

## ***Economics Group***

### **Special Commentary**

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# **The State of Economic Development Incentives**

In a period of very tight municipal government budgets, a look at economic development incentives is very timely. State sponsored economic development incentive programs have long been deemed by some a necessary component of building a state's economy. While each state takes a slightly different approach to their incentive programs, in general, there are four main types of economic development incentives: tax incentives, financial incentives, direct investment programs and research and development programs. These programs have long been staples of state economic development. However, interestingly enough, there are few accurate measures on the effectiveness of these programs. In this report, we explore the types of commonly used incentive programs utilized by several states, including some unique research and development incentives along with specialized state direct investment programs. In order to understand the effectiveness of these programs we look at the evidence, or lack of evidence, that provides insight into the optimal economic development strategy. We come to the conclusion that in order for states to justify allocating scarce state funding toward economic development incentives, a clearer understanding of the actual returns to these incentives needs to be obtained. Without better ways to measure state development incentive outcomes, the economic success of such initiatives remains uncertain.

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## **Tax Incentive Programs**

Tax incentive programs are generally defined as tax breaks or credits on property, sales, personal income or corporate taxes. These programs are designed to attract and retain businesses through lowering their tax payments, and thus, their cost of doing business within a state. The result for a state's budget is that tax revenues are foregone in order to make the state more attractive for a prospective firm to relocate. Meanwhile, the state may benefit from an increase in employment and economic growth, leading to some offsetting of additional tax revenues.

There are several types of tax credits offered by state and local governments that include exemptions applied to corporate taxes, personal income taxes, excise taxes, sales and use taxes, raw materials taxes and research and development programs just to name a few. The most common of these tax incentives are tax exemptions for raw materials, sales and use taxes and inventory taxes.<sup>1</sup> With all states offering some form of tax incentives, these programs have become a popular way to attract business to a state. Yet, if all states offer similar incentives, does any state really benefit on net?

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One particular example of the use of tax incentives to lure companies into a location was the Dell plant in Winston-Salem, North Carolina. In 2005, the state of North Carolina offered an economic incentive package totaling approximately \$260 million, making Dell the recipient of the largest economic incentive in state history. The package consisted of \$243 million in tax breaks on corporate income and state franchise taxes. These tax breaks were based on the number of jobs to be created by Dell at the facility. In addition to the tax breaks, the incentive also included a \$14.1 million Job Development Investment Grant and a \$2.8 million grant from Golden LEAF to

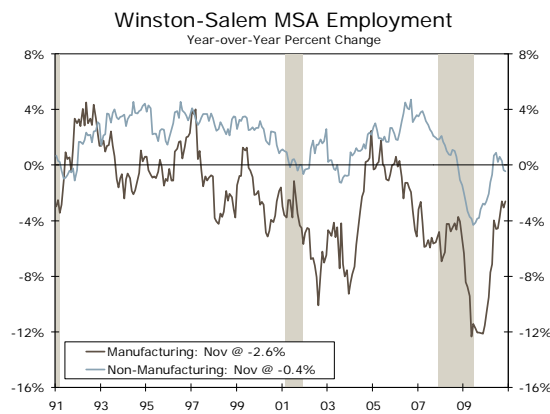
<sup>1</sup> Site Selection. (2010). State Incentive Programs.  
<http://www.siteselection.com/issues/2010/nov/incentiveChart/1011IncentiveChartswNotes1.pdf>



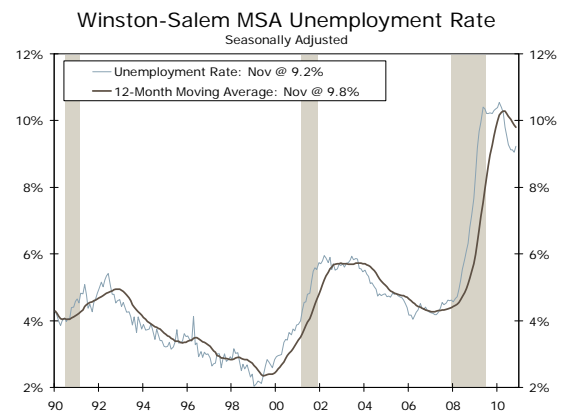
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Forsyth Technical Community College for job training associated with the new facility. As is the case in most states, North Carolina does not provide publicly available data on the number of jobs created by the plant. Thus, it is unclear if Dell made its preliminary employment objective of 1,200 new jobs as outlined in the incentive program offering. However, given the size of the local economy, we can anecdotally assess the impact on manufacturing jobs. As can be seen in Figure 1 below, there was a large jump in manufacturing employment after the opening of the Dell plant in 2005. Yet, the net result of this incentive program was that Dell ended up closing the facility in late-2009, laying off more than 900 employees and citing a decrease in desktop sales.<sup>2</sup> In both figures below we can see in late-2009 the negative effects on manufacturing employment and the rise in the unemployment rate after the closure. In addition, notice that the plant opening and subsequent closure occurred toward the end of a business cycle (see the “Issues” section below). In the end, this project boosted short-term employment and output, but failed to provide a long-term improvement to the local economy.

