



ESTIMATING THE INFLUENCE OF INCENTIVES ON INVESTMENT DECISIONS

A NEW APPROACH TO THE BUT-FOR QUESTION

Incentives are a critical tool for economic developers trying to influence corporate location decisions, but knowing how important they are in the process is fraught with uncertainty. This is especially true when public policy makers are keen to offer incentives only when they are required to convince a company to decide in favor of their state or community. However, there are good reasons to re-think how we have come to use the term “but for” when we talk about incentives. Regarding incentive offers as binary – that they either did or did not tip investment decisions and are therefore either 100% responsible for a given investment or had no impact at all – misstates the role that incentives play. We know that incentives are just one factor among many influencing investment decisions. This paper suggests that instead of an all-or-nothing approach, the effect of incentives on investment decisions should be considered as a probability between 0 and 100% and offers a methodology for estimation.

WHAT ROLE DO INCENTIVES PLAY?

Incentive advocates often overstate the role that incentives play during the investment process. Unfortunately, they tend to downplay (or forget) the critical characteristics of a competitive business environment. At the same time, incentive opponents underrate the importance of incentives, often ignoring their role in making a location more financially competitive when compared with others that have similar business advantages. In addition, opponents greatly downplay the psychological importance of incentives as a demonstration of a state’s or community’s commitment and willingness to share in the risk of a large investment a company might be making.

To balance these competing factions and to bolster the state's role as a steward of taxpayer dollars, most public agencies that offer investment incentives seek to limit their participation only to business investment activity that requires public sector involvement before it can go forward. In other words, "but for" the government incentive on offer, the project would not happen in that location. In these cases, economic development and investment promotion agencies advocating the use of incentives tend to assume that 100% of the estimated public benefits from the investment can be attributed to the incentive. In their view, not only is the incentive required to ensure the business decides to invest in a location, but all the impacts resulting from the investment can be attributed to the incentive's availability.

However, an assumption that the full impact of the investment can be attributed to the incentive actually serves to exaggerate the role that incentives play during the investment process and downplay other critical characteristics of a competitive business environment. Business surveys consistently demonstrate that multiple locational determinants, including talent, infrastructure, market access, and natural resources, affect investment decisions. Company decision makers always consider incentives in combination with these other more foundational economic factors. When allocating resources, policy makers must remain aware of the risks associated with overemphasizing incentives at the expense of downgrading the significance of other factors that are often more important to companies in their location decisions.

What role, then, do incentives play in the company investment decision making process? How can EDOs determine the extent to which incentives influence behavior? Similarly, when policy makers strive to evaluate incentive effectiveness, how much of the investment outcome should be attributed to incentives, given that these other factors were so important in getting the investment deal in front of the public agency in the first place?

PROGRAM EVALUATIONS AND EVOLUTION OF THE TERM "BUT-FOR"

Note there are two different issues: 1) Was the incentive "needed" to drive the decision; and 2) How much of the benefit should be attributed to the incentive? This two-pronged approach to considering the importance of incentives is well-grounded in the research literature on economic development program evaluation. Program evaluation studies have emphasized the following concepts (Storey, 1990; Foley, 1992; Persky et al. 1997; Abravenel et al., 2010):

- Substitution, deadweight costs, and redundancy of capital: In other words, was the incentive needed or did it simply replace money that would have been spent anyway? And was the substitution complete or was it partial?
- Additionality: How much of the beneficial outcome did the incentive itself actually cause, or how much can be reasonably be attributed to the incentive?

The term "but for" appears to have developed in the context of efforts to evaluate the federal Urban Development Action Grant program in the 1980s because policy makers were concerned that public funds should not substitute for private capital (Abravenel et al., 2010). One academic study suggests that the term itself was embedded in state urban renewal statutes and supported by advocates for tax increment finance (TIF) programs because it helped establish a "public purpose" that created a "need" for public financing. The article implies that the term was intended to give developers more power to move projects forward by threatening not to invest, causing communities to fear decline and a loss of opportunity (Weber et al., 2013).

The "but for" concept has since been stretched from its initial focus on gap financing needed to enable urban redevelopment projects and is now applied to all types of business incentive programs, including

those intended for business attraction. In this case, “but for” has come to mean that an incentive was the deciding factor in a firm’s location, expansion or retention decision.

Studies have attempted to apply this definition of “but for” during incentive program evaluation research. However, Bartik (2018b) has found that, “Overall, the research literature on incentives’ “but for” effects is not as rigorous as one might hope.” Reasons include positive or negative bias and not considering incentive program design and award magnitude. In addition, many “but for” studies do not look directly at the effect of an incentive on individual company’s decisions, but instead use a variety of techniques to compare job growth or other economic outcomes at either the firm level or by geographic area after the fact in order to infer the incentive’s impact.

