant. This suggests that businesses discount the value of incentives heavily and pay more attention to the overall level of taxation.

It appears that the preponderance of the evidence from many dozens of studies over a period of 30 years or more is that business tax cuts, *if they could be enacted without cutting public spending or raising taxes on other sectors*, have some positive effect on state economic growth, but that this effect is small. Not every study has come to this conclusion, to be sure, and some economists, such as Therese McGuire (2003), remain skeptical. She points out that many of the studies that have been relied upon the most cannot be replicated in other time periods.<sup>4</sup> Furthermore, no one has yet produced a plausible explanation for another consistent finding: Labor costs are many times state and local taxes, yet the elasticities found for wages are only two or three times the tax elasticities.<sup>5</sup> If the labor elasticities are correct, the tax elasticities should be much smaller than -.2.

### **What the Research Does Not Show**

It is important to understand the limitations and correct interpretation of these research results. For example, an elasticity of .3 does not mean that a 10 percent cut in the corporate income tax would produce a 3 percent increase in economic activity. The corporate income tax is only about 9.5 percent of total state and local taxes on business, so a 10 percent cut in corporate income taxes is equivalent to a 0.95 percent cut in overall business taxation, which would lead to just a 0.3 percent increase in the economy (a .95 percent tax cut times the elasticity of 3 percent).

The results also do not imply that a 10 percent cut in total business taxes falling on manufacturing will lead to a 3 percent increase in overall state economic activity. They may lead to a 3 percent increase in manufacturing activity (subject to all the other caveats discussed above) but manufacturing is typically a small share of the state economy. And tax cuts for other sectors of the economy that are not "footloose" but are dependent upon serving local markets, are unlikely to produce any measurable effect on state economic activity.

Most important, the research does not imply that a 10 percent cut in taxes on business that is paid for by cutting 10 percent of the state budget would produce 3 percent growth. Such a balanced budget policy (and states of course must balance their budgets) might produce no growth at all, especially in the long run, depending on the nature of the budget cuts and their importance to economic activity.

### **Public Services Matter**

It is important to understand exactly what the research on the sensitivity of growth to taxes implies for state policy. States must balance their budgets. Since tax breaks are costly, these costs must be offset, either by increased revenues elsewhere or by cuts in state services. Cuts in state services can increase business costs and negatively affect state growth in a variety of ways.

Researchers have studied the relation between public services and state economic growth. Ronald Fisher reviewed 43 such studies in 1997 and reported that 27 of the studies found that increased public spending had a positive effect on state economic growth. Helms (1985), for example, found that increases in taxes that financed more spending on health, highways, education or other public services contributed positively and significantly to state economic growth. Bartik (1989) found positive effects on the rate of small-business formation from additional education and fire protection spending financed by tax increases. Among all the studies Fisher reviewed, spending on transportation, education, and public safety were the services most likely to produce measurable effects on growth. The results varied widely, however, and he could not discern a consensus on the magnitude of these effects, which in some studies were smaller and in others larger than the magnitude of tax effects.

While the exact effect of public expenditure on the state economy has been difficult to pin down, it is clear that much of what state and local governments do is to provide the foundations for economic growth in the long run. There would not be a functioning economic system without the infrastructure to support it, and much of that infrastructure is provided and maintained by state and local governments: streets and highways, water and sewer systems, port facilities, airports, reservoirs. And an economic system cannot function without a healthy and educated labor force; the increasing skill requirements in the private sector cannot be met without significant commitments of resources to public education. In fact, a recent study 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>6</sup> Furthermore, the ability to attract workers to new jobs, particularly for higher skill jobs in technology sectors, depends in no small measure on the quality of life, which includes the quality of the schools those workers will send their children to, and the quality of public services and public recreation facilities available.

