Identifying the Real Costs and Benefits of Sports Facilities

Tim Chapin

Lincoln Institute of Land Policy
Working Paper

Lincoln Institute Product Code: WP02TC1

Abstract

While public spending on sports facilities has been staggering, this economic development strategy is rife with inadequate information on major issues relating to these projects. Decision makers often have a limited understanding of the real costs and benefits of sports facilities. This incomplete understanding often leads to unforeseen public expenditures at levels far above those originally budgeted for a project. Unlike most of the literature on sports facilities, this paper does not begin with the premise that sports facilities are poor investments, nor does it espouse the view that these investments provide benefits that far outweigh project costs. Instead, this paper assumes that decision makers require a baseline of information available to them when considering this approach to economic development. This baseline of information includes 1) a broad understanding of existing literature on sports facilities and economic development and 2) an awareness of the full range of costs and benefits of these projects.

About the Author

Tim Chapin is assistant professor in the Department of Urban and Regional Planning at Florida State University. He has published papers on sports facilities and urban development and on the political economy of the location of sports facilities. His current research interests are in the areas of downtown redevelopment, infrastructure planning, and growth management.

Contact information:
Department of Urban and Regional Planning
Florida State University
Tallahassee, FL 32306-2280
Phone: 850.644.8515
Fax: 850.645.4841
E-mail: tchapin@garnet.acns.fsu.edu

Table of Contents

Identifying the Real Costs and Benefits of Sports Facilities

Introduction

Sports facilities have become a staple of the economic development toolkit in North American cities (Robertson, 1995; Chapin, 2000). Proponents argue that new sports facilities represent a sign of progress, illustrating that despite recent tough times city centers are still vital and active places for commerce and culture. These facilities provide evidence that the public sector is actively pursuing strategies for the redevelopment and revitalization of center city areas. Not to be outdone, suburban cities have also invested millions in sports facilities to illustrate their "coming of age" and to focus development into designated districts of their jurisdictions. Proponents of sport projects have also outlined a number of economic and noneconomic benefits that flow from these facilities, including, but not limited to increased tax revenues, job creation, and community image-building.

For these reasons, sports stadia and arenas have become one of the most popular economic development tools in North America. In the 1990s alone, over forty major league facilities were constructed, with the number of minor league and collegiate sports facilities numbering in the hundreds. In dollar terms, the 1990s will have seen well over $9 billion spent on major league facilities, with approximately 55% of these funds coming from public coffers (*USA Today*, 1996; Chapin, 1999). In a recent policy study by the Cato Institute, the total spent on major league sports facilities in the 20th Century was pegged at over $20 billion, with approximately $15 billion having come from public sources (Keating, 1999).

Public expenditures on stadia and arenas, however, appear to fly in the face of evidence that indicates that these facilities are not wise municipal investments. Studies of the economic impacts of sports facilities have generally concluded that at face value these facilities promise a great deal for a city, but deliver very little in economic returns (see, for example, Baade and Dye, 1990; Baade, 1996a; Noll and Zimbalist, 1997b; Coates and Humphries, 1999). There is concern that decision makers have been unaware of this research or unable to interpret this literature.

While public spending on stadia and arenas has been staggering, this economic development strategy is rife with inadequate information relating to these projects. Decision makers often have a limited understanding of the real costs and benefits of sports facilities. Hidden costs associated with these projects sometimes include the relocation of existing businesses and reduced or abated property taxes on land used for the facilities themselves. An incomplete understanding of the real costs of these projects often leads to unforeseen public expenditures at levels far above those originally budgeted for a project. Alternatively, some argue that stadia and arenas provide image-related and development-related benefits that fall outside the boundaries of traditional

cost-benefit analyses (Chema, 1996, Johnson and Sack, 1996). Proponents argue that a narrow view of the benefits of these projects has contributed to the conclusion that sports facilities simply do not make sense as economic development tools.

This paper is intended to provide an overview of major issues involved in this economic development approach. Unlike most of the literature on sports facilities, this paper does not begin with the premise that sports facilities are poor investments, nor does it espouse the view that these investments provide tangible and intangible benefits that far outweigh project costs. Instead, this paper assumes that decision makers need to have a coherent and succinct baseline of information available to them when considering this approach to economic development. This baseline of information includes 1) a broad understanding of existing literature on sports facilities and economic development and 2) an awareness of the full range of costs and benefits of these projects. The next section provides a summary of the literature on the impacts of these facilities, discussing both the economic and noneconomic impacts of sports facilities in host communities. Attention then turns to an outline of the costs and benefits associated with sports projects. While the economic costs and benefits have garnered the lion's share of attention in the literature, there are other costs and benefits that should be considered before any decisions are made. The final section outlines the major lessons to be garnered from our collective understanding of the impacts of sports facilities on cities and their economies.

The Economic and Noneconomic Impacts of Sports Facilities

Crompton (2001, 16) writes that advocates for sports facilities have utilized five lines of argument to generate support for public spending on these projects: 1) economic impacts from visitors due to increased spending (new money), 2) stimulation of other development (spin-off development), 3) increased community visibility, 4) enhanced community image, and 5) psychic income. At a very basic level, these impacts are best categorized as *economic impacts* (#1 and #2) and *noneconomic impacts* (#'s 3–5). *Economic impacts* include such things as spending by fans at events, by players in the community, money generated by spin-off businesses, as well as a wide variety of other impacts that can be tied to the flow of money in the economy. *Noneconomic impacts* include social impacts, such as the communal experience of attending sporting events at a ballpark or the community identity and pride generated by a local championship team.

Reflecting this distinction, research into the impacts of sports facilities has also proceeded along two very different paths, one strictly economic and one with an eye towards noneconomic impacts. The literature on the economic impacts of sports facilities is further bifurcated, with consultants usually determining that teams and sports facilities have a sizable economic impact while scholarly studies almost unilaterally conclude that sports facilities are not wise investments. The literature on the noneconomic impacts is somewhat more positive, concluding that noneconomic impacts are present and often positive, but hard to quantify. To provide decision makers with a baseline of information essential to good decision making, these literatures are summarized below.

The Economic Impacts of Sports Facilities

Two types of studies have dominated the economic impacts literature: 1) economic impact analyses undertaken for a specific proposed or existing sports facility or team and 2) longitudinal and/or cross-sectional studies of the impacts of sports on cities in North America. This first subset is dominated by consultant-prepared reports that indicate that teams and facilities have a substantial impact upon a local economy. Despite their utility, these studies are usually fraught with problems, often overstating economic impacts of teams and facilities. In contrast, the second subset is dominated by scholar prepared studies that almost universally conclude that, on economic terms alone, sports facilities are not wise investments.

