

Bang for the Buck

Calculating the State's Return on Investments in Economic Development

By Charles Bruner and Peter S. Fisher

What is the Public Return on Investments in Business Subsidies?

There is much interest in using Return on Investment (ROI) calculations to assess whether business tax credits and other economic development expenditures have value to the state. This approach attempts to borrow a standard methodology employed by businesses in evaluating how a planned new investment will impact the firm's profitability over time. The up-front and continuing costs of the investment are compared with the projected increases in sales and profits — the project returns — over the life of the investment. When used to evaluate public expenditures for business subsidies, however, the ROI approach presents significant challenges. We will discuss the most important of these challenges, and argue for a version of cost-effectiveness analysis as a preferable framework for tax credit evaluation.

We will also discuss the importance of distinguishing between ranking particular projects under a credit program in order to ration funds, and a method to evaluate the program as a whole. For example, one might wish to rationalize the process of deciding which projects get money under a \$50 million cap when there are \$75 million in credits that have been applied for, or one might wish to evaluate the cost-effectiveness of the whole \$50 million credit program. The methods differ depending on one's purpose.

To apply the ROI approach to public-sector activity, one must be careful to identify the correct public analogues to private-sector costs and project returns. The costs include not just the revenue loss from the tax credit in question, but all of the state and local government incentives provided, including direct grants and loans, tax abatements, tax increment financing incentives, and infrastructure required by a new facility. In addition, the subsidy is presumed to result in increase in business activity and jobs, and the long-run effect of greater job opportunities is increased in-migration and/or reduced out-migration. This in turn creates greater demands placed on state and local public services. The correct cost (or "investment"), then, is the increase over some time period in government expenditure plus the reduction in government revenue attributable to the private sector investment induced by the subsidy.

If we are to apply the private-sector ROI method to governmental activity, then the "return" on the public investment in the ROI calculation means the increased revenue to the government, analogous to the increases in business revenue following the business investment. The presence of new business activity in the state will produce new business taxes (income, sales and property tax revenue) and the gain in jobs and personal income will generate additional individual income, sales and property taxes.

The Iowa Policy Project

20 E. Market Street
Iowa City, IA 52245
(319) 338-0773 • www.iowapolicyproject.org

CHILD & FAMILY POLICY CENTER

505 5th Ave. • Suite 404
Des Moines, IA 50309
(515) 280-9027 • www.cfpciowa.org

It is a mistake to treat an increase in private-sector incomes as a return to the state. While increased tax revenues belong to all the citizens of Iowa, increased business profits or private-sector wages accrue to particular private firms and individuals; these are not public returns. Thus, a properly applied ROI analysis is, in effect, measuring the net long-term fiscal effects of a business subsidy. These effects can be positive or negative, depending on whether or not the additional tax revenues attributable to the private economic activity exceed or fall short of the cost of the incentives and the additional public expenditure required by economic growth.

The net fiscal effect also can be thought of as the net public cost of the project — the incentive and other costs, offset (fully or in part) by increased future tax revenue. This cost can then be set against a wide variety of economic impacts or intangible public benefits. For example, if the purpose of the credit is simply to generate jobs and income, economic models can be employed to forecast the impact of a project on total state employment and income. If the purpose is in part to preserve historic structures, the historic and aesthetic values of the building can be described. If the credit is aimed in part at increasing Iowa's energy independence, then quantitative measures of the expected reduction in reliance on imported energy can be created. This approach allows decision makers to consider the cost-effectiveness of alternative projects and programs, not in a mechanical fashion but by using judgment as to the weight to be given to alternative kinds of impacts and public benefits, and comparing those impacts and benefits to the net public cost. The cost analysis is important to do because efficient use of public funds requires, first, understanding the exact cost of a project or program.

It is a mistake to treat an increase in private-sector incomes as a return to the state. While increased tax revenues belong to all the citizens of Iowa, increased business profits or private-sector wages accrue to particular private firms and individuals; these are not public returns.

Key Challenges in Applying ROI Analysis to Public Programs

Regardless of whether one refers to this as an ROI analysis, or a correct accounting of costs, or a fiscal impact assessment, some difficult challenges require attention. First, we need to determine if the public investment produced a difference in the amount of business activity that the recipient of the investment engaged in, and if so, how much and for how long? Not all business activity, or increased business activity, may be attributable to the public investment; some or all may have occurred in any event. Take, for example, a typical investment tax credit equal to 5 percent of the private capital investment. It is unlikely that a 5 percent cost reduction would be a determining factor in the business's decision to make the investment or locate the investment within a state, when other concerns (labor markets, energy costs, access to markets and materials) will generally have a much greater impact on a business's bottom line.

Second, we would need to determine whether the public investment produced a net increase in economic activity or simply displaced some existing business activity. Even where an incentive was the decisive factor in an investment decision, starting up a new business that competes with an existing business may not actually create a net increase in economic activity but may merely change who receives that activity. This is true with businesses that directly compete with one another (as in the case of Wal-Mart coming into a community and competing with downtown retail businesses), but it also can be true with businesses competing for the same, limited labor pool.