It is important to point out, therefore, that the positive effects of tax cuts identified in the research show up for the most part only when studies control for the level of public services. This means that tax cuts promote growth holding everything else constant, including state spending on education, health, infrastructure, and public safety. Since states must balance their budgets, in practice spending cannot be held constant. As Bartik wrote in 1991: “[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>7</sup>

Thus any estimates of the employment effects of tax breaks, even if based on an elasticity of  $-.3$ , are undoubtedly overstated. They fail to account for the negative effects of state spending cuts on the economy. And they fail to account for the very likely reduction in public sector jobs necessitated to pay for the tax breaks. These job losses would be immediate. The result is that the tax breaks would very likely produce a net loss in total jobs for several years. And this accounts only for the direct loss in

public sector jobs; a long-term decline in public services would have additional negative effects on state private sector growth.

Large jobs effects are not credible for another reason: State economic growth has been shown to be more affected by the rate of new firm formation than by any other factor.<sup>8</sup> Most tax breaks do nothing to enhance the prospects for a new firm.

### **Tax Breaks Are Costly**

Corporate tax breaks are a very inefficient means of promoting state economic growth. Most of the lost revenue simply flows to corporations who are doing nothing different, nothing that they wouldn't have done anyway.<sup>9</sup> And this accords with common sense. As we saw, a corporate tax cut is a tiny share of a business's costs, so that the vast majority of location or investment decisions will hinge on factors other than taxes.

Much of the benefit of corporate tax breaks will go to economic sectors that are tied to local markets: retail trade, utilities, transportation, and services.<sup>10</sup> These are industries that have to be where their market is. If the market grows, they will grow; state taxes have nothing to do with it, and the tax breaks are simply a windfall, with no effect on growth. In fact, the loss of public sector employment and purchasing power brought about by the tax breaks will have a detrimental effect on sectors dependent on local consumer purchases. The tax breaks to corporations do not stimulate consumer spending, and it is not clear how retailers can collect more sales tax if consumers are not spending any more money. The tiny reduction in the costs of doing business cannot be expected to translate into retail price reductions, which is the only way sales could increase in the absence of a shift in the consumer demand curve.

Yet some will claim that tax breaks more than pay for themselves. Such conclusions may follow from analyses that include personal income tax revenues from new employees in addition to the direct business taxes from the firms creating the jobs. But research shows that in the long run a large majority of new jobs are filled by in-migrants.<sup>11</sup> Those workers bring with them families, with children that need to be educated, and they bring cars that help to create the need for new streets and highways. If these secondary fiscal effects were fully accounted for it is likely that the additional public costs associated with increased population would eat up all of the additional tax revenue they would bring. After all, state and local governments must balance their budgets, and they do so by using the additional taxes brought by growth to pay for the additional services necessitated. In fact, it could well be that the direct fiscal effect — the change in business tax revenue associated with a tax break — is even more negative than described above, as the business activity itself may necessitate some additional investment in public infrastructure. It is clear, at any rate, that to treat new workers as if they contributed only to the revenue side of the public budget and not the expenditure side is plainly wrong and misleading.

### **What about the Counterarguments?**

*The unilateral disarmament argument: We have to do it because everyone else does.*

Disarming unilaterally is easy once you recognize that the states are shooting at each other with very expensive popguns. If incentives are costly and inefficient, let your competitor states continue to squander their money on them, and pursue instead a smarter and more cost-effective approach to economic development that focuses on long-run fundamentals: quality education, job training and infrastructure.

***Taxes may be a small share of costs, but they are a big share of profits so they matter a lot.***

This is a complete non-issue. Certainly what matters to business is the bottom line, but the bottom line, or profit, is simply total sales minus total costs. The way states attempt to affect the bottom line is to reduce a firm's costs, since states can do little or nothing to affect sales. Of course taxes are a higher percentage of profits than they are of costs; every component of cost is a higher percentage of profit than it is of costs. Labor costs are many times net profit. The point remains: A firm with a given level of sales seeking to maximize profit will do so by seeking to minimize total costs, and most other components of cost are far more important than state and local taxes. Thus even large changes in state and local taxes are unlikely to offset small changes in other more important costs in most instances.