Economic Impact Reports

When a debate arises over the prudence of spending public funds on a new sports facility, invariably an economic impact study is undertaken to determine the dollar and employment impacts of the new facility or of the local professional sports team. These studies typically conclude that a new stadium or arena would pump tens of millions of dollars into the local economy. For example, a study prepared for King County (Seattle metropolitan area) on the impact of the Seattle Mariners baseball club determined that the total impact of the team on the local, regional, and state economy was $142 million in 1993, generating over 2,200 jobs in the state that year (Conway and Beyers, 1994). Baade (1994) cites several studies that estimate the impact of sports in Philadelphia, New York, and Baltimore from as low as $200,000 in annual marginal economic activity generated by Baltimore's NFL team, to $500 million for the total economic impact of all of Philadelphia's teams combined. A study by Ragas *et al* (1987) of the New Orleans Superdome concluded that the public's investment in that facility was well worth the costs, with a benefit-cost ratio of over twelve dollars in benefit for every one dollar in the public's cost. The implication of these studies is that a local government should devote public funds to a sports facility given the massive economic impact of these investments.

Scholars have taken issues with these economic impact studies, concluding that they often over-inflate the economic impacts of sports teams and facilities (Hunter, 1988; Hefner, 1990; Crompton, 1995). Hunter (1988) identifies two major problems with these studies: 1) the "local production fallacy", in which the local economy is assumed to be the benefactor of *all* economic activity created by the new facility and 2) the "Taj Mahal syndrome", whereby the local economy is increasingly better off as the project costs increase, in large part because the project costs are assumed to be an input for the local economy. Hunter (1988) notes that what these studies often fail to recognize is the opportunity costs of money spent on a sports facility. This money could be spent on other projects, such as libraries or new roads, providing other benefits not realized because this money was dedicated to a stadium or arena, or not spent at all, thereby lowering local taxes and perhaps spurring the economy through consumer spending.

Crompton (1995) points out that economic impact studies typically fail to distinguish between total and marginal impacts on the economy. This oversight gets at the concept of "new money", an idea that is at the heart of the debate over the economic impacts of sports facilities. Total impacts are, not surprisingly the total impact of all spending related to a sports facility. Marginal impacts (new money) refer to money that would otherwise not be in the local economy if a new facility or a team did not exist. In the Conway and Beyers (1994) study, the authors note that of the $142 million total impact on the Washington state economy, $43 million was determined to be "new money".

Economic impacts reports can be valuable inputs into the decision making process, but only when these reports consider the full range of costs and benefits of these projects and only when prepared by skilled and unbiased consultants. Hefner (1990) argues that the underlying methodologies used for these studies are indeed valid, but only when applied appropriately and interpreted correctly. The assumptions of any analyses undertaken should be transparent and the methodologies used should be well explained. Lastly, there needs to be a clear distinction between total economic impact and marginal economic impact to correctly understand and interpret the results generated.

Research into the Economic Impacts of Sports Facilities

By far the most research into sports facilities has been in the area of the impact of stadia and arenas on their local and regional economies (Gratton and Henry, 2001). Usually prepared by scholars, these studies have typically attempted to measure the total and marginal economic impacts, the number of jobs, and the amount of tax revenues generated by a facility or team. This analysis has usually been undertaken at the city or the metropolitan level, in large part because of data limitations for smaller geographic levels.

Almost to the last, these studies have found that sports facilities are not the economic development engines that they claim to be (Rosentraub and Nunn, 1978; Baade, 1987; Baade and Dye, 1990; Rosentraub and Swindell, 1991; Baade, 1994; Baim, 1994; Rosentraub *et al*, 1994; Baade, 1996a; Baade, 1996b; Rosentraub, 1997a; Noll and Zimbalist, 1997b; Hudson, 1999; Coates and Humphries, 1999). In a number of studies over the years, Baade (1987; 1994; 1996a) has found that sports do increase the size of local and regional economies, instead they alter the content of the economy, driving it towards lower wage service employment. Rosentraub, a well-known critic of public spending on sports facilities, has investigated the impacts of these projects on suburban areas (Rosentraub and Nunn, 1978; Rosentraub and Swindell, 1991), in the city of Indianapolis, where sports projects have dominated that city's redevelopment agenda (Rosentraub *et al* 1994), and in other cities throughout the United States and Canada (Rosentraub, 1997a). In all cases, Rosentraub concludes that sports facilities simply do not offer economic benefits that outweigh the economic costs of these projects.

Complementing these lines of research have been statistical analyses of the impacts of sports teams on urban economies. A study by Hudson (1999) investigated the impact of

sports teams on employment growth and found that the presence of professional sports teams had no statistically significant effect. A similarly detailed study of 37 metropolitan areas by Coates and Humphries (1999) concluded that there is no evidence that sports facilities and sports teams increase the rate of real per capita income and, in fact, may actually generate a negative impact on real income per capita.

Noll and Zimbalist's book, *Sports, Jobs, and Taxes* (1997b), should once and for all end the debate about sports facilities as wise economic investments. Echoing and summarizing much of the previous research on the topic, the book concludes that sports teams and sports stadia are simply too insignificant to generate measurable economic benefits. The editors of this book summarized their research when they wrote that their book:

> "examine[d] the local economic development argument from all angles: case studies of the effect of specific facilities, as well as comparisons among cities and even neighborhoods that have and have not sunk hundreds of millions of dollars into sports development. In every case, the conclusions are the same. A new sports facility has an extremely small (perhaps even negative) effect on overall economic activity and employment. No recent facility appears to have earned anything approaching a reasonable return on investment. No recent facility has been self-financing in terms of its impact on net tax revenues. Regardless of whether the unit of analysis is a local neighborhood, a city, or an entire metropolitan area, the economic benefits of sports facilities are *de minimus*." (1997a)

The Failure of Sports Facilities as Economic Development Tools

Why have sports facilities been deemed unwise economic investments, despite what appear to be substantial employment and dollar impacts on a local economy? The following have been cited as the primary reasons that sports facilities are poor economic development tools:

- **Substitution Effects**: Sports facilities simply redirect spending from one entertainment activity to another, thereby producing little to no increases in economic activity for a region (Sanderson, 2000). If a new stadium isn't capturing money spent by fans attending events, it has been argued that almost all of this money would still flow through the local economy via movie theaters, restaurants, and other entertainment venues. Consequently, the amount of "new money" generated by a sports facility is very small even given the most optimistic assumptions.
- **Leakages in the Economy**: Any industry has "leakages", a concept that captures the idea that a certain percentage of money spent on a given industries' local products and services flows out of the local economy to non-local entities, usually in the form of other businesses, corporate offices, or through non-local spending. The

professional sports industry is particularly susceptible to leakages out of the local economy. Revenues that flow to professional sports teams, the majority of which ends up in the pockets of players and owners, are less likely to remain in the local economy because owners and players do not spend a large percentage of their money locally (Sanderson, 2000).

