

**"Economic and Fiscal Impact of Sports Facilities: The Importance of Context"**

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LEIB ADVISORS, LLC

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**Global Sports Advisory Credentials**

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**Economic and Fiscal Impact Study Experience**

Wisconsin Motorsports Stadium (1994)	Milwaukee Brewers Proposed Stadium (1994-1996)	Mid-South Coliseum (1999-2003)	City of Philadelphia, NFL/MLB Arena Assessment (2002)	Lackawanna County Stadium (2004)	Coastal Carolina Sports and Entertainment Complex (2005)	City of Irvine, California NFL Stadium Development
Maritima Moose 12,500 Seat Arena Proposal (1995-2000)	St. Charles Arena (1998)	Collinsville, Illinois Frontier League Ballpark (2000)	Beloit Snappers Beloit, Wisconsin (2003-2009)	Waukegan, Illinois Proposed Stadium (2004)	Tranmere Rovers Prenton Park, UK (2008)	Pittsburgh Steelers Three Rivers Stadium
Minnesota Timberwolves Target Center (1996-1997)	Victorie Events Center (1998-2000, 2006)	Daytona Beach, Florida Jackie Robinson Ballpark (2000-2002)	Lackawanna County Stadium (2003)	Milwaukee Wave Stadium (2005)	West Tenn. Diamond Jaxx (2008)	
Minnesota Wins, Inc. Target Center, Metrodome (1996)	Pittsburgh Pirates Proposed Stadium (1998-1999)	Kansas City Community College Proposed Sports Complex (2004)	Hawks/Thrashers Philips Arena (2003-2006)	Miller 100 Indy Car Raceway (2005)	Minnesota Wild Xcel Arena (2007-current)	Cleveland Browns Stadium Move to Baltimore
Wallstadion Frankfurt (1997)	Wichita Arena (1998-1999)	2002 Olympic Hockey E Center Arena (2001-2003)	Cleveland MLS Expansion Arena	Daytona 500 Speedway (2005)	Tampa Bay Lightning St. Pete Times Forum (2003, 2006)	Philadelphia Eagles Lincoln Financial Field
Texas Professional Baseball, Inc. Stadium Development Strategy (1997-1997)	Commonwealth of Pennsylvania, NFL/MLB Arena Assessment	Crossroads of America Arena Proposal	Nashville Predators Bridgestone Arena 2012	Hillsborough County, Florida Proposed Sports Complex		

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### Expenditures on New Sports Facilities for Professional Teams by Decade Through 2000

Decade (No. Built)	Millions of Nominal Dollars	Millions of Constant 1997 Dollars	Public Share of Total Spending
1940-1949 (7)			
Mean	\$0.46	\$7.65	
Total	\$3.22	\$53.55	0%
1950-1959 (8)			
Mean	\$4.23	\$39.58	
Total	\$33.86	\$316.65	23.5%
1960-1969 (6)			
Mean	\$1.91	\$16.06	
Total	\$11.45	\$114.39	34.3%
1970-1979 (11)			
Mean	\$0.25	\$1.72	
Total	\$0.25	\$1.72	0%
1980-1989 (7)			
Mean	\$3.84	\$22.65	
Total	\$26.87	\$158.51	100%
1990-1999 (21)			
Mean	\$24.46	\$120.92	
Total	\$513.69	\$2,339.39	63.2%
1970-1979 (25)			
Mean	\$70.65	\$215.76	
Total	\$1,766.25	\$5,204.19	94.6%
1980-89 (14)			
Mean	\$108.25	\$143.77	
Total	\$1,445.50	\$2,012.73	78.6%
1990-98 (32)			
Mean	\$200.16	\$211.73	
Total	\$6,405.10	\$6,775.21	55.3%
1999* (41)			
Mean	\$374.89	\$275.25	
Total	\$15,276.50	\$11,285.49	73.4%

\* Under construction or being planned as of October 1999.  
Source: Keating (1999).