***We know they work, because we deal with corporations every day and they say taxes matter.***

Businesses engaging in tax incentive competition recognize that it is in their interest to argue publicly, before and after receiving incentives, that taxes matter. This provides essential cover for the politicians who have provided them with the incentives that do so much for their bottom line, and for the economic development officials trying to justify their jobs and expense accounts. No one this close to the situation is in a position to assess objectively whether any given location or investment decision hinged on tax breaks. That's why we look to academic research to see if tax breaks have actually affected state economic growth.

***Economist X's brand new study of our state's tax breaks showed very large job effects. Generalizations based on outdated studies are meaningless.***

A tax break may be supported by new research specific to the particular state and incentive in question and it will be argued that this is the only research of any relevance. In response, it can be pointed out that a business cares about another dollar flowing to profits, but not which path it took through the tax code to get there. A dollar gained is a dollar gained. There is no rationale for an assertion that a dollar of profit resulting from single sales factor, for example, is more important to a firm than a dollar of profit flowing from a reduction in the top tax rate, or some other tax code change.

Furthermore, to present one study as the definitive answer to the question about the effects of tax policy on business location decisions is to adopt a completely indefensible position on how social science research in this area should be used for policy purposes. A responsible researcher looks at the entire body of research over many years to determine which results have stood the test of time and have been replicated by different researchers looking at different places and time periods, and which studies are outliers that should be written off. Many studies have shown no effect of taxes, others have shown very large effects. But the preponderance of the evidence is that the effects are there but are small. For someone to pick one study out of the many dozens that have been conducted, a study whose results clearly put it in the category of outliers, and then to base policy recommendations on that one study is irresponsible and shows cavalier disregard for the careful use of social science in this area. To assert that all prior research is outdated is disingenuous at best. Being new is less important than being done well and being corroborated by others. That is how real science proceeds.

***The unspoken political argument: Cutting incentives, or even voting against an increase, is risky because our opponents will tag us as "job destroyers" the next time a plant goes somewhere else, while increasing incentives appears costless (it's a tax cut that creates revenue!) and we can happily take credit for all future job creation.***

This is the most difficult argument of all to counter. Other than the point about tax cuts paying for themselves, the arguments are pretty much immune to fact-based criticism.



## Conclusion

Business tax breaks are an expensive and inefficient way to attempt to stimulate a state economy. Because of the small effect of tax breaks on business costs, and the much larger importance of other production costs and location considerations, tax breaks will have little if any positive effect on private sector employment. In fact, the revenue losses may well produce immediate public sector job losses. Furthermore, the private sector employment effects of such tax cuts could be reduced or even eliminated by a long-term deterioration in the quality of public services, which themselves have been shown to be important to businesses making location decisions, and which provide an important part of the foundation for the state economy.

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## Notes

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<sup>1</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/taxstats/bustaxstats/article/0,,id=152029,00.html> ; 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>2</sup> Council on State Taxation (see note 1). This is the average proportion over the three years 2005 to 2007; the fraction is lower in recession years.

<sup>3</sup> See Peters and Fisher (2004); Weiner (2010); Funderburg et al (2010).

<sup>4</sup> See, for example, Tannenwald (1996); Carroll and Wasylenko (1994).

<sup>5</sup> Lynch (2004).

<sup>6</sup> Bauer et al (2006).

<sup>7</sup> Page 8.

<sup>8</sup> Bruce et al (2007).

<sup>9</sup> The negative fiscal effects of business tax breaks and incentives at the state level have been shown in Bartik (1994); Fisher and Peters (2001); and Peters and Fisher (2002), chapter 5.

<sup>10</sup> According to analyses by the Franchise Tax Board, 34 percent of the benefits of the largest of the three tax breaks, SSF, would flow to utilities, retail and wholesale trade, transportation, real estate, and services. SSF was estimated to account for \$1.1 billion of the \$1.27 billion total cost of the three tax breaks.

<sup>11</sup> Bartik (1991), p. 95; Bartik (1993).