The methods (empirical vs. survey and aggregate vs. micro) and outcomes examined in these studies also vary, as do the type of incentive programs being evaluated (grants, tax credits, payroll credits, discretionary, statutory, etc.). Studies use various approaches to job growth to determine the “but for” level, including job growth among a set of comparison companies, total employment and/or job growth at the county level, industry-specific job change, total employment, ratio of jobs created to claimed jobs created, and economic growth by county (Bartik 2018b). A key point is that in these cases, “but for” stretches further to refer to the effect on broader economic outcomes, rather than the influence on a company’s investment decision.

In short, the economic development field has adopted “but for” as a meaningful standard for assessing incentive effectiveness, but the term is not well-defined nor is it used consistently in evaluations. Consequently, related findings about the value of “but for” assessments in the firm decision process do not rest on a strong research foundation.

THE FIRM CHOICE APPROACH

New approaches are merited given these shortcomings in the application of a “but for” standard to incentive assessments. CREC, Smart Incentives, and the Upjohn Institute took on this challenge by striving to estimate the influence of incentives on business location decisions during a recent evaluation of a US state’s flagship incentive program.

The Michigan Economic Development Corporation (MEDC) offers the Michigan Business Development Program (MBDP), a discretionary grant program for “highly competitive projects in Michigan that create jobs and/or provide investment.” MEDC requested a third-party review of the MBDP’s effectiveness. That review included an assessment of the importance of incentives to securing projects and generating results for Michigan.

In response, our team (Smart Incentives working with CREC) developed what we called the “firm choice” approach to assessing the relative importance of incentives in the corporate investment decision making process.¹ The firm choice approach emphasizes firm and project characteristics likely to affect the ultimate level of influence that an incentive on offer may have on the final investment decision.

The assessment drew on academic research identifying factors that affect business choices and incentive effectiveness at the firm level. We then examined company-specific MBDP project documentation to rank and rate the factors, generating a score that we translated into an estimate of the level of influence of the incentive.

1. The Upjohn Institute developed a “cost sensitivity” approach, which is based on the sensitivity of business activity to tax costs and the incentive’s value relative to business scale. For more information see the [Michigan Business Development Program Effectiveness Study](#).



The research literature suggests several firm and project characteristics affect the importance of incentives to business investment decisions. These include:

- **Geographic area.** Efforts to measure incentive influence depend on the geographic frame of reference. For example, a company may have already decided to invest in the United States (so a national incentive would be assumed to have no influence on that choice) but has not chosen the specific state (so state-level incentives would be more likely to affect that decision) (Storey, 1990).
- **Consideration of multiple locations.** Companies that have credibly considered multiple locations that are able to meet their operational needs or have functions that are mobile (that is, they do not need to locate in a specific place in order to meet their operational needs) are more likely to value state and local incentives in their decision process (James, 2013; Jensen, 2017; Tavares-Lehmann et al., 2016). A special case occurs when the investment decision will be made among multiple locations where the company already has operations, and corporate leaders are evaluating which site will generate the highest return.
- **New or existing facility.** Incentives are considered especially valuable to attract new businesses or encourage new investment (Hoover, 1975; Stimson, Stough, and Roberts, 2002), but in practice, incentives are frequently offered to existing businesses for retention purposes, to encourage investment that might not have otherwise occurred, and/or to build goodwill with the firm to ensure that it does not consider alternative locations for its expansion.
- **Features of the incentive offer.** The relative size of the incentive benefit affects its impact (James, 2013; Bartik, 2018a) as do the incentive type and structure, timing of the application, and whether a firm is a first-time or repeat incentive recipient (Foley, 1992; Lenihan et al., 2005).
- **Firm attributes.** Cost-sensitive or efficiency-seeking operations (such as manufacturing, call centers, and distribution centers) and foreign investors have also been found to be more likely to be influenced by the availability of incentives, as are companies for whom the incentive meets a specified need, such as project financing or support services (Tavares-Lehmann et al., 2016).

To operationalize these concepts, we identified project- and firm-specific information available from MBDP project documentation aligned with these characteristics for 25 completed projects and 16 terminated projects. As part of the review, we also examined company-provided answers to application queries on alternative project configurations and other sites being considered, why the incentive assistance was needed to ensure the project happened in the state, and the project description.

Seven factors were selected for which consistent, reliable data were available from the MBDP's project: whether the company credibly considered multiple locations, description of a financing gap or competitive disadvantage (specified need), the ratio of the incentive to the projected investment (incentive offer size), whether the company already had operations in multiple locations, whether the company already operated in the state or was new to the state, foreign or US parent company ownership, and cost-sensitive industry category (Table 1).

Table 1. Weighting and scoring of factors influencing the importance of incentives.