**Figure 1**



**Figure 2**



Source: U.S. Department of Labor and Wells Fargo Securities, LLC

### **Financial Incentive Programs**

Financial incentive programs encompass a wide range of state provided opportunities for firms, including grants, bond financing, loan guarantees and subsidies for construction and development projects. The purpose of these types of incentive programs is to induce capital investment in local jurisdictions where such investments might not otherwise take place. Most commonly, financial incentive programs attempt to influence firms’ decisions to expand operations and develop new businesses in areas with persistently high unemployment.<sup>3</sup>

***State governments often issue tax-exempt municipal debt to raise capital for financing manufacturing or commercial facilities for private users.***

Increased competition among states to provide financial incentives has grown dramatically since the early-1990s, often resulting in public officials employing significant amounts of capital to induce development without much knowledge of the estimated returns. One of the most common types of financial incentives offered by state governments relates to bond financing. State governments often issue tax-exempt municipal debt to raise capital for financing manufacturing or commercial facilities for private users. The generosity of this type of financing arrangement lies in the fact that issued municipal debt for private facilities typically tends to be backed by the full faith and credit of the issuing municipality—in the case of general obligation bonds. In other words, in the event that a financed manufacturing or commercial facility turns out to be a poor investment and the private user cannot cover interest costs related to the issued debt, the state is obligated to step in and repay any outstanding interest and principle. This type of financing provides private users with the twofold advantage of being able to issue attractive, tax-exempt debt under a high municipal credit rating, while also positioning the state government (i.e., state taxpayers) as a backstop in the event of default.

<sup>2</sup> Local Tech Wire. (2009). Dell agrees to repay more than \$26 million in local tax incentives.

<sup>3</sup> Lee, Y. (2004). Geographic Redistribution of U.S. Manufacturing and the Role of State Development Policy. Federal Reserve Bank of Cleveland. Working Paper 04-15.

In many cases, firms obtain direct loans from state governments as well, bypassing credit markets altogether. Smaller firms tend to find direct state loans particularly attractive because they enable small businesses, without established lines of credit or healthy credit ratings, to obtain financing. Moreover, loan guarantees provided by private lenders and other government institutions often help facilitate direct state loans to firms that otherwise would not be made. Such guarantees also lower interest rates on state loans, which in turn reduces borrowing costs for firms. However, while direct state loans are evidently beneficial for small businesses, as we will see later, state governments often employ nontraditional methods of spurring small business development, including direct equity investments in small businesses and other start-up companies.

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Another form of financial incentive that states often provide comes in the form of a grant. State governments often award incentive grants to firms to induce them to pursue a certain type of development initiative. For example, the One North Carolina Fund in the state of North Carolina uses appropriations made by the North Carolina General Assembly to issue grants to firms that “help recruit and expand quality jobs in high value-added, knowledge-driven industries.”<sup>4</sup> These types of incentive grants not only attempt to geographically dictate where new developments will be made, but they also attempt to dictate the types of industries growth will comprise, making incentive grants attractive in the eyes of state development officials. From the perspective of those on the receiving end of state incentive grants, the added benefit is that such grants often come in the form of cash and need not be paid back to the state.

### **Alternative Incentive Programs**

Together, tax and financial incentives comprise the vast majority of development incentive programs offered by states. However, in recent years many states have engaged in various alternative incentive programs, hoping to further attract firms and foster development in specific industries and jurisdictions. While there are many different types of alternative incentive programs that states offer, our analysis focuses specifically on direct investment incentive programs and research and development incentive programs.

Direct investment incentive programs appropriate public funds for the purposes of making equity investments—i.e., taking ownership—in private firms. States may make equity investments into a whole host of different types of firms, but typically, direct investment programs seek to inject capital into smaller firms, including start-up companies, operating in specific, predefined industries.