- **The Size of the Economic Engine**: At first blush, professional sports appears to be a substantial industry for a metropolitan economy. Conway and Beyers (1994) placed the economic impact of Seattle's baseball club at over $140 million per year. However, while certainly a significant figure, this accounts for only a very small portion of the Seattle metropolitan economy. In reality, individual sports teams and facilities are very minor players in a region's economy. Rosentraub (1997a, 176) analyzed employment and economic activity attributable to professional sports and concluded that "by themselves, sports teams are not economic engines; they have too few employees and involve too few direct dollars to be a driving force in any city or county's economy."
- **Impacts on Metropolitan Economic Growth**: Related to the above, sports facilities have been shown to have no discernible positive impact upon metropolitan economies (Baade, 1996a; Hudson, 1999; Coates and Humphries, 1999). Proponents of sports facilities have argued that these projects offer locational and perceptual advantages that can improve a region's economy. No study to date has verified the claim that investments in sports facilities can help the regional economy to grow. In point of fact, some studies have concluded that these projects may actually hurt the regional economy because it predisposes the economy towards lower paying service sector jobs (Rosentraub *et al*, 1994; Baade, 1996a; Coates and Humphries, 1999).
- **Quality of New Jobs**: All analysts agree that new sports facilities will generate short term and long-term jobs. In the short term, construction firms are employed to build a facility as several hundred millions are spent to construct the stadium or arena. Over the longer term, jobs are also created to provide services at the facility (vendors, ticket takers, ushers) or within the surrounding district at any new spin-off businesses (often including restaurants and clothing vendors). While a few thousand jobs are indeed created, these jobs are often low paying, seasonal, service sector jobs that cannot serve as the basis for a quality economy (Baade, 1996a).
- **Indirect Project Costs**: New sports facilities typically require substantial ancillary investments, the costs of which usually fall on the public sector. These costs often include major infrastructure improvements (interstate interchanges, water/sewer lines) and new parking structures, projects that quickly can add another $50–$100 million to a new facility's price tag. In addition, there are other hidden costs that can contribute to the public sector's bill for a new facility, such as large pieces of property removed from the property tax rolls and the relocation of businesses out of the project area.
- **Opportunity Costs**: The public sector is always short of funding to address all needs in a given community or region. When spending public funds on a sports facility, the

public sector has actually made two choices; 1) to spend money on the stadium and/or arena and 2) to not spend this money on other needs. Money encumbered for a sports facility cannot be spent on other needs. In addition, by choosing to use a given piece of land for a sports facility also loses an opportunity to utilize this land for other needs or other uses.

When considering the benefits and costs of a proposed sports facility, the benefits and costs of other potential uses of the money and the land required for a new facility must be considered. Noll and Zimbalist write (1997c, 62), "the opportunity foregone in building a stadium is not the cost of the stadium, but the benefits from the other ways this money could be spent." Opportunity costs are one of the most overlooked aspects of sports facility financing and they are rarely included in economic impact studies prepared on behalf of teams or governmental agencies. These costs can be substantial, particularly given that most local governments have limited funding available to meet growing needs in their communities.

- **Flow of Facility Revenues**: Lastly, the flow of revenues from sports facilities have helped to consign sports facilities to the status of failure as an economic investment. Most revenues from sports facilities, even those built with public funding, tend to flow to the sports teams and not into the coffers of the public sector. While the previous era of sports facilities were unable to cover their debt payments (Baim, 1994), many modern sports facilities generate revenues sufficient to cover their construction and operating costs. Luxury suites, club seats, stadium naming rights, pouring rights, parking revenues, and ticket revenues are just some of the revenue streams that flow from these facilities, streams that generate in excess of the $400 million in funds required for modern sports facilities. However, in almost all cases, these revenues flow to the teams and not to serve the debt from these projects. Scholars attribute the flow of these revenues to the teams to the cartel status of the major league sports leagues, in effect forcing governments to accede to the demands of a limited number of potentially footloose franchises (Rosentraub, 1997a; Rosentraub, 1999; Sanderson, 2000).

The Noneconomic Impacts of Sports Facilities

The *economic* impact of sports facilities has received the majority of attention from scholars in large part because project proponents have usually justified public expenditures on stadia and arenas on purely economic grounds (Crompton, 2001). However, there is an emerging recognition that there are concurrent *noneconomic* impacts to these projects, ones often overlooked by both proponents and adversaries of public spending on sports facilities. In recent years, scholars have begun to turn their attention to costs and benefits that cannot be captured in terms of dollars and jobs. This section first addresses the issue of why noneconomic impacts matter. Following on this is a summary of the literature on these impacts.

Why Noneconomic Impacts Matter

The previous section's review of the economic impact of sports facilities reached the firm conclusion that sports facilities are not wise economic investments. Typical economic impact studies were shown to be flawed and sports facilities were revealed to be small, inefficient, and ineffective engines of economic development. It would seem, then, that the debate over the prudence of spending public funds on these projects has been answered in the negative.

Despite this unavoidable conclusion regarding the economic sense of these projects, there might still be compelling noneconomic reasons for decision makers to support public spending on stadia and arenas. First, the public sector routinely invests in large projects that are not economically viable, but whose package of benefits outweigh the costs for these projects. Second, these projects require both economic and noneconomic inputs, suggesting that both economic and noneconomic outputs (impacts) should be considered. Lastly, noneconomic impacts are potentially very significant and can potentially tip the balance of a holistic cost-benefit analysis. Each of these ideas is discussed further below.

Cities routinely invest in projects that are not economically viable, such as symphony halls or major art museums, projects with large price tags that charge entry fees to see performers play or artists display their work. On strictly economic terms projects such as these would be deemed unsuitable for public funding. The public sector routinely invests in projects that are economic sinkholes, but whose noneconomic benefits (e.g. providing opportunities for the public to experience art, sustaining and promoting the artistic community, contributing to downtown or sector development) are deemed sufficient to attract public investment. While a comparison between sports facilities and symphony halls/art museums is a bit strained (there are not billionaire "team owners" paying millionaire salaries to artists or musicians), the underlying point is that noneconomic factors are routinely considered by public sector decision makers when determining how to spend scarce public resources.

An evaluation of sports facilities should also consider a fuller range of impacts because both economic and noneconomic resources are required to see these projects through (Johnson and Sack, 1996). Sports facility economic impact studies typically focus solely upon the capital inputs required for the construction of the new stadium/arena and the direct and indirect revenue streams generated by these projects. There is little to no recognition of the political capital required to get these projects through the political process. In addition, any discussion of the social costs and benefits (community prestige, downtown (re)development, improved quality of life, promotion of a low wage service economy) of these projects are routinely avoided as well.