### Expenditures on Refurbished Sports Facilities for Professional Teams by Decade through 2000

Decade (No. Built)	Millions of Nominal Dollars	Millions of Constant 1997 Dollars	Public Share of Total Spending
1920-1929 (1)	\$0.50	\$4.59	0%
1930-1939 (1)	\$0.95	\$10.01	100%
1940-1949 (0)	0	0	NA
1950-1959 (1)	\$2.50	\$4.97	100%
1960-1969 (4)			
Mean	\$3.25	\$15.50	
Total	\$13.00	\$62.01	95.4%
1970-1979 (9)			
Mean	\$42.54	\$120.76	
Total	\$382.90	\$1,086.88	100%
1980-89 (6)			
Mean	\$21.21	\$32.17	
Total	\$126.70	\$200.43	98.8%
1990-98 (13)			
Mean	\$79.96	\$83.53	
Total	\$1,039.42	\$1,083.93	78.8%

Source: Keating (1999).

### Economic and Fiscal Impact of Sports Facilities: The 1990's

**The 1990's:** During 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 saw well over \$9 billion spent on major league facilities, with approximately 55% of these funds coming from public coffers.<sup>1</sup>

A 1999 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.<sup>2</sup>

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 saw 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.<sup>3</sup>

1 USA Today, 1996; Chapin, 1999  
2 Keating, 1999  
3 Ibid

**Economic and Fiscal Impact of Sports Facilities Is there Still Any Doubt?: The Critics**

**Public expenditures on stadia and arenas fly in the face of evidence that indicates that these facilities are not wise municipal investments. Studies of the economic and fiscal impacts generally conclude that sports facilities promise a great deal, but deliver little in economic returns. Scholarly analysis finds that sports facilities are not the economic development engines that they claim to be.**

Rosentraub and Nunn, 1978; Rosentraub and Swindell, 1991; Rosentraub et al, 1994, 1997a; Baim 1990; Baim 1994; Hunter 1988 (Heartland Institute); Baade, 1987; Baade and Dye, 1990; Baade 1994; 1996a; 1996b; Baim, 1994; Chema, 1996; Johnson and Sack, 1996; Noll and Zimbalist, 1997b; Siegfried and Zimbalist 2000; Hudson, 1999; Coates and Humphries, 1999

**Lack of Adoption by Public Sector**

Public sector decision makers have been unaware of this research or unable to interpret the literature.

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.

Pressure from uninformed citizen/fans who carry water for leagues and owners who 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.

Identifying the Real Costs and Benefits of Sports Facilities (2002) Tim Chapin, Assistant Professor, Department of Urban and Regional Planning, Florida State University

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**The Critics: Rosentraub and Zimbalist**

- **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), 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.**

- Most economists believe that Noll and Zimbalist's book, Sports, Jobs, and Taxes (1997b), put an end to the debate about sports facilities as wise economic investments. They conclude that sports teams and sports stadia are simply too insignificant to generate measurable economic benefits. "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 diminimus." (1997a)
  - 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

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**The Critics: Baade, Hudson, Coates and Humphries**

- In a number of studies over the years, Baade (1987; 1994; 1996a) has found that sports not only don't increase the size of local and regional economies, but instead alter the content of the economy, driving it towards lower wage service employment.

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 5 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.

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### Methodology: Consultants vs. Economists

**Economists Ex-Post Facto Standard**

- Use of regression analysis and a combination of time-series and cross-section data to detect whether presence of a sports team or facility significantly impacts statistics that represent the strength of the local economy.
- Looking at attributes of the local economy and changes that are statistically attributable to the team or facility.



Year	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.	Pop.
1990	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1991	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1992	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1993	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1994	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1995	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1996	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1997	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1998	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1999	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2000	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2001	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2002	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2003	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2004	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2005	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2006	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2007	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2008	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2009	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2010	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2011	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2012	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

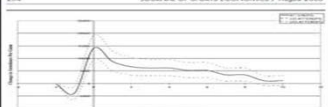


Figure 2: The Homegrown Effect—Change in Total Attendance After the Construction of a Professional Team Stadium

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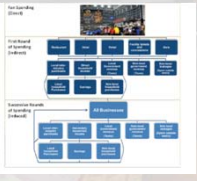
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### Methodology: Consultants vs. Economists

**Consultants Input Output Models**

- Consultants utilize predictive input output models
- Spending in and outside the facility drives economic activity, jobs, income and state and local tax revenues.
- Multipliers reflect features of local economy based on historical activity.