***Direct investment incentive programs appropriate public funds for the purposes of making equity investments in private firms.***

Perhaps one of the oldest direct investment incentive programs belongs to the state of Pennsylvania. In 1983, the Pennsylvania General Assembly established the Advanced Technology Centers of the Ben Franklin Partnership “to promote technological innovation and spur economic growth in the Commonwealth.”<sup>5</sup> Since its inception, this Pennsylvania state-sponsored initiative has been transformed into its present-day shape as the Ben Franklin Technology Partners (BFTP), which comprises a network of regional investment operations that span the entire state of Pennsylvania. These regional investment operations seek to make “direct investments in promising technology-oriented companies throughout the Commonwealth to fund critical commercialization activities and growth needs.”<sup>6</sup> The impetus for focusing on technology-oriented firms in the state of Pennsylvania is that such firms are said to provide residents with high-skilled, well-paying jobs. According to Chad Paul, the president and CEO of BFTP of Northeastern Pennsylvania, the jobs created from capital provided by BFTP pay, on average, 33 percent higher than other nonfarm jobs across the state (salary comparison shown in Figure 3).<sup>7</sup>

<sup>4</sup> North Carolina Department of Commerce. (2004). One North Carolina Fund.

<sup>5</sup> Pennsylvania Economy League. (2009). A Continuing Record of Achievement, The Economic Impact of Ben Franklin Technology Partners 2002-2006 Executive Summary.

<sup>6</sup> Ben Franklin Technology Partners. 2011. Programs and Services.

<http://benfranklin.org/programs-services>

<sup>7</sup> Paul, C. (2009). Cutting Ben Franklin Technology Partners funding would hurt job creation, retention in Pennsylvania (Moring Call).

Figure 3

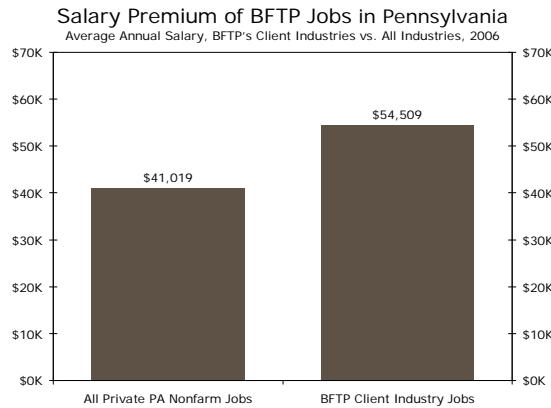
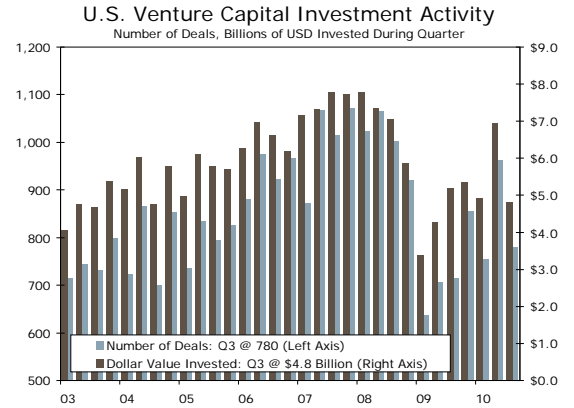


Figure 4



Source: Economy League of Greater Phila., PricewaterhouseCoopers and Wells Fargo Securities, LLC

One unique aspect of the BFTP initiative in Pennsylvania is that many investments made by the state focus on early-stage, start-up companies. Evidence exists to suggest that private venture capital investment activity has been on the rise since the early-2000s (shown in Figure 4), likely due to the possibility of higher returns. Given the possibilities for larger returns, states may have a stronger incentive to invest in startup companies. BFTP provides such firms with not only capital, but also guidance and management expertise as well. Across the state, BFTP has set up an extensive incubator network, which focuses on helping start-up companies grow and implement successful management decisions. In many cases, companies engaged in BFTP-sponsored incubators collaborate with regional economic development organizations, including colleges and universities, which lowers costs for firms and increases the chances of success in the marketplace.<sup>8</sup> For example, at Lehigh University located in Bethlehem, Pennsylvania, a BFTP-sponsored incubator called Ben Franklin TechVentures has been collaborating with the university for more than 25 years. In partnership with Lehigh, Ben Franklin TechVentures is able to leverage off of the university's facilities, research equipment, staff and students.<sup>9</sup> Examples of successfully incubated companies through Ben Franklin TechVentures include: OraSure Technologies, IQE and Authentix.

