

Example 20.3

Justifying Public Subsidies to Professional Sports Teams with Economic Impact Analyses

Before the 1950s, most stadiums and arenas for professional sporting events were paid for entirely by the owners of the teams. In 1951, Ford Frick, the commissioner of major league baseball, then the most popular sport, decided that the owners should insist that state and local government officials provide subsidies for new baseball stadiums. He felt that public subsidies were justified because baseball brings many benefits to state and local economies beyond the games themselves. Seldom has a commissioner done more for the owners of professional teams. Public officials wholeheartedly embraced his idea, to the point that large public subsidies for stadiums and arenas became commonplace. For example, from 1994–2000 owners of professional sports teams spent over \$8 billion on building new stadiums and arenas and another \$1 billion renovating existing facilities. Funding of \$5.4 billion, approximately 60%, came from state and local governments. The public largesse since then appears to be increasing, if anything. A leading textbook on sports economics reported that 25 new stadiums and arenas were scheduled to open from 2000 to 2006. They would receive \$5.5 billion in public funding, an average subsidy of \$220 million per facility and equal to 63% of the total funding.¹

Can such large public subsidies to professional sports teams really be justified? These are, after all, private businesses that enjoy monopoly profits, on average, largely because they have received an exemption from the antitrust laws to restrict the entry of new teams into their leagues. In an attempt to justify the subsidies, team owners and organizations that support them often commission private consulting firms to undertake an economic impact analysis of a proposed new stadium or arena. As the name suggests, an economic impact analysis is designed to show the various economic impacts or benefits that would accrue to a city or state from building the stadium or arena. These

¹ The data from 1994–2000 are from Rappaport, J., and Wilkerson, C. (2001) What Are the Benefits of Hosting a Major League Sports Franchise?, *Economic Review, First Quarter 2001*, Kansas City Federal Reserve Bank, p. 57. The data from 2000–2006 are from Fort, R. (2006) *Sports Economics*, 2nd edn (Upper Saddle River, NJ: Pearson Prentice Hall), p. 338.

analyses generally conclude that the benefits far exceed the public subsidies that the owners are seeking.²

An Economic Impact Analysis of the New Fenway Park

In the late 1990s, the owners of the Boston Red Sox wanted to build a new baseball stadium near the existing Fenway Park, and were seeking large subsidies from the city and state governments to cover part of the \$350 million cost of the stadium. Two pro-business organizations that supported the new ballpark, The Greater Boston Convention and Visitors Bureau and The Greater Boston Chamber of Commerce, commissioned C. H. Johnson Consulting, Inc. to undertake an economic impact analysis of the new park. The report produced by C. H. Johnson is representative of analyses of this kind.³

The study had two main goals, to estimate the additional annual spending and employment that would result from having a new ballpark and also the new jobs that would be created during the 2½-year design and construction phase. The study also distinguished between fans and workers living within and outside Massachusetts. Spending by the out-of-state fans clearly generates new income within the state; similarly, only employment of in-state workers represents new income for the state. Most of the incremental gains were due to the increased seating capacity of the new ballpark, 44,130 versus 33,871 in the existing Fenway Park. We report both their total and incremental estimates below, because the total estimates are representative of the estimates of economic impact analyses for stadiums and arenas when a team is new to a metropolitan area.

The spending and employment estimates fall into three categories, direct, indirect, and induced. Direct spending refers to “in- and out-of-ballpark fan spending and other spending from premium seats, league sources, advertisers, and visiting teams.” Indirect spending consists of “supplies of goods and services resulting from direct spending at the proposed facility.” Induced spending is the “change in local consumption due to the personal spending by employees whose incomes are affected by direct and indirect spending.” The employment in each category refers to the number of jobs created by the spending in the corresponding category.

² Economic impact analyses are not unique to sports stadiums and arenas. They often accompany proposed public construction projects in a similar attempt by public administrators and legislatures to justify projects that they are particularly interested in.

³ *Economic Impact Analysis of the Proposed Ballpark for the Boston Red Sox: Prepared for The Greater Boston Convention and Visitors Bureau and The Greater Boston Chamber of Commerce*, prepared by C. H. Johnson Consulting, Inc., June 30, 1999. The new park was not built; new ownership decided instead to expand and renovate the existing Fenway Park.

The estimates were as follows:

ANNUAL		
	Total Spending (\$ millions)	Out-of-State Spending (\$ millions)
Direct	284.9	105.1
Indirect	53.0	19.5
Induced	164.6	61.0
Total	502.5	185.6
	Incremental Spending (\$ millions)	Out-of-State Spending (\$ millions)
Direct	116.1	37.3
Indirect	23.3	8.2
Induced	64.9	20.0
Total	204.3	65.5
	Total Employment	Out-of-State Employment
Direct	4,743	1,713
Indirect	489	181
Induced	1,985	735
Total	7,217	2,629
	Incremental Employment	Out-of-State Employment
Direct	2,088	715
Indirect	215	76
Induced	782	241
Total	3,085	1,032

Source: Johnson, *op. cit.*, Tables 13, p. 20 and 14, p. 21.