Category	Item	Value	
Direct Spending	Food	\$100	
	Transportation	\$100	
	Accommodation	\$100	
	Retail	\$100	
	Health Services	\$100	
	Education	\$100	
	Government	\$100	
	Other	\$100	
	Indirect Spending	Food	\$100
		Transportation	\$100
Accommodation		\$100	
Retail		\$100	
Health Services		\$100	
Education		\$100	
Government		\$100	
Other		\$100	
Total Spending		Food	\$200
		Transportation	\$200
	Accommodation	\$200	
	Retail	\$200	
	Health Services	\$200	
	Education	\$200	
	Government	\$200	
	Other	\$200	



Public Spending Multiplier

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### The Failure of Sports Facilities as Economic Development Tools

- **Why do scholars conclude that sports facilities are unwise economic investments, despite what appear to be substantial employment and dollar impacts on a local economy:**
  - **Substitution Effects:** Sports facilities simply redirect spending from one entertainment activity to another, thereby producing little to no increases in economic activity within 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 venue.
  - **Leakages in the Economy:** A certain percentage of money spent on a given industry's 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).**

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**The Failure of Sports Facilities as Economic Development Tools**

- **The Size of the Economic Engine:** At first blush, professional sports appears to be a substantial industry for a 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).

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**The Failure of Sports Facilities as Economic Development Tools**

**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).
- The argument is that people are willing to accept lower wages, all else being equal in exchange for the amenities associated with professional sports.

**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.

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**The Failure of Sports Facilities as Economic Development Tools**

**Opportunity Costs:** "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." 5 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.
- 3) Rarely included in economic impact 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.
- 4) A study conducted in the early 1990's

5 Noll and Zimbalist write (1997, 62)

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### The Failure of Sports Facilities as Economic Development Tools

**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 (Bain, 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.

Critics argue that 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).

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### Impact of Context on Facility Economic and Fiscal Benefits

**Change in Facility Design and Site Location**

The studies conducted during the late 1990's used as a basis for criticism of public investment in stadium and arenas are dated. That is they are based on multi-use, utilitarian facilities built in the 1960's and 1970's leading to the conclusion that there is no statistically significant positive correlation between sports facility construction and economic development.

Criticisms of recent stadium Investments ignore new evidence based on arenas and stadia that are designed to serve as architectural symbols with tourist appeal and are often built into the urban fabric to facilitate synergy that contradicts the conventional wisdom. More recent studies (Coates and Humphreys 1999) lumped old and new facilities together examining all major league sports facilities built between 1969 and 1994.

New empirical research, derived from recasting the frequently cited studies of Baade and Dye, Rosentraub, and their colleagues is supported by a closer examination of previous analyses which indicates that **context** plays a key role in determining the impact of sports development strategies.

- Baade and Dye researched studied non-urban facilities which were not intended to be economic development tools. Stadiums and arenas constructed during the 1960's and early 1970's were specifically designed to be apart from the city. Many were in suburban or rural locations. Even those constructed on an urban site were separated from the host city by a moat of surface parking.

Saigfried and Zimbalist (2000)

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### The Critics

- Using two regression equations Baade and Dye examined the effect of NFL teams, MLB teams and new stadiums on metropolitan area income. The methodology was designed to provide a straight forward test of claims that sports related spending and multiplier effects lead to increased area income.
- The 1990 analysis used data gathered from nine metropolitan areas which either gained a new team or experience the construction or renovation of a facility during the period 1965 to 1983. The 1996 Analysis used 48 cities over a period 1958-1997.

Cincinnati	New Orleans	Baltimore	The results of the analysis indicated a significant relationship between the sport related variables and income levels for only one of the metropolitan areas: Only Seattle with the presence of a new baseball team had a significant positive effect. In the 1996 study only Baltimore and Indianapolis had a positive effect.
Denver,	Pittsburgh	Indianapolis	
Detroit	San Diego	Washington DC	
Kansas City	Seattle	San Francisco	
	Tampa	St. Louis	

No conclusions were drawn from pooled data from all nine cities, the authors found a significant negative impact on the presence of a football team, and a significant positive impact associated with the presence of a baseball team.

The second analysis was created to determine whether an MSA gains a larger share of its regions income as a result of the presence of a sports team or stadium. Based on the findings of their model, the authors concluded that sports teams and facilities have a potentially negative impact on metro area economies but no significant positive impact:

Cincinnati	New Orleans
Denver,	Pittsburgh
Detroit	San Diego
Kansas City	Seattle
	Tampa

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**Richfield Coliseum**

Opened: October 26, 1974  
 Closed: September 1, 1994  
 Demolished: May 21, 1999

Located in Richfield Township roughly halfway between Cleveland and Akron, it was home to the NBA's Cavaliers, WHA's Crusaders, NHL's Barons, MSL's Force, MSL & NHL's Chiefs, the AFL's Lumberjacks, and the AFL's Thunderbolts. It hosted the 1981 NBA All-Star Game.