When a more complete range of noneconomic costs and benefits begins to come into focus, it becomes apparent that these impacts should influence the decision making calculus underlying these projects. Noneconomic impacts are not just broad, but potentially very large. For example, Chema (1996) argues that the downtown image and

development impacts of the Gateway Project in Cleveland, a roughly $500 million stadium/arena project that has been a drain on the city and county purse, more than balance out the economic costs attributable to the project. Sanderson (2000) has concluded that a combination of economic and noneconomic benefits (consumption benefits, civic pride, a lack of viable substitutes for sports entertainment) might indeed be sufficient to warrant public funding for a new sports facility.

A Review of the Noneconomic Impacts Literature

The literature on the noneconomic impacts of sports facilities is much smaller and less developed than research into the economic impacts. Because more traditional quantitative evaluation techniques, such as cost-benefit analysis, economic base analysis, and input-output analysis, are less easily applied to noneconomic impact analysis, findings come primarily from case studies of specific towns, projects, or sporting events. In addition, because these impacts remain poorly operationalized, scholars have sometimes struggled in determining the relative size and importance of these impacts.

Nevertheless, the literature does reach consensus on several issues that are of interest to decision makers. First, noneconomic impacts have been shown to exist and decision makers should be attuned to these. Second, noneconomic impacts have been determined to take many forms, but they are best understood as 1) social/psychic impacts, 2) image impacts, 3) political impacts, and 4) development impacts. Third, these impacts take the form of both costs and benefits, although it is often assumed that noneconomic impacts only take the form of benefits. These ideas are discussed further below.

The Existence of Noneconomic Impacts

In recent decades, the impacts of sport on society have begun to garner attention from sociologists, urban planners, and geographers. While it is undeniable that sports have tremendous cultural, social, and economic impacts, scholars have struggled on how to distill and operationalize these impacts so that decision makers can make use of this research. Some scholars have discussed the political ramifications, usually characterized as "regime-building", of these massive public projects (Pelissero *et al*, 1991; Euchner, 1993; Sage, 1993; Schimmel, 2001), illustrating the immense political resources required by these projects. Other research has investigated the role of sports facilities in helping to regenerate urban areas, concluding that district redevelopment is a possible outcome from these projects (Baade and Dye, 1988; Rosentraub, 1997b; Chapin, 1999).

Among the best investigations of the noneconomic impacts of sports facilities is a study by Johnson and Sack (1996). The authors used a case study New Haven, Connecticut to document the numerous noneconomic benefits and costs of the city's choice to construct a tennis facility to host an international tennis tournament. They identified numerous noneconomic impacts, both positive and negative, varying from increased political conflict to potential image benefits resulting from the project. From this, they concluded

that "…one cannot answer the question 'Is it worth it?' solely by focusing on economic data. *The ultimate value of a sports facility or event is more or less than its net economic impact.*" (378, emphasis added) From this and other studies, then, it is clear that sports facilities have noneconomic impacts and that these impacts are important to any evaluation of these projects.

Categorizing Noneconomic Impacts

Crompton (2001) identified three broad types of noneconomic impacts; increased community visibility, psychic income, and enhanced community image. These social/psychic and image related impacts represent a nice starting point for categorizing the noneconomic costs and benefits that flow from sports facilities. Johnson and Sack's (1996) study illustrates that noneconomic impacts can take other forms as well. They determined that there were indeed potential social and image-based impacts (health impacts in the form of a growing interest in tennis, increased community identity and community solidarity), but that there were potential development impacts as well (renewed public interest in downtown New Haven, some redevelopment of downtown land), although many of the projected benefits did not materialize. Johnson and Sack also determined that political costs and benefits were one of largest noneconomic impacts in New Haven. City leaders had to marshal support for the project with the public and key civic/business leaders, expending precious political capital in the process.

Following from Crompton (2001) and Johnson and Sack (1996), noneconomic impacts are best categorized along four dimensions: 1) social/psychic impacts, 2) image impacts, 3) political impacts, and 4) development impacts.

Social/psychic impacts refer generally to the enjoyment provided by sports and sports facilities to citizens in a community. Economists use the term "consumption values" to capture this idea. Zimmerman (1997, 121) writes that consumption benefits result from "living in a 'big league' town, from having another topic of conversation that is common to most citizens, from reading about its successes and failures in the newspaper, and the like." While it is widely understood that consumption values exist and are substantial, these benefits are very hard to quantify (Noll and Zimbalist, 1997c). However, Noll and Zimbalist (1997c, 58) note that it is possible that these benefits outweigh the public's costs for a new sports facility.

Two studies have attempted to quantify consumption benefits, yielding opposite conclusions concerning whether or not these benefits outweigh public sector costs. Irani (1997) found that in five of the eight cities investigated consumption benefits were substantial enough to tip the benefit-cost equation in support of public spending on new sports facilities. Alexander *et al* (2000) undertook a more detailed study across the four major leagues and attempted to mitigate some shortcomings they found with Irani's study. Alexander *et al* (2000, 335–336) concluded that consumption benefits do not outweigh the public sector's costs in any of the four sports leagues, although they term

their conclusions "tentative". Both studies agree that further research is required to arrive at a more firm conclusion.

Image impacts captures the concept that a city may experience benefits from being a "major league city", home to a franchise from one of the four dominant sports leagues in North America. Proponents routinely cite image building as one of the primary benefits of building a new stadium or arena. Image related impacts include increased community visibility and an ability to better compete for relocating businesses and households. The status of being a major league city is one that has driven many cities to vigorously pursue major league sports, as cities like Jacksonville, Indianapolis, and Nashville pursued and eventually acquired teams through massive investments in sports facilities.

While most analysts agree that there are image impacts following a new sports facility, identifying these and quantifying these impacts has been difficult. To be sure, having a major league sports team allows smaller cities like Green Bay, San Jose, and Memphis to have a national and international marketing presence not likely available to them otherwise. The value of this community visibility remains unknown. Studies of business and household relocation decisions have found sports facilities to be largely irrelevant, as business are usually more interested in factors such as low taxes and a positive business climate, while households too want low taxes, but also good schools and good medical facilities (Danielson, 1997). Finally, while "major league city" status is desirable, there is no evidence that this status conveys any quantifiable benefits to a community.

Political impacts refer, not surprisingly, to the political costs and benefits that flow from a sports facility. Because sports facilities are high profile projects, they offer opportunities for politicians to rally a community around redevelopment efforts, in the process catapulting a leader to higher political office. For example, William Donald Schaeffer's efforts to redevelop downtown Baltimore, including support for plans for two new downtown stadia, played a role in his ascendancy to the state's governorship. Similarly, Cleveland's George Voinovich support of the Gateway Project helped propel him to statewide prominence and eventually to the governor's office and later the U.S. Senate.