How one deals with the problem of causation depends on the purpose of the evaluation. A vast amount of research has been conducted over the past 25 years on the effects of business subsidies and tax breaks on state economic growth. The inescapable conclusion is that tax subsidies are of very limited effectiveness, and that the majority of business investment decisions are not altered by the existence of

subsidies. If the subsidy was not the decisive factor, then the subsidy has only costs — no increased future revenues of any kind, no increased economic activity or jobs can be attributed to the subsidy. Those future revenues and jobs would have been there even without the subsidy. This means a proper cost analysis of a tax credit as an ongoing program — rather than a particular case of one firm that received the credit — can be performed by applying the results of the tax credit research to the particular credit in question. In other words, we could estimate the net cost of the credit assuming that it is decisive in 10 percent of the cases in which it is taken. All of the credits provided are part of the cost of the program, but future revenues (and other benefits) flow only from the 10 percent of investment projects induced by the incentive.

It is another issue altogether to attempt to evaluate a discretionary subsidy provided to a particular firm. The firm will know if the subsidy was necessary, or if it was applied for and taken as “gravy” for a decision that had already been made. The public will not know this for certain, despite efforts that may be made to require documentation of the necessity for the subsidy. Certainly the application process and the discretionary nature of the subsidy make it more likely that it is granted only when necessary to tip the balance, but it is also highly likely that many discretionary awards are made unnecessarily.

In fact, limitations or caps on the total amount of credits that can be awarded under a particular program have the virtue of forcing agencies to adopt some kind of criteria for ranking projects in order to ration the funds, and this makes it more likely that scarce public dollars will be used more effectively.

For these reasons, we would recommend that tax credit *programs* should be evaluated using sound cost-effectiveness analysis techniques that incorporate appropriate assumptions about the proportion of investments that are actually induced. Where particular applications for subsidy are being evaluated, on the other hand, the cost-effectiveness analysis has more limited application. It can be useful in comparing different projects or applications under the same grant or credit program, and it could be incorporated into a scoring system that aided decisions about how to use limited funds. In fact, limitations or caps on the total amount of credits that can be awarded under a particular program have the virtue of forcing agencies to adopt some kind of criteria for ranking projects in order to ration the funds, and this makes it more likely that scarce public dollars will be used more effectively. But a cost-effectiveness analysis should not be applied to individual projects as a way of demonstrating the overall value of a program. The reason is that each individual project will be evaluated as if the credit were the decisive factor; the returns for the program as a whole will be based on the assumption that every single project would not have occurred but for the credit. This is highly unlikely.

Guidelines for ROI or Cost-Effectiveness Analyses

If the state wishes to take a more systematic approach to the evaluation of economic development projects, we need not start from scratch. In 2003, the Department of Economic Development, with the assistance of an advisory team from the state’s three public universities, created a computer spreadsheet-based model for evaluating applications for IDED subsidies. The model incorporated all of the considerations needed to assess the net fiscal cost of a given subsidy to a particular firm, and also estimated the impact of the proposed investment on the Iowa economy and employment. Subsequently, however, this model was modified. Further, some of those involved in the initial development raised a number of concerns about the model revised in 2004, both in terms of how it operated and in terms of how it was being used and how the results were presented. Given the amount of effort and expense involved in creating the original model, we would recommend that a team of outside experts be asked to

review the current model's operation and make recommendations on revisions to its workings, and on the proper use and interpretation of the results.

In reviewing existing approaches to return-on investment (ROI) calculations or developing a new approach, a number of factors need to be taken into consideration. We propose the following guidelines:

- **Calculate public investments in terms of public returns.**
- **Establish a reasonable time frame for making these estimates**, with returns in future years appropriately discounted.
- **Estimate the impact of the investment on the direct level of economic activity that is projected to occur**, including any potential for displacing existing economic activity.
- **Incorporate additional public costs, as well as benefits, from the economic activity.**
- **Count any return only once, even if multiple, independent state investments were made to produce it.**
- **Recognize that ROI is only one factor to consider in determining public purpose and benefit.**
- **Audit for impact and accuracy.**

An overall formula or protocol for conducting ROIs should address each of these factors. Each is discussed briefly, below, with recommendations for next steps included at the end of this report.

Calculate public investments in terms of public returns. Government is not a private investor. Most public investments in economic development do not assume an equity position and do not share in profits that are secured as a result. Public investments must produce a public benefit. ROI may be a useful way to calculate a portion of that public benefit, but only on the direct financial side. The benefits of a cleaner environment or a safer community, for example, which economic activity can foster or jeopardize, are not part of ROI calculations. They should be included in ultimate decisions regarding the value of making public investments, but this should be done independent from the ROI calculation itself.

In terms of financial ROI calculations, ROI's should examine the amount that is invested by government compared to the increased tax revenue that accrues as a result of the investment. This also could be referred to as a Fiscal Impact Ratio (FIR).

Establish a reasonable time frame for making these estimates. Some investments will take longer than others to produce economic growth and any increased tax revenues that derive from this growth. At the same time, in general the public should be expected to recover its investment over a reasonable period of time. There are a number of factors that go into such a determination — establishing a projected growth and profit curve for the investment, determining the riskiness of the venture, and factoring in opportunity costs and inflation for out-year investments. The time frame should be consistent with the nature of the investment and its expected growth and there must be an adequate discount percentage to reflect opportunity costs and inflation.