Built at a cost in 1974 at a cost \$36 million to build (\$170 million in 2012 dollars) and had a capacity of 20,273 for basketball and 18,544 for ice hockey.


It had only one concourse for both levels, which became crowded during games at which the attendance was anywhere close to capacity.

Luxury suites, were at the uppermost level were the worst seats in the house. Once plans for Quicken Loans Arena in downtown Cleveland were announced in 1991, became economically obsolete.

Located at the intersection of Interstate 271 and Ohio State Route 303, a toll, two-lane highway outside of Richfield. Traffic became an issue especially with lake-effect snow from Lake Erie providing another obstacle to drivers during the winter months. With one true entrance traffic would back up for several miles in all directions for hours.

In 1994 the arena and surrounding parking areas were allowed to be returned to woodland as part of the Cuyahoga Valley National Recreation Area.

The site is now a grassy meadow and has become an important area for wildlife. Birds such as the Eastern meadowlark, bobolink, and various sparrows now inhabit the area. This has caused the site to become popular with local birders.



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**Detroit Silverdome**

When it first opened in December of 1975, the Silverdome was the largest stadium in the NFL. It was at the time state of the art. But the years have not been kind to the Silverdome.

The Detroit Lions moved out after 26 years in 2001. Since then, the venue has hosted only a handful of events, most of which were ill suited for an 80,000 seat venue.

It was costing the city of Pontiac a fortune to maintain the stadium, so they decided to put it up for auction.

In 1975 the Silverdome cost \$55.7 million to build. In 2009 it sold for \$583,000.



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**Texas Stadium-Irving, Texas**

Opened: September 17, 1971  
 Closed: December 26, 2008  
 Demolished: April 11, 2010

Owner: City of Irving  
 Operator: Texas Stadium Corp.  
 Surface: Texas Turf (1971 to 1995)  
 AstroTurf (1996 to 2002)  
 RealGrass by Sportfield (2002 to 2008)


Construction cost: \$35 million  
 (\$201 million in 2012 dollars[2])

Architect: A. Warner Moresy  
 General contractor: JW Bateson Co., Inc.

Capacity: 65,875

Tenants:  
 Dallas Cowboys (NFL) (1971–2008)  
 Dallas Tornado (NASL) (1972–1975, 1980–1981)  
 SMU Mustangs (NCAA) (1976–1979)

City of Irving announced that the Texas Department of Transportation would pay \$15.4 million to lease the site for 10 years as a staging location for the State Highway 114 Loop 12 diamond interchange. The city has the right to relocate the staging area if redevelopment becomes available [23]



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### Recasting Baade and Dyes Methodology

Santo studied more than double those examined by Baade and Dye. The time frame is illustrative of the difference between the two different. Design areas reflecting increased stadium constructions, team expansion, and relocation.

The larger sample size also contributed to enhanced statistical reliability and validity for pooled regressions.

Captured effects of movement amongst NFL teams.

Added variable differentiation between presence of a baseball and football stadium to detect differentiating impacts. Essential since multipurpose facilities are no longer built and four of the sample cities constructed or renovated separate stadiums for both the sports during the study period.

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### Recasting Baade and Dyes Methodology

Teams in parentheses left MSJ during the Measurement period.	MSA	Baseball Team	Baseball Stadium	Football Team	Football Stadium
	Atlanta		Turner Field 1997		Georgia Dome 1992
	Baltimore		Ortola Park 1992	Ravens 1996	M&T Bank Stadium 1998
	Charlotte			Panthers 1996*	Bank of America Stadium 1996
	Chicago		US Cellular 1991		
	Cleveland		Jacobs Field 1994	(Browns 1995)	Cleveland Stadium 1999
	Danver	Rockies 1993	Coxe Field 1995		
	Fort Worth-Arlington		The Ballpark 1994	(Clers 1996)	
	Houston			Jaguars 1995	Aflac Stadium 1995
	Jacksonville			(Packers 1994)	renovated
	Los Angeles				Pro Player Stadium 1987
	Miami	Marlins 1993			The Coliseum 1999
	Nashville		Edison Int'l Field 1999	Titans 1999*	
	Oakland		renovated	Raiders 1995	
	Orange Co. (Anaheim)		Bank One Ballpark 1998	(Pirates 1994)	
	Phoenix	Diamondbacks 1998	renovated	Cardinals 1998	
	St. Louis			(Cardinals 1967)	Edward Jones Dome 1995
	Seattle	Devil Rays 1998	Safeco Field 1999		
	Tampa		Tropicana Field 1998		Raymond James Stadium 1998
	Washington, DC		renovated		Fed Ex Field 1997