In their case study of New Haven, Johnson and Sack (1996) found that political impacts were among the among the most important of the noneconomic impacts. Minority and poor residents in the city saw a tennis facility as just another in a long line of large, expensive projects that benefited a limited set of individuals, with only very minor trickle-down benefits to those community residents most in need. The authors concluded that these political costs were considerable, requiring substantial energy and time from the administration to see the project through. Pelissero *et al* (1991) identified a very similar conflict in Chicago surrounding a new ballpark and a new football stadium. In that city, political leaders had to very carefully manage both sides of the debate and attempt to balance the wants of the teams and sports fans versus the needs of poor and minority communities.

Development impacts refers to physical redevelopment in the area immediately surrounding and in the district encompassing a new sports facility. Proponents have argued that sports facilities can potentially catalyze new development within the surrounding area because of large investments in the district and the volume of activity generated by events at a new facility (Chema, 1996; Rosentraub, 1997b; Chapin 1999). Crompton (2001) characterizes these development impacts as one of two types: complementary development and proximate development. Complementary development refers to new or reused buildings that specifically take advantage of the crowds generated by events. Proximate development refers to development that occurs because of a more general upturn in the fortunes of the district or to take advantage of new infrastructure provided for the new stadium or arena.

Some evidence indicates that development impacts are a potential benefit of investment in a new sports facility. Danielson (1997) cites several cities (St. Louis, Atlanta, New Orleans) where areas around new facilities experienced new development, both complementary and proximate. However, he also notes that other cities have stadia that remain isolated within dilapidated, still declining districts. Chapin (1999) investigated the development impact of two sports projects (Cleveland's Gateway and Baltimore's Camden Yards) on their surrounding districts. Only in the case of Cleveland did the surrounding district experience substantial physical redevelopment. From this Chapin (1999) concluded that sports facilities offer opportunities for development but that this outcome is by no means guaranteed by investments in sports facilities.

A related, but largely unexplored issue is that of the development *costs* of these projects. New facilities often require the relocation of existing businesses and/or government offices to provide enough land for a stadium or arena. Similarly, concurrent infrastructure improvements (interchanges, for example) may also require the relocation of existing firms from the district. While these development costs are sometimes identified as following from a project, they remain largely overlooked in the rush to get a project completed. Chapin (1999), for example, found that numerous businesses had to be relocated for the Camden Yards project area in Baltimore.

The Form of Noneconomic Impacts

The literature quickly yields the conclusion that sports facilities can have substantial noneconomic impacts and that these impacts take a wide variety of forms. In general, these findings have informed the debate concerning the prudence of public investment into sports facilities. Noneconomic impacts are routinely considered by the public sector when evaluating these projects and these impacts often serve as the underlying justification for a decision maker's or the citizenry's vote to provide public funds for projects.

However, one element of this literature has largely been overlooked, that noneconomic impacts can take the form of both benefits *and costs*. Johnson and Sack (1996, 378) write

that when "studies do include commentary on intangibles [noneconomic benefits], they erroneously assume that all intangibles will represent positive outcomes." Many noneconomic benefits that sports facilities confer have a corollary cost often ignored by the public sector. For example, while sports facilities can generate tremendous political goodwill, catapulting a leader to a higher office, the tremendous political capital required to push these facilities through the process takes away from other initiatives. Similarly, while development benefits are possible, there are also development costs, such as business relocations, the paving of valuable urban land for parking lots, or the removal of large pieces of land from the property tax base.

Even the social benefits of sports and sports facilities are not costless. A community's visibility and image can be negatively impacted by a sports facility. When successful, sports facilities can project an image of a competent, successful, visionary city, as with Baltimore's or Denver's experience with their thriving urban ballparks. However, an unsuccessful facility can project a poor image of a city, as with Milwaukee's over-budget ballpark, Miller Park. This new ballpark has been plagued by construction accidents, a leaky roof, and dwindling crowds. Does Milwaukee's problems with their stadium suggest that the city is in decline or that city leadership is incompetent? Of course not, as a number of factors affect the success and failure of a project, much less the rise and fall of urban areas. However, if project proponents argue that a city's image can be positively impacted by a successful project, then it must also be understood that an unsuccessful project can negatively impact a city's image as well.

Identifying the Real Costs and Benefits of Sports Facilities

A central purpose of this paper is to provide an overview of the wide variety costs and benefits that follow from the decision to utilize public funds to construct a new sports facility. This section provides a summary review of these impacts. Costs and benefits have been categorized across two variables; 1) basic form (Economic vs. Noneconomic) and 2) consideration by the public sector (Typically Considered vs. Not Typically Considered). The first of these categorizations requires no explanation. The second category refers to whether or not a given cost or benefit is typically included in a sports facility impact analysis prepared by or for the public sector.

Table 1 summarizes the real costs and benefits that follow from a sports facility. As the table shows, there is a much larger mix of costs and benefits attributable to these projects than is typically considered by the public sector. A total of thirty-four costs and benefits are identified in the table. Table 1 illustrates that many of these costs and benefits are largely overlooked by public sector decision makers in assessing the real impact of these projects. Of the eighteen costs identified, only three are included in the typical sports facility impact assessment. On the benefit side, of the sixteen benefits, four are typically overlooked, including marginal economic activity, which is a subset of total economic activity. A detailed discussion of Table 1 is provided below.

Table 1: The Real and Potential Costs and Benefits of Sports Facilities

		COSTS	BENEFITS
ECONOMIC	Typically Considered by Public Sector Decision Makers	▪ Land Acquisition Costs ▪ Construction Costs ▪ Carrying Costs (Operation and Maintenance, Debt Service)	▪ Tax Revenues (Sales, Property, Personal, Sin, Others) ▪ Stadium Revenues (that flow to the public sector) ▪ Total Economic Activity (Dollars and Jobs) ▪ Spin-Off Businesses ▪ District (Re)Development ▪ Impact of Other Events
	Not Typically Considered by Public Sector Decision Makers	▪ Required Infrastructure Improvements ▪ Business Relocation Costs ▪ Property Tax Losses (Removal from Tax Rolls, Abatements) ▪ Public Service Costs for Events (Police, EMS, Other) ▪ Opportunity Costs for Funds ▪ Opportunity Costs for Land ▪ Encumbrance of Bonding Capacity ▪ Demolition and Site Work for Old Facility (if applicable) ▪ Impact on District Surrounding Old Facility (if applicable)	▪ Marginal Economic Activity (New Money, New Jobs) ▪ Reuse Opportunities for Old Facility Site (if applicable) ▪ Impact on District Surrounding Old Facility (if applicable)
NONECONOMIC	Typically Considered by Public Sector Decision Makers		▪ Community Identity ▪ Civic Pride ▪ Community Visibility ▪ Consumption Benefits ▪ Political Capital Gained ▪ Support of Development Logic
	Not Typically Considered by Public Sector Decision Makers	▪ Community Identity ▪ Community Visibility ▪ Potential for Political Conflict ▪ Political Capital Expended ▪ Political Opportunity Costs ▪ Disconnect with Development Logic	▪ Project Planning/Management Capacity Building

Economic Costs and Benefits Typically Considered

Unsurprisingly, the direct economic costs attributed to a facility are typically considered by the public sector. The sum of these values usually reflects the "total bill" for a project when it is presented to the public in public documents and meetings. Although there is a tendency for these costs to grow beyond those originally estimated, these costs are typically part of the decision making calculus by the public sector.

