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## THE BIG ECONOMIC DEVELOPMENT PROJECT QUESTION:

# IS IT NEW REVENUE OR A SPENDING TRANSFER?

By Paul Harris, Ronald Berkebile, Julia Martin, and Larry Filer

**M**ost local governments pursue some degree of economic development activity to strengthen their economy by adding jobs and generating tax revenue. Witness the growth in tax

increment financing, property tax abatements, tax credits, and exemptions for economic development. These state and local incentives totaled more than \$80 billion in 2012.<sup>1</sup>

Economic development projects can

represent a significant boon for a local economy. Estimating how much money they might generate, however, is not as easy as it initially seems, and jurisdictions can receive far less net new revenue than developers predict.

Although no precise method exists to determine net new revenues, the purpose of this article is to examine factors and provide guidance to help local government managers estimate net revenues from a new venue in their communities.

### Factors Affecting Net Revenues

The *substitution effect* represents an intuitive concept that consumers and residents recognize each month when making choices on how to spend their money. Whether for political reasons or lack of ability to quantify it, some economic development analyses are silent about this phenomenon, and this last point represents a legitimate issue.

Most consumers have finite incomes, which limits their discretionary spending. Spending at a new venue can generate a shift or transfer in discretionary spending from one product, service, or place to another because limited income forces consumers to choose how, where, and when to spend money.

Even spending at such a unique place as an amphitheater displaces spending. A household's budget is limited and fungible so, for example, a person might decide to splurge on a concert rather than purchasing an item of clothing. Economists refer to this as a substitution effect<sup>2</sup>; *displacement* and *cannibalization* are similar terms.

An increase in consumers' incomes ultimately can generate more spending. Absent an increase in income, spending at a new venue in a local economy represents a 100 percent net increase when it results from these situations:

- **Preventing consumer leakages.**

When consumers spend outside their local economy, economists refer to this as a *leakage*. Some new venues may prevent leakages because if consumers did not spend at a new venue, they would do so outside the community.

- **Attracting spending by residents of neighboring communities and visitors.** A local government's venues may attract spending that otherwise would not have occurred there. In other

words, the locality essentially exports its businesses.

### Recognizing the Substitution Effect

The economic theory outlined above suggests that because consumers' incomes are limited, some spending is substituted for other spending. Economists test theories through empirical research, but it is difficult to model the substitution effect.

Because no research exists, financial officers must rely on the theory that substitution exists. Theory further suggests that substitution rates vary by the composition of demand—substitution varies among spending by local residents, residents of neighboring communities, and visitors and tourists.

## ESTIMATING HOW MUCH MONEY AN ECONOMIC DEVELOPMENT PROJECT MIGHT GENERATE IS NOT AS EASY AS IT INITIALLY SEEMS, HOWEVER, AND JURISDICTIONS CAN RECEIVE FAR LESS NET NEW REVENUE THAN DEVELOPERS PREDICT.

**Local residents.** Economists generally assume that spending by local residents represents a 100 percent substitution, which means no new spending, but some spending by residents at a new location may represent a marginal increase.

A 100 percent substitution effect assumes that if consumers did not spend money at one venue, they would spend it elsewhere within a locality. There are two reasons, however, that substitution rates would be less than 100 percent. We refer to these as *induced consumption* and *captured savings*.

First and most commonly discussed, the new venue may induce spending (consumption) that otherwise would not have been spent or spent in a different locality (leakage).

Second and less considered, the new venue could capture savings. Savings generates an economic impact through bank loans to local consumers and businesses. This suggests that

turning savings into consumption still represents substitution.

In other words, whether the consumer spends at a new location or retains funds at a local bank, the net impact of this substitution between spending and savings is the same. Banks, however, hold money in reserves, and they lend and invest funds outside the immediate area, creating leakages. Spending at the new location, therefore, may have a greater economic impact than savings because of these leakages.