**Direct investment incentive programs have been gaining popularity since the early 1990s, perhaps because the link between entrepreneurship and economic growth has become more pronounced.**

Direct investment incentive programs focusing on start-up firms have been gaining popularity among state officials since the early 1990s, perhaps because the link between entrepreneurship and economic growth has become more pronounced in academia over the past 20 years.<sup>10</sup> Though not a new concept in economics, as Joseph Schumpeter pointed out in the 1930s that economic growth is brought about by entrepreneurs, "the only agents who are capable of carrying out new combinations of resources and transforming organizational forms," it does appear that state officials have been trying to use entrepreneurs and start-up companies as a means for development in their jurisdictions.<sup>10</sup> This does bring about a fundamental challenge, however, when attempting to measure the direct economic benefits obtained from investment incentive programs. Namely, because many of the investments made by state-run investment incentive programs concentrate on smaller firms and start-up companies, it becomes difficult to discern the economic gains from such firms within the context of broader metropolitan and statewide data. The following section discusses in more detail some of the measurement challenges associated with all of the various types of state-provided economic incentives (see the "Measurement? What Measurement..." section below).

<sup>8</sup> Ben Franklin Technology Partners. 2008. Incubator Network. <http://nep.benfranklin.org/incubator-network>

<sup>9</sup> Ben Franklin Technology Partners. 2008. Ben Franklin TechVentures®. <http://nep.benfranklin.org/incubator-network/ben-franklin-techventures>

<sup>10</sup> Carree, M. and Thurik, R. (2005). Understanding the Role of Entrepreneurship for Economic Growth.

In contrast to direct investment incentive programs, research and development incentive programs use public funds to subsidize research and development at the commercial level. Often times, these programs attempt to encourage firms to conduct research in predefined industries, where firms are underinvested in research and development from the start.<sup>11</sup> The most plausible case for such underinvestment at the firm level is a lack of profitability on the part of firms to conduct research and development in these industries. Therefore, research and development incentive programs attempt to subsidize research and development in the private sector to the point that it becomes profitable for firms to conduct research and development; that is, in areas where they otherwise would not conduct research and development without the subsidies.

The advantage of research and development incentive programs to states is that they allow officials to choose which industries they would like more capital employed for research and development. For example, since 1996 the California Energy Commission has been providing subsidies across the state of California to promote research and development in alternative and renewable energy sectors. The goal of these subsidies in California is to help develop transportation technologies that reduce air pollution and greenhouse gas emissions, increase energy efficiency in buildings, improve electricity generation technologies and develop technologies that reduce or eliminate consumption of finite resources, such as water, across the state.<sup>12</sup>

Allowing states to choose which industries they would like to see more capital employed for research and development does invoke certain risks inherent to industrial policy, however. Historically, evidence has shown that decisions to employ capital in preferential industries are made more efficiently and cope better with investment uncertainties in the private sector than in the public sector.<sup>13</sup> Therefore, state-directed incentive programs targeted at promoting specific industries run the risk of misallocating capital and over-developing industries, which become underutilized by market fundamentals. The end result for states could be inadequate returns on capital.

### **Measurement? What Measurement...**

While state development incentive programs have gained traction in recent decades, the measurability of the effectiveness of such programs is still widely debated today. On the one hand, measurements of economic development from state incentive programs sometimes focus too narrowly on only one variable, say employment, when determining effectiveness. On the other hand, measurements of growth from state incentives often tend to focus only on the positives, ignoring the possibility that some policies could have negative impacts on growth. For example, incentives inducing firms to invest more in capital often lower the cost of capital relative to labor, which hinders employment growth. In essence, the key complication when measuring the effectiveness of state incentive programs is that there are so many different ways in which one can measure development from incentive programs, thereby making it difficult to determine whether the undertaking of such programs is really in the best economic and fiscal interest of states.

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In the past, statistical models have attempted to determine growth from state incentive programs by looking at growth measures such as changes in employment, gross state product, personal income, new plant openings, formations of small and start-up firms and so on.<sup>14</sup> Moreover, many of the more sophisticated statistical models factor in costs related to incentive programs such as fiscal costs to states, time and energy costs to run incentive programs and transportation costs to

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<sup>11</sup> Wallsten, S. (2000). The effects of government-industry R&D programs on private R&D: the case of the Small Business Innovation research program. Vol. 31. No. 1 82-100.