The public sector also considers many of the direct benefits that may flow from a sports facility. Included in these are projections of increased tax revenues and any stadium revenues that have been negotiated to flow to the public sector (parking revenues or ticket surcharges, for example). In addition, economic impact studies typically estimate the total economic impact attributable to the new facility, often summarized in the form of employment and dollar impacts in a given year.

The public sector also typically considers other potential indirect economic benefits attributable to a new facility usually in the form of spin-off businesses and spin-off development. A stadium or arena can sometimes brings with it ancillary development, new restaurants and/or new hotels in the district, perhaps catalyzing the (re)development of an entire district. These potential benefits are often part of the decision making calculus. However, these benefits are often assumed to flow from a project ("if you build it, they will come"), even though (re)development impacts are often illusory.

Lastly, the construction of a new sports facility often brings other events to an area that otherwise would not have come to the city. For example, Major League Baseball has routinely awarded All Star Games to cities that have built new ballparks. These events can have a substantial total economic impact (upwards of $100 million) and these benefits should be part of an impact analysis, which they usually are. In addition, if a new facility allows a city to host events (conventions or concerts/shows) that would not otherwise have come to town, then the economic benefits of these events should be considered. Estimates of these benefits are usually available to decision makers.

Economic Costs and Benefits Not Typically Considered

One of the most glaring weaknesses in the public sector's decision making process regarding sports facilities is the poor level of information on the economic costs of these projects. While direct costs are well understood, there are a number of hidden costs that the public sector typically overlooks. These costs are potentially substantial and should be part of the any project impact analysis, although they typically are not.

For example, the cost of any major infrastructure improvements required for a new facility (interchanges, new roads, water/sewer lines) normally fall to the public sector. Alone, these improvements can easily require up to $100 million in public funds. Other hidden costs include business relocation expenses for firms required to relocate to new locations, property tax losses for land removed from the property tax rolls, and the costs

of providing public services for events at the facility. Individually these costs may not seem significant, but they can quickly sum to millions of dollars.

Opportunity costs are also rarely considered by the public sector. The public sector typically has finite resources for seemingly infinite needs, so the opportunity costs for both the funding and the land for the facility must be part of the decision making calculus. In a related issue, there are opportunity costs related to the use of municipal debt for sports facilities. A local government typically has set limits on their bonding capacity, as their debt thresholds are set by local, state, or federal statutes. If a city uses a substantial portion of their available debt on a sports facility, they cannot use debt financing for other community needs even if they are immediate and pressing. Additionally, these debt commitments are usually over a period of at least fifteen years, encumbering a portion of the public sector's financing capacity for a long period of time.

Lastly, in cases where a city is replacing an existing facility with a new one, the economic costs associated with the old facility should be considered as well. The old facility will need to be demolished and the debris removed from the site. Site remediation costs should also be factored in. These costs are not trivial and can easily run into the millions of dollars. In addition, the economic impact on the district surrounding the old facility must be considered. If the surrounding land uses complemented the sports facility (restaurants, bars, visitor shopping), then these businesses may relocate or terminate operations as their customer base may have moved to the district surrounding the new facility.

On the benefit side, the most important economic benefit overlooked by the public sector is the marginal economic impact of the facility. A subset of the total economic impact, the marginal impact captures the effect of "new money" in the local economy. As discussed earlier, this number provides a more precise valuation of the economic impact of a sports facility. Decision makers should not accept economic impact studies that do not include this figure. Fortunately for decision makers, estimates of marginal impacts have been become a more common element of economic impact studies in recent years.

Another overlooked economic benefit rests in the reuse of the site of an old stadium/arena and the potential redevelopment of this site and the surrounding district. Large, consolidated pieces of land are valuable and can be resold for substantial return. These sites can also generate property taxes if they are returned to the tax rolls, generating an economic benefit. Additionally, the departure of a sports facility can lead to (re)development opportunities in the surrounding that can potentially bring substantial economic returns.

Noneconomic Costs and Benefits Typically Considered

As Table 1 shows, the public sector usually considers the majority of the noneconomic benefits that potentially flow from a sports facility. Leaders recognize that a new sports

facility can contribute to a community's identity and civic pride in a way that few other major capital investments can. It is also understood that a new sports facility provides image benefits that are hard to translate into dollar impacts. There is also some recognition of the consumption benefits provided by sports teams and sports facilities, often cited as benefits to a region's "quality of life."

Political officials usually recognize the political opportunities offered by these large, visible public works projects. As detailed earlier, the political careers of many mayors and councilpersons have benefited greatly from backing new sports facilities. Even projects that have experienced tremendous acrimony in their planning and development stages often generate equal amounts of goodwill when the opening date for a given facility arrives. Showpiece projects like sports facilities are the hallmarks for many administrations and public sector leaders almost always recognize the immense political upside of these projects.

Lastly, sports facilities can potentially provide an excellent fit to the "development logic" in a city, providing substantial development benefits to a community. Johnson (1991; 1995; Johnson and Sack, 1996, 379) has put forth the idea of a development logic to capture the "policy context within which [a] project was designed", arguing that the project's fit to and integration with an overarching development plan should be considered when evaluating a project. In studying minor league baseball stadia, Johnson (1991, 318) argued that new facilities "can be used to advance economic development in terms of redevelopment activity or new development opportunities." In Cleveland, for example, the Gateway project was part of a larger plan for downtown redevelopment that identified the Gateway District as an entertainment and sports oriented district that would have synergies with nearby entertainment and shopping oriented districts (Chapin, 1999). These potential benefits are often identified by proponents of sports facilities and are usually included in the decision making calculus.

Noneconomic Costs and Benefits Not Typically Considered

While the vast majority of noneconomic benefits are typically considered by decision makers, noneconomic costs are generally not. Table 1 indicates that the noneconomic downsides of investments in sports facilities are ignored when weighing the costs and benefits of these facilities. Rarely does the public consider the psychic/social and image costs that might potentially flow from a project. For example, the Seattle Kingdome, an ugly, concrete, domed stadium torn down in the late 1990s, despite tens of millions of dollars of debt still owed on the facility, did little to project the image of a successful, vibrant northwestern city. The facility also had maintenance problems over the years, requiring unexpected funding from the public sector. The stadium became something of a public embarrassment, leading to decisions to build two new stadia to replace the Kingdome with a bill approaching $1 billion, with a majority of funding coming from public coffers.