These two factors suggest not all spending by local residents represents a substitution, but there is not a method of precisely estimating the substitution rate. Virginia Beach, Virginia, staff generally errs conservatively and

assumes substitution rates of 80 percent (20 percent new spending) for pure local demand—an educated guess.

### Residents of neighboring cities.

Spending by residents of neighboring cities can represent net new spending to a community. In this case, the neighboring city would experience the leakage because of the increased spending at the new location.

The supply or availability of merchandise, consumer tastes and preferences, price, and geography generally influence residential shopping patterns. This is particularly the case for routine shopping at grocery stores, drug stores, and related businesses, as well as for people who live and work in different communities and shop in the one where they work.

The quality and availability—something that is only available in one location—of shopping and

**FIGURE 1. Calculating a Substitution Rate Based on the Composition of Demand.**

	<b>% of Demand</b>	<b>Substitution Rate</b>	<b>Weighted Average</b>
<b>City residents</b>	50 %	80 %	(20% new) 40.0 %
<b>Neighboring city residents</b>	30 %	35 %	(65% new) 10.5 %
<b>Out-of-town visitors</b>	20 %	20 %	(80% new) 4.0 %
		55.5 %	(44.5% new)

In this example, the substitution rate is 55.5%, meaning that 44.5% of the spending represents new economic activity.

**FIGURE 2. Example of a Linear, Phased-out, 10-Year Substitution Rate.**

<b>Years</b>									
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
80%	72%	64%	56%	48%	40%	32%	24%	16%	8%

44% represents the 10-year average substitution rate.

entertainment can attract consumers from neighboring places, including high-quality shopping destinations, unique restaurants, and desirable entertainment venues.

If these places induce a nonresident to spend money they otherwise would have spent where they live, this represents new spending to the locality. Residents from neighboring communities may already shop where the new venue opened. These outside residents could redirect their spending to the new venue, displacing sales at establishments they normally patronize.

Suppose a resident of city A regularly dines in city B. If a new restaurant opens in city B and the person chooses to spend her money at the new restaurant, not the one she frequented before, substitution occurs.

The substitution rate from spending by neighboring city residents would be lower because these residents likely spend less in adjacent cities. Again, however, no research exists on determining this rate. Virginia Beach staff generally assumes a substitution rate of 35 percent and 65 percent net new revenue.

**Visitor and tourist spending.** Much of the money spent by visitors to an area represents new spending to a city or county. The key distinction is whether (1) the tourist visits because of a specific event or venue, or (2) the tourist visits and spends money in the city regardless of new events or venues.

New attractions may lure out-of-market residents who would not have visited otherwise. If an analyst can link the out-of-town visitation to an event or venue, perhaps through a survey of patrons, then 100 percent of that money reflects net new spending.

The exception is “time switchers” or visitors from outside the region whose spending represents a substitution. Recurring annual events provide a good example. Suppose a visitor regularly attended an event in September, but switched to May to attend a new event. This spending would represent a substitution.

Local government managers and analysts also need to consider the “crowd-out effect” from visitor spending. Large crowds, insufficient parking availability, or high parking fees may dissuade local residents or potential visitors

from attending an event or patronizing surrounding businesses near it. Out-of-town vendors accompany certain events, and patronizing these vendors represents a leakage, but these vendors would still remit some local taxes.

Regarding the second point: Some spending by existing visitors, those who are not in town for a specific event or venue, does represent new spending, while some does not. Visitors face spending trade-offs, similar to local residents, as they may limit spending to their vacation budget.

If visitors spend money at a local museum, perhaps they would have spent it elsewhere in the city during their stay. In other words, the visitor may have substituted one form of spending for another in the city. Conversely, some new attractions could entice tourists to spend money that they otherwise would not have spent.

Thinking about the net impact from new hotels represents an important topic associated with out-of-town visitors. Hotels generally experience high substitution rates because demand for hotels is derived from the demand to visit the destination, not the hotel in most cases.