Design and Construction Phase (2½ years)*		
	Total Spending (\$ millions)	Jobs Created (FTE)
Direct	262.5	2,072
Indirect	100.6	1,148
Induced	128.5	1,549
Total	491.6	4,769

*Does not include necessary improvements in infrastructure associated with the new ballpark.

Source: *ibid.*, Table 15, p. 22.

The two organizations that paid for this study were undoubtedly pleased with these estimates. The combination of:

- the large amount of incremental spending each year, with 32% (65.5/204.3) coming from out-of state citizens;

- the large amount of incremental employment each year, with 67% [(3085–1,032)/3085] of the jobs going to in-state workers; and
- the large number of jobs created during the design and construction phase

seems to imply that building the new ballpark would bring large economic benefits to the Massachusetts economy. (The benefits to the economy would be even greater if the Red Sox were new to the state and the stadium was not replacing an existing stadium, since then the total spending and employment figures would apply.) But do figures such as these justify a public subsidy to the owners of the Red Sox to build a new stadium? The answer is most definitely no.

Cost-Benefit Analysis vs. Economic Impact Analysis

We would like to have answers to two questions regarding public subsidies to professional sports teams for their stadiums and arenas. The first is whether a public subsidy is justified. If the answer is yes, then the second question is whether subsidizing a sports team is the best use of scarce public funds: Is a given amount of subsidy to build a stadium more productive than if the money were used instead to build a new public school, or improve existing highways, or clean up a polluted harbor? The spending and employment data given above, which are the typical output of all economic impact studies, are used by interested parties to try to convince the public that the answers to both questions are “yes”. But the truth is that these kinds of economic impact studies offer virtually no guidance at all in answering either of these two fundamental questions. The principles of cost–benefit analysis discussed in Chapter 20 of the textbook indicate why this is so.

Economic impact analyses fail to answer the first question because they essentially come at it backwards. These studies use the spending and employment impacts of the stadium to justify the subsidy. But the justification for a subsidy is a prior question that has to be answered to determine how the study should be designed. The place to begin is to ask: What is it about a particular activity that justifies government intervention in some activity, in this case in the form of a subsidy. Recall that the justification for government intervention in economic activity is market failure, and the burden of proof is on the government intervention: Always let the market do what it can do well.

If some kind of market failure does justify a subsidy, then the proper way to answer the second question is to design a cost–benefit analysis that identifies and quantifies the true benefits and costs associated with the market failure. It must also avoid the bogus benefits and costs enumerated in Chapter 20. Most importantly, the cost–benefit study should assume full employment within the state unless there is some reason to believe that some or all of the labor used in constructing and operating the project is unemployed *and* otherwise unemployable.

The problems with economic impact analyses begin with their answer to the first question. The implicit justification given by the study cited above is that the new ballpark

would increase economic activity in the state. The increase in economic activity is the same justification given by virtually all economic impact analyses, by the very nature of these studies. But this is hardly a compelling justification for public intervention. An economic impact analysis could produce a similar set of spending and employment numbers as this study has for any private sector firm that invested \$350 million in a new plant, office building, or retail store in Massachusetts. Indeed, any firm operating in the state contributes to the economic activity of the state. Yet this certainly does not imply that all private sector activity should be subsidized by the state. In truth, none of the spending and employment estimates in the economic impact analysis of the new Fenway Park bear any relationship at all to a market failure that might justify a public subsidy.

The economic impact estimates in the study do provide useful information for a cost–benefit analysis, but only if these data are used correctly. Here again, however, the study essentially has things backwards. It emphasizes the bogus benefits discussed in Chapter 20 at the expense of the true benefits (and costs). One sees immediately the common mistakes of focusing on secondary benefits and playing the labor game of moving wage costs to the benefit side of the ledger.