Note: \*Baseball teams in parentheses denote teams that left an MSA during the indicated year.  
\*The Carolina Panthers played at Memorial Stadium in Clemson, South Carolina in 1995. The Tennessee Titans played at the Liberty Bowl in Memphis in 1997 and at Vanderbilt Stadium in 1998.

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### Facility as Component of Urban Center

- 950,000 square feet of retail & restaurant
- 1,850,000 square feet of office
- 1,500 hotel rooms
- 10,000 seats of live venues
- 4,800 residential units

Adjacent to Sawgrass Mills Mall

- # 1 Most Popular Retail Location in Florida
- # 2 Most Popular Tourist Attraction in Florida - After Disney
- # 3 Largest Mall in the US (2,700,000 Square Feet of Shopping)

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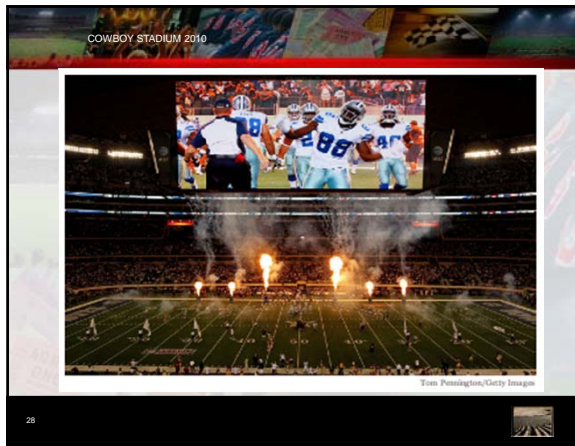
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### Recasting Baade and Dyes Methodology

With the exception of the unique football and baseball stadium variables, the two regression equations used in this analysis are identical to those employed by Baade and Dyes, and are described below.

Equation 1:

$$Y_i = \alpha_0 + \beta_1 \text{BSTAD}_i + \beta_2 \text{FSTAD}_i + \beta_3 \text{BASE}_i + \beta_4 \text{FOOT}_i + \beta_5 \text{TREND}_i + \beta_6 \text{POP}_i + \epsilon_i$$

where,

- $Y_i$  = the  $i^{\text{th}}$  MSA's real aggregate personal income (in 2001 dollars)
- $\text{POP}_i$  = the  $i^{\text{th}}$  MSA's population
- $\text{BSTAD}_i$  = 0 before the  $i^{\text{th}}$  MSA renovates or builds a baseball stadium; 1 after a stadium is renovated or built
- $\text{FSTAD}_i$  = 0 before the  $i^{\text{th}}$  MSA renovates or builds a football stadium; 1 after a stadium is renovated or built
- $\text{BASE}_i$  = 0 if an NFL team is not present in the  $i^{\text{th}}$  MSA; 1 if an NFL team is present
- $\text{FOOT}_i$  = 0 if an NFL team is not present in the  $i^{\text{th}}$  MSA; 1 if an NFL team is present
- $\text{TREND}_i$  = a variable assigned a value of 1 for 1984 and increasing to 18 for 2001
- $\epsilon_i$  = error term

Equation 2:

$$Y_i/\text{YR}_i = \alpha_0 + \beta_1 \text{BSTAD}_i + \beta_2 \text{FSTAD}_i + \beta_3 \text{BASE}_i + \beta_4 \text{FOOT}_i + \beta_5 \text{TREND}_i + \beta_6 \text{POP}_i/\text{POP}_i + \epsilon_i$$

where,

- $Y_i/\text{YR}_i$  = the  $i^{\text{th}}$  MSA's real aggregate personal income as a fraction of the  $i^{\text{th}}$  region's income
- $\text{POP}_i/\text{POP}_i$  = the  $i^{\text{th}}$  MSA's population as a fraction of the  $i^{\text{th}}$  region's population

