State Business Tax Incentives: Examining Evidence of Their Effectiveness

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Tax credits are preferences in the tax code that aim to induce some type of economic activity that would not have occurred—or would have occurred to a lesser degree—without the credits. Championed by some and vilified by others, these types of incentives have been widely embraced as an economic development tool by state governments in New England and across the country.

Tax credits allow businesses to reduce their tax liability dollar for dollar, based on the amount of desired activity they undertake. Although tax credits usually do not require state governments to make cash outlays, they can represent forgone revenue. And because most states must balance their budgets, they must "pay for" any expected revenue losses stemming from the credits by increasing other taxes or reducing spending.

Whether state business tax credits actually spur new economic activity—and whether they do so in a cost-effective manner—are important concerns. This is particularly true in times of fiscal and economic stress, when policymakers must balance a desire to spark the economy with the need to cope with budget deficits. Unfortunately, determining a tax credit's costs and benefits is inherently difficult—partly because it is impossible to know the level and mix of economic activity that would occur without the credit.

A recent report by the New England Public Policy Center focuses on four types of state business tax credits: those targeting capital investment, research and development (R&D), job creation, and film production. It examines credits offered by New England states, and the choices policymakers have faced in creating them, which can affect their cost-effectiveness as well as other tax policy goals. This report also evaluates the approaches and findings of studies of business tax credits. This analysis reveals the challenges entailed in measuring the impact of business tax credits, and the need for both analysts and policymakers to consider those challenges carefully when undertaking or reviewing such studies.

Business tax credits in New England

Tax credits for investment, R&D, job creation, and film production are common across the region. For example, all six New England states have enacted tax credits for R&D. Five states—all except New Hampshire—offer tax credits to businesses that invest in capital equipment. Four states offer tax credits to film production companies, while four offer credits or credit-type incentives to businesses that create jobs. (See Table 1 for a summary of business tax credits offered by New England states.)

Designing tax credits: Key considerations

What type of economic activity is a credit designed to induce? Beyond explicit goals such as increased levels of capital investment, R&D, job creation, and film production, tax credits may also implicitly aim to induce other types of activity. For example, one implicit goal of a film tax credit may be expanding tourism.

Which businesses will receive a credit, and how does the state distribute them? States may require firms to meet certain requirements to be eligible for a tax credit. For example, a firm may have to engage in a minimum level of targeted activity, or be part of a particular industry. The latter type of selective targeting can have negative implications if subsidized industries are relatively inefficient. States

Table 1: Selected tax credits offered by New England states

	Targeted economic activity			
State	Investment	R&D	Job creation	Film production
Connecticut [1]	Fixed Capital Investment Credit Film Infrastructure Investment Tax Credit Machinery and Equipment Expenditure Credit	R&D Expenses Credit Research & Experimental Expenditures Credit	Jobs Creation Tax Credit	Film and Digital Media Production Tax Credit Digital Animation Production Credit
Maine [2]	Jobs and Investment Tax Credit High-Technology Investment Credit	Research Expense Tax Credit Super R&D Expense Tax Credit	Jobs and Investment Tax Credit	Certified Media Production Credit
Massachusetts [3]	Investment Tax Credit Life Sciences Investment Tax Credit	Research Tax Credit	Job Creation Incentive Payment	Payroll/Production Credits for Motion Picture Production
New Hampshire [4]		R&D Tax Credit		
Rhode Island [5]	Investment Tax Credit R&D Property Credit Biotechnology Investment Tax Credit	R&D Expense Credit		Motion Picture Production Company Tax Credit
Vermont [6]	Vermont Employment Growth Incentive (VEGI)	R&D Tax Credit	Vermont Employment Growth Incentive (VEGI)	

[1] Connecticut General Assembly, Office of Fiscal Analysis, "Connecticut Tax Expenditure Report," January 2008.
[2] Maine Revenue Services, "Maine State Tax Expenditure Report, 2008-2009," January 2007.
[3] Massachusetts Fiscal Year 2009 Tax Expenditure Budget.
[4] New Hampshire Statutes, Title V, Chapter 77-A, Section 77-A:5.
[5] State of Rhode Island, Department of Revenue, Division of Taxation, "Tax Expenditures Report," January 2008.
[6] Vermont State Auditor, "Vermont Employment Growth Incentive Compliance Audit Pursuant to 32 V.S.A. Section 163(12)(B)," June 2008.

can also grant credits to any eligible firm (known as an "entitlement") or award them on a discretionary basis, which may be more administratively burdensome. To limit potential costs, a state may cap the total amount of tax credits it will grant in a given year.