Similarly, political costs are rarely considered as well. Sports facilities almost always engender tremendous political debate, requiring substantial investments of resources from the governing coalition and diverting attention from other issues of importance. Additionally, these projects often polarize a community, generating political discord that can haunt a community for years. Residents of Minneapolis/St. Paul, and Minnesota more generally, continue to be bitterly divided over the "need" to provide new sports stadia for their MLB and NFL franchises, a debate that has raged almost ten years. While decision makers usually consider the political benefits of these projects, political costs are rarely recognized as an almost certain part of the process.

Lastly, while sports facilities can promote a "development logic", there are times when these projects actually work against ongoing economic development efforts. Baltimore's Camden Yards stadia have been hailed as model sports projects. However, these stadia have actually worked against the city's longstanding efforts to promote industrial development in a district adjacent to Camden Yards (Chapin, 1999). The need for parking for the crowds that attend events at the two stadia has led to numerous new surface parking lots in this industrial district. Similarly, Seattle's SoDo (South of Downtown) district was envisioned as a light manufacturing, industrial, and waterfront district, but the siting of a new ballpark in SoDo has instead led to new restaurants and other entertainment oriented uses being established in the area. If a facility provides a poor fit to the development logic for a portion of the city, it can retard economic development efforts rather than promote them. These development costs are rarely considered in typical impact studies.

On the benefit side, there is one potential benefit that is usually overlooked in impact studies. Sports facilities are very complex projects, usually requiring diverse funding sources and attention from multiple governmental organizations. As such, these projects offer opportunities to develop a community's capacity for undertaking and completing very difficult projects. In doing so, a community can benefit from the lessons learned from these projects and apply these lessons to future projects. A community's capacity for undertaking large (re)development projects can be enhanced in the process of funding, planning, and implementing a sports project.

Conclusion

Any decision regarding the question of public funds for sports facilities requires of decision makers a broad grasp of issues related to economics, politics, tax policy, real estate development, and urban planning. As a consequence, public sector decision makers require a baseline of information at their disposal to provide a more complete picture of the costs and benefits of these projects. This paper has attempted to provide this baseline of information. An understanding of the costs and benefits that flow from sports facilities serves to better shape the debate concerning these facilities and yield decisions that more closely reflect community needs and wants.

To date, the question of whether or not to provide public funding for a new sports facility is one that has typically been answered by boosters with a resounding "Yes" and by scholars with a firm "No". During a typical stadium debate, each camp holds up their impact studies to affirm their positions, all the while pointing out the limitations of the other side's work. What should be evident from the foregoing paper is that impact studies prepared by or for the public sector and scholarly research into the economic impacts of sports stadia are each valuable to the debate, but each in limited ways. The answer arrived at by these respective groups depends largely on how the impacts of sports facilities are bounded; boosters tend to claim all of the benefits of sports facilities and recognize few of the costs, while scholars tend to focus strictly on the economic costs and benefits of these projects. In both cases these studies may have utilized appropriate data and methods that yield accurate findings, but which overlook key elements of the real costs and benefits of these projects. In reviewing the literature on the impacts of sports facilities and in laying out a comprehensive set of costs and benefits, it is hoped that both proponents and opponents can more easily and more completely debate the merits of public funding for sports facilities.

The foregoing review of the literature and the identification of the full range of costs and benefits of sports facilities points to several conclusions of interest to decision makers investigating the prudence of public spending on these projects. These conclusions are:

1. **A pro-facility argument that rests solely on the magnitude of the economic benefits conferred by a new facility is unsustainable.** The economic impact literature has ended once and for all the argument that the economic impact of these projects justifies public subsidies for new sports facilities.

2. To reiterate Johnson and Sack (1996), **a sports facility must be assessed on both its noneconomic and economic merits.** Sports facilities have noneconomic impacts that exist and which are potentially significant. As such, noneconomic costs and benefits deserve more attention from decision makers, facility boosters, and scholars.

3. **Traditional project impact assessments tend to focus on the direct economic costs and the direct economic benefits of sports facilities.** A strength of traditional impact studies is that they cover the basics rather well. However, secondary economic costs and benefits remain largely ignored by these analyses. This very important oversight has led to the scholarly research that emphasizes that sports facilities do not generate measurable economic benefits that outweigh the economic costs of these projects.

4. **Traditional project impact assessments only broadly incorporate noneconomic benefits while generally ignoring noneconomic costs.** An additional strength of traditional impact studies is their general inclusion of the noneconomic benefits that potentially flow from sports facilities. Nonetheless, while community identity, visibility, and civic pride are routinely cited as noneconomic benefits that flow from a facility, these benefits are only broadly identified. What decision makers require is a

realistic assessment of the value of these benefits to a community, not general promises of benefits. In contrast, traditional impact studies routinely ignore noneconomic costs in their entirety, a significant oversight given that these costs can be substantial.

5. **Noneconomic costs and benefits are conceptually well-understood, but the value of these impacts remain unknown.** This paper illustrates that noneconomic impacts are very important to any evaluation of the prudence of public involvement in sports facility projects. While these impacts have been broadly identified, the form, magnitude, and direction of these impacts remains unclear. In the coming years, facility boosters and scholars need to do a much better job of articulating these impacts, both positive and negative, so that they may be more accurately captured in impact studies completed for these projects.

The debate over the prudence of public investment into sports facilities will almost certainly continue in the coming decades. Only when noneconomic impacts are as comprehensively investigated and as well understood as economic impacts can an accurate answer to the question "Are sports facilities worth it?" be supplied to decision makers. For now, then, the best that approach public officials can take is to 1) acquire a broad understanding of the research into the impacts of sports facilities and 2) recognize the full range of costs and benefits that flow from these projects.

Bibliography

Alexander, D. *et al* (2000). Valuing the consumption benefits from professional sports franchises. *Journal of Urban Economics 48*, 321–337.

Baade, R. (1987). Is there an economic rationale for subsidizing sports stadiums? *Heartland Policy Study #13*. The Heartland Institute: Chicago, IL.

Baade, R. (1994). Stadium, professional sports, and economic development: Assessing the reality. *Heartland Policy Study #62*. The Heartland Institute: Chicago, IL.

Baade, R. (1996a). Professional sports as catalysts for metropolitan economic development. *Journal of Urban Affairs, 18*(1), 1–17.

Baade, R. (1996b). Stadium subsidies make little economic sense for cities, a rejoinder. *Journal of Urban Affairs, 18*(1), 33–37.