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### Recasting Baade and Dyes Methodology

Equation One Results

MSA	Pop	Trend	BSTAD	FSTAD	BASE	FOOT	R square
Atlanta	76.13*	-3,719,256*	1,777,076	-3,767,652*			0.966
Baltimore	80.77	594,027	-4,799,467*	3,330,094*		1,709,803	0.979
Charlotte	1.26	-10,058	-3.20	1,071,025	11		0.962
Chicago	42.27*	0.02	-15,811,199*	1.03			0.962
Cleveland	32.79*	3,310,907*		-8.09		-1,032,980	0.962
Denver	3.81	6.01	1,172,335	1,256,781	1.81		0.964
Fort Worth-Arlington	186.29*	771,578*	831,046		-5,882,092*		0.978
Houston	48.11*	270,493	932,792			-10,051,917*	0.963
Jacksonville	5.20	0.83					0.962
Los Angeles	4.26	469,971		1,206,797*	2.23		0.965
Memphis	0.13	-4,494,622*				-208,900,001	0.965
Miami	96.81*						0.964
Minneapolis	32.88	2,889,522*		-1,458,449	-3,180,007		0.919
Nashville	10.83	813,395					0.964
Orlando	0.21*	-2,360,453					0.967
Orange Co. (Anaheim)	12.28	-12.17	7,236,047*			7,710,917*	0.964
Phoenix	119.09*	-2,676,026*	4,555,841*				0.965
Portland	3.97	-5,027,011*					0.965
St. Louis	86.84*	1,354,402*		3.06	1,118,316		0.970
Seattle	10.11	3.44		9.84			0.964
San Diego	35.59	1,027,696*	10,096,307*				0.964
Tampa	0.20	-513,439	2,038,191*	2,116	2,035,197*		0.967
Washington, DC	130.21*	-6,702,802*		4.58	10,259,802*		0.967
Wichita	12.22	-7.45					0.967
Winnipeg	44.20*	531,175*	4,611,880*	1,301,021*			0.993
Yokohama	25.32	4.16	3.65	5.99	-8,126,228*		0.993
POOLED							0.993

Coefficients are listed above in bold.   
 \* indicates significance at p < .05.   
 # indicates significance at p < .10.   
 # indicates stadium contemporaneity with football.

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The Results of Recasting

- Results contradict the Baade and Dye conclusions: New analysis indicates a significant positive relationship between sports related variables and regional income share for eight metro areas Atlanta, Cleveland, Denver, Jacksonville, Nashville , Seattle, Tampa.
- Impact of football stadium construction or renovation is significant and positive in Jacksonville, Nashville and Tampa. Presence of a football team shows significant positive effect on income share for Cleveland and Anaheim. Significant negative coefficients are associated with the presence of a new baseball stadium in Arlington and the presence of a new football stadium in Cleveland
- The results of the pooled analysis indicate that new baseball stadiums have a significant positive impact on area income, while presence of a baseball team has a significant negative impact.
- None of the facilities in the original Baade and Dye study built baseball-only facilities during the time period of their study. This supports the their that even in cities where teams already play, new stadiums themselves are
- Economic generators, Context of revitalization and tourist appeal in areas where the facilities are now built.

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The Results of Recasting

- Results contradict the Baade and Dye conclusions:
- Facility location matters. In each case of cities building new stadiums downtown or central city correlate with positive regional income share: Atlanta, Denver, Jacksonville , Nashville, Seattle, Tampa
- Stadium construction down town and for new teams generates larger visitor spending before and after event and a realignment of spending within the region.
- Need to consider context and look beyond personal income:

"If the justification for using public resources to build downtown sports facilities is that these structures will shift economic activity to an area that needs redevelopment, then the issue is not whether overall economic activity increased or decreased ,but whether the vitality or centrality of the downtown area was enhanced or sustained.

Austrian and Rosentraub (2002)

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The slide contains two maps. The left map is a detailed street-level map of a stadium area, showing the stadium, surrounding streets, and a legend with categories like 'Stadium', 'City Center', 'Downtown', and 'Neighborhood'. The right map is a regional map of Georgia, showing various counties (ROBERTSON, SUMNER, DEATHAM, DEKALB, MORGAN, MCDONOUGH, WILSON, WILLIAMSON, MURPHY, RICHMOND) with a central hub and spokes connecting them, likely representing a transportation or economic network.