How will a credit be calculated? The size of the credit a firm will receive is most often determined by multiplying the amount that it spends on a "qualified" activity by a predetermined rate. While broad definitions of qualified activity and high rates can make a credit more attractive to businesses, they can also undermine state budgets. Policymakers can try to increase a credit's "bang for the buck" by capping the tax credit each firm can receive, or by confining "qualified" activities to those likely to provide the biggest benefits for the state.

What happens if a credit exceeds a firm's tax liability? The calculated amount of a credit may sometimes exceed a business's state tax liability. Tax credits can include provisions that allow firms to re-

tain at least some portion of the credit they would otherwise lose in this situation. These provisions include carry-forwards, transferability, and refundability. Carry-forward provisions allow a business to claim the unused portion of a tax credit in future years. Transferable credits are those that a business can sell to another firm, which can then apply the credit to its own tax liability. A business can redeem a refundable credit for cash from the state. These provisions can increase a state's costs while also complicating the tax system.

What happens if a firm fails to deliver? Some states require firms to continue certain activities after they receive a tax credit. To help ensure that firms deliver the expected benefits—and that states get the biggest bang for their buck—a credit may include recapture or "claw-back" provisions. Under a claw-back provision, firms that do not meet certain requirements must pay back all or part of the credit they received.

Evaluating business tax credits: A framework

Does the credit induce the targeted activity? To answer this question, analysts must compare what actually happened with the credit in place with what would have happened without the credit (the "counterfactual"). Because no one can actually observe the counterfactual, determining whether a credit induces the desired activity can be difficult. Analysts can simply make assumptions about the counterfactual, or rely on econometric modeling to estimate the incremental activity induced by a credit.

What is the credit's overall economic impact? To answer this question, analysts must consider not only the direct economic effects of a credit, but also the indirect effects, or "spillovers," which may be positive or negative. Direct effects are new economic activity by the firm receiving the credit. Indirect effects can also occur when employers or business owners—now earning higher wages and profits, respectively—spend their new earnings in the state. On the other hand, reductions in state spending needed to balance the budget as well as cut-backs by non-subsidized firms can have negative economic effects.

What is the credit's fiscal impact? To answer this question, analysts must consider not only the total dollar amount of credits generated or expected to be generated, but also changes in tax revenue and public spending resulting from the credit. For example, as companies hire new employees, a state may collect more income tax revenue, which can help offset the tax credits.

Is the credit cost effective? To answer this question, analysts must estimate the costs and benefits of a credit and compare them to those of similarly targeted policies. Measures of cost-effectiveness may try to capture the cost of achieving a given outcome (such as net cost per job created), or how much of a given outcome a state can achieve for a fixed cost (such as dollars of state personal income per dollar of net cost). Analysts can compare these values to an "acceptable" level of cost-effectiveness—if such a threshold exists—or to the impact of other economic development initiatives. The latter approach can be used to determine whether another policy would yield a bigger bang for the buck.

What the evidence shows

Business tax credits do seem to foster their targeted activities. However, studies also reveal that at least some of those activities would have occurred without the credits. There is also evidence that credits may simply shift spending among states rather than raising the nationwide level of spending.

The economic activity produced indirectly by business tax credits is not trivial, and may sometimes be sizable. However, stakeholders should examine the methodologies and results of any study with a critical eye, as analysts' assumptions can strongly influence their findings. For example, some analysts assume that all activity that is credit-subsidized is also credit-induced. Others fail to account for the fact that most states must balance their budgets. These types of methodological flaws can lead studies to overstate the overall economic impact of a credit. Stakeholders should use particular caution when comparing results from different states, as divergent findings could stem from both cross-study differences and cross-state differences.

Business tax credits do lead to new revenues for state government, but not enough to completely offset the initial costs. In other words, for each dollar of credit granted, states usually collect

less than one dollar in new tax revenue. Thus most credits do not appear to "pay for themselves." It is therefore important to understand the benefits states are gaining for the revenues they are giving up.

Existing studies do not allow for clear conclusions on the cost-effectiveness of business tax credits. Shortcomings include a lack of methodological transparency, limited evidence on long-term effects, and a lack of comparability across studies, among others.

Concluding thoughts

As states' efforts to collect and disseminate data improve, more high-quality studies of business tax credits are likely to emerge, allowing for sounder conclusions on their effectiveness and cost-effectiveness. In the meantime, policymakers and other stakeholders need to understand the strengths and limitations of existing studies when using them to inform the debate on tax credits.

Considering the larger picture is also critical. For example, policymakers need to consider how business tax credits support or undermine other goals of state tax policy—and who is benefiting and how—when determining the proper role of such credits in promoting economic development.