<sup>12</sup> The California Energy Commission. (2008). Research Policy and Legislation. [http://www.energy.ca.gov/research/policy\\_leg.html](http://www.energy.ca.gov/research/policy_leg.html)

<sup>13</sup> Arrow, Kenneth J. and Lind, Robert C. (1970). Uncertainty and the Evaluation of Public Investment Decisions. American Economic Association: American Economic Review. Vol. 60.

<sup>14</sup> Fisher, Peter S. and Peters, Alan H. (1997). Tax and Spending Incentives and Enterprise Zones. New England Economic Review.

relocating firms.<sup>15</sup> However, several issues still remain when measuring the effectiveness of state incentive programs, including the time horizon considered, fluctuations in the business cycle and inefficiencies associated with developing industries and endeavors not profitable and cost effective in the private sector.

One of the key aspects of assessing the effectiveness of both public and private sector investments is the measurement of the results or returns on an investment. When it comes to measuring the success of economic development incentive programs there are two main methodologies employed: cost benefit analysis and fiscal impact analysis. Cost benefit analysis is the process of comparing the costs, in the form of tax concessions and revenue outlays, to the revenues that have been generated by the project.<sup>16</sup> According to a report by the Council of State Governments, 28 states use a formal cost-benefit analysis to gauge the potential impact of economic development.<sup>16</sup> However, as discussed below, many of these projects are not evaluated after funds are spent. The other main type of measurement tool used to gauge the outcomes of economic incentive programs is fiscal impact analysis. Fiscal impact analysis focuses on the net effect of the project on the state or local budget.<sup>16</sup> The forgone tax revenue and infrastructure improvement costs are compared with the revenue returns due to job creation and other sources of state income. Again, the practice for most state and local governments is to assess the fiscal impact before the incentive is distributed, but they do not follow-up with a post-hoc fiscal impact. If follow-up studies are conducted, the results are not widely published.<sup>17</sup> The reason for the lack of data and analysis is unclear, but factors that may be to blame include political pressure to not release or analyze results or states may simply not have the additional funds available to conduct the studies.

### Issues

While the concept of measuring economic incentive programs may sound simplistic, there are several issues that surround the measurement of economic development incentives. Two key factors that need to be considered as state and local governments evaluate economic development programs are the time horizon for which to evaluate the program and the impact of normal business cycle fluctuations on the outcomes of the incentive programs. Without accounting for these factors, the measurement of incentive program outcomes will not accurately reflect the true outcomes of the projects. The first question that needs to be asked in any post-hoc economic analysis is over what period of time the outcomes of the economic incentive program should be measured. If the expectation is that an incentive program will create jobs and tax revenue, at what point can a firm layoff employees or scale back operations and still be deemed a successful economic development program? In addition, the length of the time horizon is directly related to the normal fluctuations of the business cycles. If incentives are provided toward the beginning of a recessionary period and the firm is forced to cut production and employment, the firm's incentive may be measured as a failure, but in fact, given the economic climate, the result cannot be directly attributed to the incentive, but rather to general business conditions. Accounting for these factors has been a clear deficiency within the very few studies that have evaluated the effectiveness of state-sponsored economic incentive programs.

One important choice that needs to be made in the evaluation of economic incentive programs is at what point the incentive program is evaluated. In the private sector, investment outcomes are constantly measured and assessed for profitability. On the other hand, many state sponsored economic incentive programs have some type of market analysis that attempts to estimate the economic impact of investing in a project before it begins, but they do not measure the actual outcomes of the projects. There is a large body of evidence that suggests most states do not measure the overall effectiveness of their economic incentive programs (see Gorin (2007) and

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<sup>15</sup> William Hoyt, Christopher Jepsen, and Kenneth R. Troske. (2007). *An Examination of Incentives to Attract and Retain Businesses in Kentucky*. University of Kentucky.

<sup>16</sup> Zelio, J. (2009). *Taking the Measure of State Economic Development*. National Conference of State Legislatures.

<sup>17</sup> Hoyt, W. Jepsen, C., and Troske, K. (2007). *An Examination of Incentives to Attract and Retain Businesses in Kentucky*. Center for Business and Economic Research, Gatton College of Business and Economics, University of Kentucky.