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### INDIRECT IMPACTS AND THE OUTPUT MULTIPLIER

The indirect economic results that occur within Metro facilities are an area of frequent concern. This fact sheet provides a detailed look at the total of direct on-site and indirect area impacts of \$1.87 billion. As the portion of Metro's total economic activity that is attributable to Metro facilities and services, it is the most visible and measurable portion of Metro's economic activity.

The direct economic activity is the result of Metro's operations and the economic activity that occurs on-site and within the Metro facilities. This includes the economic activity that occurs within the Metro facilities, the economic activity that occurs within the Metro facilities, and the economic activity that occurs within the Metro facilities.

The indirect economic activity is the result of Metro's operations and the economic activity that occurs on-site and within the Metro facilities. This includes the economic activity that occurs within the Metro facilities, the economic activity that occurs within the Metro facilities, and the economic activity that occurs within the Metro facilities.

**Total Output: \$1.87 Billion**

**Direct Output: \$1.13 Billion**

**Indirect Output: \$0.74 Billion**

**Public Sector Investment: \$0.55 Billion**

"Multipliers can be estimated for the ultimate total employment impact, income impact, and output impact, of any given project."

Data on thousands of different production processes has been accumulated over time and reduced into input-output models that allow analysts to estimate the impact of given projects on thousands of businesses."

Economic and Fiscal Impact Analysis  
Tennessee Advisory Commission to  
Intergovernmental Relations  
Staff Research Report  
Stan Charin, Ph.D. and  
Bryan Kay, Ph.D., May 2009

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### NASHVILLE WITHOUT THE PREDATORS AND POWERS MANAGEMENT

Results of the Study of the Impact of the Predators and Powers Management

Category	2007-06	2008-06	2009-06	2010-06	2011-06	2012-06
Operating Expenses	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Capital Expenditures	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Total	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000

It's not about being a fan, it's about how you have a community that has these exciting attractions that have tourists to spend money, provide jobs in the community and generate economic opportunity."

Seattle Mayor Greg Nickels, Seattle Times, April 18, 2005

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### LOCAL TAX REVENUES GENERATED BY VISITORS FROM OUTSIDE METRO

Local tax revenues generated by visitors from outside Metro

Year	Local Tax Revenue	Percentage of Total
2003	\$1.1	11%
2004	\$1.2	12%
2005	\$1.3	13%
2006	\$1.4	14%
2007	\$1.5	15%
2008	\$1.6	16%
2009	\$1.7	17%
2010	\$1.8	18%
2011	\$1.9	19%
2012	\$2.0	20%

"New to-hat sales generated by out-of-town fans is a benefit that can be maximized. Attracting new out-of-town spending is the only certain way to measure benefit..."

Another benefit that can be measured is additional revenue for area businesses."

Patrick Church, An Analysis of Funding for the Pacific Forum, Pacific College Institute, 2009

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### RETURN ON INVESTMENT TO PUBLIC SECTOR

FINANCIAL STATEMENT DATA BY TYPE OF CONTRIBUTION				2011	2010
Item	2011	2010	2009	% of Total	% of Total
Corporate Contributions	\$126,349	\$7,259	\$7,969	25.0%	21.5%
Individual Contributions	1,032,217	1,054,229	980,351	75.0%	78.5%
Other	1,652	3,105	7,599	0.4%	0.9%
Total	\$1,158,218	\$1,064,593	\$995,919	100%	100%

*"I increase my staff by at least 25% on game nights and on the evening of a major concert."*

Jonathan Scott  
General Manager,  
The Palm, Nashville  
3rd Busiest Palm in US

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### JOBS AND EMPLOYMENT

FINANCIAL STATEMENT DATA BY TYPE OF CONTRIBUTION				2011	2010
Item	2011	2010	2009	% of Total	% of Total
Corporate Contributions	\$126,349	\$7,259	\$7,969	25.0%	21.5%
Individual Contributions	1,032,217	1,054,229	980,351	75.0%	78.5%
Other	1,652	3,105	7,599	0.4%	0.9%
Total	\$1,158,218	\$1,064,593	\$995,919	100%	100%

*"The Producers routinely employ off duty officers from their precinct on their own initiative, which created a legislative incentive for these officers."*

Christopher James Whitlock  
Nashville, Critical Incident

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### QUESTIONS ????

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