Estimate the impact of the investment on the direct level of economic activity that is projected to occur. This may be the most important, and difficult, consideration, in calculating a public ROI. ROIs need to estimate to what extent the public investment actually produced the increased economic activity, and what portion of that increased economic activity they produced. Most public investments are small in relation to the overall amount of investments that are being made, and some of these investments (or even most) would be made anyway. As businesses make decisions on economic location or growth, they must take into account adequacy, amount, productivity and cost of labor, the local infrastructure related to their business needs (transportation, sanitation, safety, etc.), and the access to materials and markets. Taxes generally play a very small role in such decisions, and the variations in taxes across jurisdictions

are tiny in comparison with variations in these other factors. Therefore, unless a public investment is very large in relation to projected overall costs of conducting business over the ROI time frame (e.g. seven years), they are likely to play a modest role, at best, in either the size or location of an investment.

As an example, if a state simply wanted to boast about its return on investment and did not incorporate this factor into its calculation, the logical thing to do would be to invest a very small amount in any and all private sector economic development activities in the state. This would be like an investor claiming that, by investing in a mutual fund owning a small share of every publicly traded company in the United States, that investor was responsible for all increased economic activity in those companies.

It is also critically important to assess whether the increased economic activity being subsidized displaces other economic activity that would have occurred. If the subsidy creates growth of one business at the expense of another, its overall impact upon state revenue is diminished, and the subsidy also may be unfair in advantaging a new business over an established one. Taking this factor into consideration is, of course, much easier to do when dealing with grants, forgivable loans, and other subsidy programs, than when it is dealing with changes in the tax code.

Incorporate additional public costs, as well as benefits, from the investment activity. It is common, and legitimate, to incorporate into public ROIs additional public sector financial returns that accrue from increased economic activity. If there is increased economic activity, that activity circulates in the economy and produces additional sales, income tax, and other revenue. There are different multiplier effects for different industries, particularly in terms of how quickly any profitability is transferred outside the state. In addition, however, there may be increased public costs that accrue from economic growth. If the economic activity is only possible through bringing new workers into the community and not creating new employment for those currently in the community (particularly individuals not in the workforce), that creates new demands for services, including educational costs for children in the public school system. In some instances, such as low-wage labor in the meat processing industry, there may be other costs associated with supporting that workforce, as well. Alternatively, if the result of the economic activity is to provide currently unemployed persons or low-wage workers with better higher-wage employment, there may be returns to the state and federal government in reduced social welfare costs and transfer payments.

Count any return only once, even if multiple, independent investments were made to produce it. When states provide multiple economic development investment incentives, it is possible for more than one of these incentives to be used at once. In fact, promoters may work to package different public investment incentives together to support a private sector economic activity. In these instances, each individual investment incentive can only claim a portion of any increased economic activity, and the total cannot exceed 100 percent of the overall activity.

Recognize that ROI is only one factor to consider in determining public purpose and benefit. There is much more to state budgeting than receiving financial returns on investment. A safe and clean environment, a quality educational system, a healthy place to live, good work environments paying fair and family-supporting wages, and supports to enable all to live in dignity and address special needs are roles for state government which cannot be reduced to an ROI. These factors deserve consideration for economic development investments even when an ROI calculation also needs to be made.

Audit for impact and accuracy. Most ROI analyses are based upon projected or estimated economic growth. To the extent possible, these can and should be tracked for the degree to which the estimates have been accurate and they have been used for their intended purposes. This is more complicated, but still possible, for investments made through the tax code, particularly if they exceed a certain size.

The above factors all need to be incorporated into public ROI calculations. ROIs, however, often have been used very loosely and primarily as arguments to seek public subsidies for their promoters. Any statements about ROIs need to be backed up with evidence that shows that all these factors have been considered and appropriately addressed

Recommendations for Next Steps

Currently, Iowa has employed an ROI methodology for some of its economic development investment activities. This methodology could and should be reviewed in light of the above factors, again drawing upon Iowa economic experts and seeking to establish a fair, and not promotional, mechanism for doing them. Re-establishing such a working group could help to draw from Iowa's experiences while working to establish a credible methodology.

One of the steps could be a review and re-analysis of the Fiscal Impact Ratio (e.g. ROI) work that was done on the Enterprise Zone Tax Credit and the High Quality Jobs Program. Both established an estimate of public return from investment in relation to investment costs and tax revenue. There is now experience on one of the major types of investment — in ethanol production plants — and the returns they have achieved. Both incorporated the tax benefits into their analysis, so the review also can determine if there was duplicative counting of estimated benefits. By examining this specific work, there should be insights in what changes should be incorporated into future methodologies and analyses.

Iowa Fiscal Partnership

The Iowa Fiscal Partnership is a joint fiscal policy initiative of two nonprofit, nonpartisan Iowa-based organizations, the Child & Family Policy Center in Des Moines and the Iowa Policy Project in Iowa City. IFP reports are available at www.iowafiscal.org.