

Economic Impact Analysis: Common Pitfalls

Introduction

While the methods of conducting an economic impact analysis are straightforward, there are several common pitfalls that tend to overstate impacts, either because they fail to account for monies that leak outside of the region, or because they ignore monies that may be withdrawn or lost from the economy. Three of the most common pitfalls in economic impact analysis are the following:

1. Expressing impacts in terms of sales rather than income
2. Ignoring the “with and without” principle
3. Failing to account for general equilibrium effects

Sales vs. Income

Sales comprise the total dollar amount collected in return for goods and services, while **income** refers to total wages, salaries, and benefits of a given region, as well as profits, rents, and transfer payments. At the regional level, sales figures tend to be larger than income, thereby making impacts appear to be greater than they really are.

Consider the following example. Two visitors each spend \$40,000 in an economic region. One visits a local auto dealer and purchases a new automobile. The other undergoes a medical procedure at the local hospital. While both transactions amount to \$40,000, they have widely different impacts on the local economy. Of the \$40,000 spent for the automobile, perhaps \$3,000 remain in the region as salesperson commissions and auto dealer income, while the other \$37,000 leave the area for Detroit or Tokyo as wholesale payment for the new automobile. The hospital expenditure, on the other hand, retains perhaps \$37,000 as wages for physicians, nurses, and assorted hospital employees (part of the region’s overall income), while only \$3,000 leave the area to pay for hospital supplies or help amortize building and equipment loans.

In terms of sales, both the automobile purchase and the medical procedure have the same impact. When expressed in terms of income, however, the former has a much smaller impact than the latter. As a true evaluation of regional impact, therefore, the use of income rather than sales is a far more accurate measure.

With and Without

While an economic event may generate direct regional impacts, failure to account for the monies that are withdrawn from the economy as a result of that event results in overstatement of the impacts. As such, gross impacts must be adjusted to account for monies that would have been generated had the event *not* taken place.

Consider the following adaptation of the well-known “Broken Window Effect.” An errant baseball breaks a window pane on a house. The visible impact is a broken window that needs to be replaced. The good news is that the local building supply store benefits from the sale of a replacement window—a plus side for the economy. From one point of view, therefore, this visible transaction has not only contributed positively and directly to economic growth, but also indirectly through a multiplier effect as the supply store and its employees spend the added income from the sale of the replacement window. Given this reasoning, the batter could naively be regarded as a public benefactor, having created additional economic growth by breaking the window.

What's missing, of course, is the invisible impact. The biggest loser is the owner of the broken window and the biggest beneficiary is the building supply store. Whereas the economy grows through the transaction with the store, the homeowner loses because he now has less money to spend on other things. For example, the local clothing retailer loses because he didn't receive an order for that new suit the homeowner had wanted but now can't afford. Likewise, all the other vendors who would have benefited from the money earned and spent by the clothing retailer if the suit had been procured are also losers because the money was instead spent on replacing the broken window. In the end, the errant baseball incident does not really add to economic growth at all. The clothing retailer and all of the vendors not benefiting from his business are the invisible losers.

The "Broken Window Effect" illustrates the difference between gross and net impacts. Measuring only the gross—the transaction between the homeowner and the building supply store—is only half the story. The other half is the adjustment needed to account for the monies withdrawn from the economy, monies that could have been spent elsewhere had the window not been broken. For the homeowner, that money is what he would have spent at the clothing retailer's for a new suit, and the subsequent ripple effect that would have occurred as the clothing retailer spent the money earned. These effects should be subtracted from the additional economic growth created by the broken window to determine its net impacts.

General Equilibrium

The extent to which economic events are interrelated in a general equilibrium sense must be accounted for in order to derive a true impact measure. However, many impact analysts regard the event studied in isolation, which risks overstating impacts.

Consider the following example. A student achieves an associate's degree and enters the workforce with a \$40,000 annual salary. Without that education, however, she would probably be employed elsewhere in the region making perhaps \$30,000 per year, reflective of the next-best opportunity associated with the education level the student had before earning the degree. The legitimate benefit to count is not the full \$40,000 for the newly created job, only the incremental increase of \$10,000 per year. The now-vacant \$30,000 job is an economic loss and the impact measure should be adjusted correspondingly.

This example demonstrates that, although higher earnings stimulate the economy, the individuals receiving these higher earnings must abandon lower paying jobs to do so. At some level, jobs and uses of capital that are left behind are simply left undone, or perhaps outsourced overseas. For this reason, counting the full \$40,000 earnings as an added impact to the region as a result of a worker getting a new and higher paying job would be a considerable over-estimate, because it fails to account for the opportunity cost of taking a newly created job. The result is that gross multiplier effects need to be reduced to reflect this opportunity cost. This reduction in gross effects applies through the entire chain of economic multiplier effects.

Conclusion

In the majority of cases, failure to account for common pitfalls in economic impact analysis leads to overstatement of impacts, which would be readily discredited upon a rigorous peer review. In any economic analysis, all impacts must be counted, negative and positive, visible and invisible, in order to ensure that results remain as accurate as possible and are a true measure of economic feasibility.

References & Further Reading

Hamilton, J. R., N. K. Whittlesey, M. H. Robison, and J. Ellis. "Economic Impacts, Value Added and Benefits in Regional Project Analysis." *American Journal of Agricultural Economics* 31 no. 2 (1991): 334-344.

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