Baade, R. & Dye, R. (1988). Sports stadiums and area development: A critical review. *Economic Development Quarterly, 2*(3), 265–275.

Baade, R. & Dye, R. (1990). The impact of stadiums and professional sports on metropolitan area development. *Growth and Change*, Spring, 1–14.

Baim, D. (1994). Sports stadiums as 'wise investments': An evaluation. *Heartland Policy Study #32*. The Heartland Institute. Chicago: IL.

Chapin, T. (1999). *Urban Revitalization Tools: An Assessment of Impacts of Sports Stadia at the Microarea Level*. Doctoral dissertation, University of Washington Department of Urban Design and Planning.

Chapin, T. (2000). The political economy of sports facility location: An end-of-the-century review and assessment. *Marquette Sports Law Journal 10*(2): 361–382.

Chema, T. (1996). When professional sports justify the subsidy, a reply to Robert A. Baade. *Journal of Urban Affairs, 18*(1): 19–22.

Coates, D. & Humphries, B. (1999). The growth effects of sports franchises, stadia, and arenas. *Journal of Policy Analysis and Management 18*(4): 601–624.

Crompton, J. (1995). Economic impact analysis of sports facilities and events: Eleven sources of misapplication. *Journal of Sports Management, 9*: 14–35.

Crompton, J. (2001). Public subsidies to professional sports teams in the USA. In C. Gratton and I. Henry's (Eds.), *Sport in the City: The Role of Sport in Economic and Social Regeneration* (pp. 15–34). New York: Routledge.

Danielson, M. (1997). *Home Team: Professional Sports and the American Metropolis*. Princeton, NJ: Princeton University Press.

Euchner, C. (1993). *Playing the Field: Why Sports Teams Move and Cities Fight to Keep Them*. Baltimore: MD: The Johns Hopkins University Press.

Gratton, C. & Henry, I. (2001). Sport in the city: Where do we go from here?. In C. Gratton and I. Henry's (Eds.), *Sport in the City: The Role of Sport in Economic and Social Regeneration* (pp. 309–314). New York: Routledge.

Hamilton, B. & Kahn, P. (1997). Baltimore's Camden Yards ballparks. In R. Noll & A. Zimbalist (Eds.), *Sports, Jobs, and Taxes: The Economic Impact of Sports Teams and Stadiums* (pp. 245–281). Washington, DC: Brookings Institution Press.

Hefner, F. (1990). Using economic models to measure the impact of sports on local economies. *Journal of Sports and Social Issues 14*(1): 1–13.

Henry, I. & Gratton, C. (2001). Sport in the city: Research issues. In C. Gratton and I. Henry's (Eds.), *Sport in the City: The Role of Sport in Economic and Social Regeneration* (pp. 3–12). New York: Routledge.

Hudson, I. (1999). Bright lights, big city: Do professional sports teams increase employment? *Journal of Urban Affairs 21*(4): 397–407.

Hunter, W. (1988). Economic impact studies: Inaccurate, misleading, and unnecessary. Policy Study #21. *The Heartland Institute*.

Irani, D. (1997). Public subsidies to stadiums: Do the costs outweigh the benefits? *Public Finance Review 25*, 238–253.

Johnson, A. (1991). Local government, minor league baseball, and economic development strategies. *Economic Development Quarterly, 5*(4), 313–324.

Johnson, A. (1995). *Minor League Baseball and Local Economic Development*. Chicago, IL: University of Illinois Press.

Johnson, A. & Sack, A. (1996). Assessing the value of sports facilities: The importance of Noneconomic factors. *Economic Development Quarterly 10*(4), 369–381.

Keating, R. (1999). *Sports pork: The costly relationship between Major League sports and government*. Washington, DC: The Cato Institute: Policy Analysis Number 339.

Noll, R. & Zimbalist, A. (1997a). Sports, jobs, and taxes: Are stadiums worth the cost? *Brookings Review, 15*(3), 35–39.

Noll, R. & Zimbalist, A. (Eds.) (1997b). *Sports, Jobs, and Taxes: The Economic Impact of Sports Teams and Stadiums*. Washington, DC: Brookings Institution Press.

Noll, R. & Zimbalist, A. (1997c). The economic impact of sports teams and facilities. In R. Noll & A. Zimbalist's (Eds.), *Sports, Jobs, and Taxes: The Economic Impact of Sports Teams and Stadiums* (pp. 55–91). Washington, DC: Brookings Institution Press.

Pelissero, J. *et al*. (1991). Urban regimes, sports stadiums, and the politics of economic development agendas in Chicago. *Policy Studies Review 10*(2/3), 117–129.

Ragas, W. *et al* (1987). Louisiana Superdome: Public costs and benefits 1975–1984. *Economic Development Quarterly 1*(3): 226–239.

Robertson, K. (1995). Downtown redevelopment strategies in the United States: An end-of-the-century assessment. *Journal of the American Planning Association, 61*(4), 429–437.

Rosentraub, M. (1996). Does the emperor have new clothes?: A reply to Baade. *Journal of Urban Affairs, 18*(1), 23–31.

Rosentraub, M. (1997a) *Major League Losers: The Real Costs of Sports and Who's Paying For It*. New York: Basic Books.

Rosentraub, M. (1997b). Stadiums and urban space. In R. Noll & A. Zimbalist's (Eds.), *Sports, Jobs, and Taxes: The Economic Impact of Sports Teams and Stadiums* (pp. 178–207). Washington, DC: Brookings Institution Press.

Rosentraub, M. (1999). Are public policies needed to level the playing field between cities and teams? *Journal of Urban Affairs, 21*(4), 377–395.

Rosentraub, M. *et al*. (1994). Sport and downtown development strategy: If you build it, will jobs come?. *Journal of Urban Affairs, 16*(30), 221–239.

Rosentraub, M. & Swindell, D. (1991) 'Just say no?' The economic and political realities of a small city's investment in minor league baseball. *Economic Development Quarterly, 5*(2), 152–167.

Sage, G. (1993). Stealing home: Political, economic, and media power and a publicly-funded baseball stadium in Denver. *Journal of Sport and Social Issues 17*(2), 110–124.

Sanderson, A. (2000). In defense of new sports stadiums, ballparks and arenas. *Marquette Sports Law Journal, 10*(2), 173–192.

Schimmel, K. (2001). Sport matters: Urban regime theory and urban regeneration in the late-capitalist era. In C. Gratton and I. Henry's (Eds.), *Sport in the City: The Role of Sport in Economic and Social Regeneration* (pp. 259–277). New York: Routledge.

Zimmerman, D. (1997). Subsidizing stadiums: Who benefits, who pays?. In R. Noll & A. Zimbalist's (Eds.), *Sports, Jobs, and Taxes: The Economic Impact of Sports Teams and Stadiums* (pp. 119–145). Washington, DC: Brookings Institution Press.