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***Two key factors that need to be considered as state and local governments evaluate economic development programs are time horizons and business cycle fluctuations.***



Zelio (2009).<sup>18</sup> A report by the National Conference of State Legislatures cited the fact that it is difficult to evaluate the success or failure of many economic development programs due to the lack of even basic measurable data.<sup>19</sup> As a result of these measurement deficiencies on the part of state governments, there is not a clear evaluation of past programs for policy makers to make informed decisions about where to invest a state's increasingly scarce funds.

Figure 5

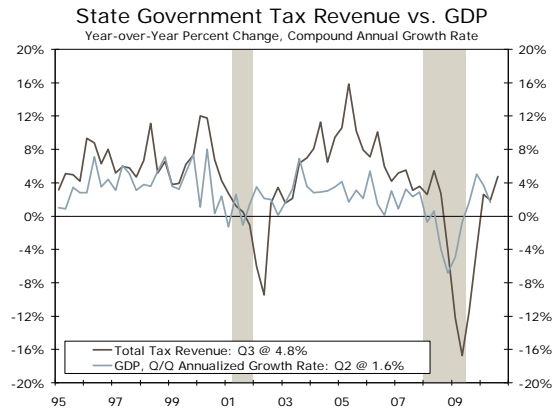
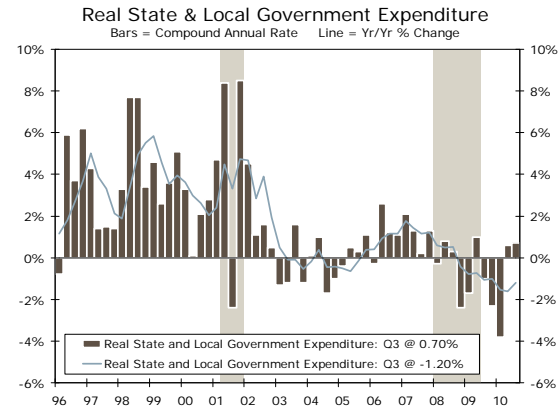


Figure 6



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

## Do State Development Incentives Make Sense?

Given the recent stress on state and local budgets, does continual investment in these incentive programs without knowing the return on these investments make sense? Unless states begin to collect better data and conduct accurate post-hoc analysis of these incentive programs, there is not a clear understanding of the historical success of a program. In addition, there is concern that investing scarce funds in programs without knowledge of the historical success could lead to state and local governments misallocating already scarce revenues. While the past may not always be the best predictor of future returns, state and local governments would be in a better position to defend their appropriations to these incentive programs if they could justify the financial costs. In addition, there is some evidence to suggest that some state and local incentive programs are redundant with federal economic incentive programs.<sup>20</sup> These redundancies are likely due to political reasons such as local governments wanting to appear to support small businesses. In light of the absence of data and the possibility that state and local programs overlap with some federal programs, these governments need to take steps to ensure tax dollars are invested wisely. In order to ensure the effectiveness of economic incentive programs, state and local governments need to conduct preliminary cost benefit and fiscal impact analyses. These analyses should include the time horizon for measurement, including also some clearly defined benchmarks, such as the number of jobs created, the amount of tax revenue that is generated by the investment or other measures that the state or local government deems significant to the success of the incentive funded project. In addition, funding levels should be justified in light of the estimated return on investment that has been calculated by an objective third party. Finally, a post-hoc study of the actual returns should be conducted in order to determine the actual return on investment that the state or local government received. Most important, the results of these studies need to be made public, ensuring that policymakers are held accountable for the investment decisions that are made. Without state and local governments ensuring some return on their investment, future

***Does continual investment in state-sponsored incentive programs without knowing the return on these investments make sense?***

<sup>18</sup> Gorin, D. (2007). Economic Development Incentives: Research Approaches and Current Views. Federal Reserve Bulletin, Vol. 93.

<sup>19</sup> Zelio, J. (2009). Taking the Measure of State Economic Development. National Conference of State Legislatures.

<sup>20</sup> Brash, R. (2008). Public Sector Duplication of Small Business Administration Loan and Investment Programs: An Analysis of overlap between federal, state, and local programs providing financial assistance to small businesses. The Urban Institute.

budget allocations for the purpose of economic development will likely not be justified in the eyes of taxpayers, especially in a time of very tight fiscal budgets as is true today.



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