1. *Secondary benefits* – Both the indirect benefits to Red Sox’s suppliers and the induced benefits of increased consumption by the employees who benefit from the direct and indirect spending are secondary benefits resulting from the investment in the new ballpark. These kinds of benefits would arise from any investment within the state, private or public. The inclusion of the induced benefits is a variation of the regional multiplier game, which the consultants in this study happen to cut off at the end of the first round. By why stop there? Why not let the multiplied effect of these induced benefits play out to their full value so that the new ballpark looks even more attractive? In any event, there is no reason to assume that these kinds of secondary benefits would be greater or less from a new stadium than from any other investment of a similar scale, which is one reason why the textbook recommends excluding them entirely from a cost–benefit analysis.
- *The labor game* – The greater sin, though, is failing to recognize the full employment assumption that lies behind a proper cost–benefit analysis. Proponents who use the employment estimates in these studies to push for public subsidies imply that the jobs represent net job creation in the state. But this cannot be. The workers involved with constructing the stadium, the operation of the team, and the indirect and induced spending are surely not all unemployed and unemployable, as is implicitly assumed when the jobs are viewed as part of the benefits of the new stadium. Quite the contrary. If they were not employed as a result of the new ballpark, almost all of them would be employed doing something else within the state. This has two important implications.

First, it means that the secondary gains resulting from the new ballpark may be largely offset by secondary losses experienced in the industries that lose these workers to the new ballpark, which is another reason why the textbook recommends

that secondary benefits be ignored. Jordan Rappaport and Chad Wilkerson reviewed the economic literature on the benefits and costs of professional sports teams for the Kansas City Federal Reserve Bank. They note that the literature is virtually unanimous in concluding that the net job creation that results from bringing a professional sports team into a state is usually negligible, and may even be negative in some cases.⁴ One reason why the number of new jobs is so small is that households, on average, appear to allocate a fixed amount of their budgets to entertainment. Therefore, the more money they spend attending more baseball games or paying for premium seating in a new stadium, the less they spend on movies, concerts, restaurants and the like. These industries would suffer some of the secondary losses from a new ballpark.

The second implication is that the additional employees hired by the Red Sox as a result of the new stadium are a cost to the Red Sox, not a benefit as these economic impact analyses imply. So, too, are the additional supplies purchased by the Red Sox. Placing them on the benefit side of the ledger considerably overstates the overall benefits. The direct annual benefit to the Red Sox is the profit they earn from providing the games, the difference between (most of) the direct spending identified in the study and the labor and material input costs. To justify building the new stadium from the Red Sox's point of view, the present value of the annual stream of profits has to exceed the construction cost of the stadium. If Red Sox games are strictly a private activity, then this is also the proper investment rule from society's point of view. No public subsidy is justified.

In summary, economic impact analyses are virtually useless as a means of justifying public subsidies for stadiums and arenas.

The Quality of Life

Ironically, economic impact analyses such as the one cited miss the one possible market failure that might justify substantial public subsidies to a professional sports team. It is an externality related to the overall quality of life that is absent from most other goods and services. A professional sports team may bring external benefits in the form of people gaining utility from having a shared rooting interest in the team, whether they attend the games or not, or possibly by generating a sense of civic pride, much as is derived from having a world class symphony orchestra or botanical garden. After all, the Red Sox are truly beloved throughout New England. Not all New Englanders are emotionally attached to the Red Sox, of course, but if enough of them are then the externality from having the team could be quite large.

These kinds of non-marketed, quality-of-life externalities are difficult to estimate. As noted in Chapter 20, economists try to get a rough estimate of their value in one of two ways, one direct and one indirect. The direct way is a contingent valuation: Conduct

⁴ Rappaport and Wilkerson, *op. cit.*, pp. 63–4.

a survey that asks people how much they would be willing to pay to attract or retain a professional sports team. The indirect way is by means of a hedonic price estimation of the housing market, in which the econometrician attempts to determine the independent effect of a professional sports team on the price of houses. There are difficulties with both methods, but when used to estimate the value of the quality-of-life externality associated with professional sports teams they suggest that the value may be quite high. A survey of people in the Pittsburgh area asked them how much they would be willing to pay to retain the Pittsburgh Penguins, the professional ice hockey team. The answer was between \$.83 and \$2.40 per year per Pittsburgh resident, an annual benefit between \$27 million and \$75 million.⁵ These estimates are particularly striking since Pittsburgh also has a major league baseball and a National Football League team, and hockey is the least popular of the four major professional sports in the U.S. (basketball is the other sport among the top four). A hedonic price study of housing markets in cities with National Football League teams estimated that the aggregate rent premium per city from having a team was \$139 million.⁶ Estimates of the quality-of-life externality of this magnitude could be used to justify a public subsidy to a professional sports team, but probably not the huge subsidies that these teams have received from the host cities and states.

The C. H. Johnson study of the new Fenway Park does mention the potential quality-of-life externality but makes no attempt to estimate it. Yet this is precisely what the consultants should have done if the two organizations that commissioned the study wanted a justification for a public subsidy to the Red Sox. It is the one economic impact that truly matters to the subsidy question.

⁵ Ibid., p. 72.

⁶ R. Fort, op. cit., p. 368. The estimate is in 1999 dollars. It would be \$173 million in 2007 dollars.