If tourists are unable to visit because of a lack of available rooms, however, a new hotel could help meet demand during peak occupancy. Some hotel spending may represent such a marginal increase as booking a room at a new luxury hotel rather than at a midscale hotel, assuming the tourist would not have spent this residual increase elsewhere in the city.

# MONITORING ECONOMIC DEVELOPMENT PERFORMANCE

## FINANCIAL CONSIDERATIONS FIGURE

prominently in a “Best Practice” for monitoring economic development performance issued by the Government Finance Officers Association (GFOA). GFOA recommends periodic evaluations of each project receiving an incentive to ensure that it meets the compliance standards established in the development agreement.



Monitoring should include both timing of benchmarks and actual results compared to targets. It should also consider changes in tax base, property valuations, average wages, and income levels, and other factors that have an impact on the jurisdiction as a whole.

*Read more at [icma.org/gfoabestpractice](http://icma.org/gfoabestpractice).*

Some hotels generate new demand by hosting conventions on-site; their marketing staff attracts conventions held on-site that other hotels may not have secured.

For these reasons, out-of-market residents generate the lowest substitution rate. This is unquantifiable; however, Virginia Beach generally assumes a substitution rate of 20 percent (80 percent new).

## Estimating Demand and Rate

The factors above illustrate the difficulty in estimating the composition of demand. Sales by zip codes and intercept surveys can represent two potential sources of data for estimation.

A community might structure a public-private development agreement to include the release of sales by postal zip codes for a project, or data might be available for a city-operated venue like a museum or aquarium that could serve as a proxy for a similar private attraction.

Intercept surveys involve asking patrons entering or leaving a venue where they reside. These surveys are common in estimating the impact for sports stadiums and arenas. Figure 1 provides an example of a weighted-average substitution rate from the figures previously cited for each type of demand.

Many factors can affect the phase-out of the substitution effect. In general, growth in population, income, and tourism could decrease substitution rates over time. The density of the market, which includes the number of entertainment venues consumers have to choose from, and the quality and

uniqueness of the attraction, represent other considerations.

Sales at venues within a densely populated attraction environment—many are competing attractions—may experience high substitution rates for an extended period. Some attractions like an amphitheater provide unique, singular experiences.

Patrons attend the venue repeatedly because the performing artist changes, so displacement could remain high for an extended period. Offsetting this, a unique venue may lure visitors from other cities and induce local residents to spend money they would not have otherwise, thereby preventing a leakage.

Some venues may have a novelty effect, experiencing lower substitution rates because of strong initial demand. As the venue ages, the appeal of the attraction wanes and the substitution rate could increase.

## Phasing Out the Substitution Rate

Virginia Beach staff typically phase out the substitution rate in a linear manner during 10 to 20 years, depending on the type of venue.

Staff members also report the average substitution rate over the entire period. An 80 percent first-year substitution with a linear rate phased-out over 10 years, for example, represents an average substitution rate of 44 percent (see Figure 2).

## Concluding Thoughts

Precise methods for determining the substitution effect do not exist. Local government managers and analysts can

attempt to account for substitution by considering the composition of the demand for a site: Will its patrons primarily reside in the city where the venue is located, or will it attract patrons from a neighboring city and out of the market?

Generally, most of the spending by local residents represents a substitution while most of the spending by nonresidents represents new spending. Regardless of how it is arrived at, the calculation of expected new revenues from a proposed economic development project is important to making an informed decision on a project.

Managers and analysts need to be aware of the complex interactions, and governments need to perform appropriate due diligence, on revenue estimates provided by a developer. **PM**

## ENDNOTES AND RESOURCES:

- 1 Louise Story, “As Companies Seek Tax Deals, Governments Pay High Price,” *The New York Times*, December 1, 2012.
- 2 Rather than the textbook microeconomic theory of substitution, (i.e., a consumption shift generated by a change in price), the authors are considering a consumption shift resulting from a new product or venue.



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