Factor	Scoring Approach	Factor Weight
Considered multiple locations	0=no; 0.5=yes, among its own operations; 1=yes, multiple locations not limited to its own operations	0.25
Described financing gap or disadvantage	0=did not describe gap or disadvantage in application; 1=did describe specific gap or disadvantage	0.25
Incentive amount relative projected investment	0=0.125=0.25; 0.126-0.25=0.5; 0.26-0.375=0.75; 0.376-0.5=1	0.15
Company has operations in multiple locations	0=no; 1=yes	0.15
Cost sensitive or capital-intensive industry	0=other; 1=NACIS 31, 32, 33, 56	0.10
Expansion or new	0=expansion; 1=new	0.05
Foreign owned	0=US parent; 1=foreign owned company	0.05
Total Factor Weight (combination of the above factors)		1.00

The team developed a scoring scale and system for weighting each factor as a way to recognize that not every factor equally impacts a corporate investment decision. The scales and weights were created with multiple internal and external inputs, but it is important to note that professional judgment played a substantial role, and they should not be considered definitive. Further research and additional perspectives would strengthen the findings and the framework's utility for understanding the relative influence of different project- and company-specific factors for other types of incentives. The most heavily weighted factors were the consideration of multiple locations and a documented financing gap or competitive disadvantage. The ratio of incentives to the projected investments, presence of operations in multiple locations, a determination of whether the companies were new to the state, US or foreign ownership, and cost sensitivity of the companies' industry rounded out the analysis.

Factor data were obtained for each investment from incentive applications provided by the companies, internal review memos maintained by MEDC, and publicly available company data. Each of the 25 completed projects and 16 terminated projects were reviewed and scored by two study team members. The last step involved multiplying each factor score by the appropriate weight and adding the factor scores to determine a total project score that hypothesized the likely level of influence the incentive had on each company's investment decision.

The result was a score for each incentivized project between 0 and 1 to represent the “but for” level, or level of influence of the incentive on the investment. However, we were mindful that presenting an overly precise figure might be construed as too deterministic, especially given the number of assumptions made in developing this approach and the inherent uncertainty associated with the entire “but for” issue. Therefore, we opted to group scores into five categories and assigned a “but for” percentage to each range based on the mid-point of that range. For example, a project that scored 0.75 was given a probability score of 70% based on the score range of 0.61-0.80. The interpretation is that there is about a 70% chance this project was influenced by the incentive given project and company characteristics.

The results provided insight into which projects were most likely to be influenced by incentives. The project scores ranged from a relatively low level of influence to very high. For most projects, the analysis indicated that incentives would be responsible for approximately 50-70% of the choice to invest in the state. The assessment therefore concluded that the MBDP incentive likely played an important—but not isolated or determinative—role in influencing companies’ investment decisions.

IMPLICATIONS

There are several implications of this work that may be helpful to incentive program management:

- It provides a framework for economic development organizations to consider the relative importance of incentives when assessing the merits of proposed investment projects.
- It can be used to estimate the proportion of public benefits stemming from incentives’ use when conducting program evaluations, rather than assuming 100% causality, thereby recognizing the limited role incentives play in investment decisions.
- Economic development organizations should consider adjusting ROI and other economic impact calculations to account for an incentive effect that is less than 100% but greater than zero, even if the firm choice approach is not applied.
- Incentives are not all created equal. Other studies have found that many tax incentives have lower levels of influence than were found here. A discretionary, pay-for-performance grant incentive that includes a robust application and review process and requires regular reporting on milestone achievement—as with the MBDP—is likely to affect behavior differently than a statutory tax break with few accountability mechanisms. In short, effective incentives require careful program design and scrupulous management practices.

Rethinking “but for” in this manner means governments do not have to be stymied by the impossible task of determining whether incentives proved absolutely decisive to investment decisions in order to assess effectiveness. More importantly, this approach puts incentives in their proper context. Acknowledging the limited role that incentives play helps redirect attention to necessary investments in other location factors and discourages overpaying for investment decisions that may not make economic sense for the state or community. As a result, economic development organizations can target resources carefully and make better choices when working with potential investors.

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FOR MORE INFORMATION

[Michigan Business Development Program Effectiveness Study](#), W.E. Upjohn Institute and Center for Regional Economic Competitiveness, January 2019.

[Why It's Important to Estimate How Incentives Influence Investment Decisions](#), Josh Goodman, Alison Wakefield, Khara Boender, The Pew Charitable Trusts, July 21, 2020.

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ABOUT THIS SERIES

In the economic crisis brought on by the coronavirus and COVID-19 public health concerns, state economic development executives are considering significant questions regarding how best to use incentive programs to help their states respond to the challenge. A coherent set of principles and approaches around adapting incentive use can help states respond strategically.

This is the fourth in a series of guidance papers.

Please also see:

- Adjusting Performance Agreements - [Guide to Help States Adjust Incentive Performance Agreements in Response to the Current Economic Crisis](#), May 2020.
- Small Business Assistance - [Guidance on Adjusting Discretionary Incentive Programs to Support Small Business Recovery](#), July 2020.
- Reporting and Evaluation - [Incentive Adjustments, Guidance on Documenting Program Changes](#), August 2020.