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Tracking the Dollars: How Economic Impact Studies Can Actually Benefit Managerial Decision Making

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Almost every month brings another attention-grabbing headline about a city or country considering a bid for a major sporting or entertainment event. Politicians, business executives, and excited fans weigh in about the possible costs and benefits, with limited numbers provided about the possible economic impact, and even less said about how these numbers were calculated. Most recently, LeBron James' return to Cleveland was estimated by Bloomberg to boost the city's economy by \$215 million annually, while Cuyahoga County's projections were more than double this number. A concert of Jay-Z and Beyonce in Baltimore in 2013 was estimated by the local newspapers to have an economic impact of between \$20 million and \$40 million. In these cases (as with so many others), these numbers were highly debated and many of our management colleagues were quick to dismiss the estimated size of the impact. Yet, as we get distracted by the discussion of how high the impact of a particular sport or entertainment event might be, we lose track of the more important question: What lessons can sport and entertainment executives learn from these studies? The first author of this article has been involved with over 50 sport industry economic impact studies, including analyses of the NBA All-Star game, the Dallas Cowboys' new stadium, the NCAA Men's Final Four basketball tournament, Singapore Grand Prix Formula 1 race, and the India Premier League, to name a few.

Throughout this journey, he picked up valuable lessons about how we could increase economic impact. Hence, this article is not written as a justification for the economic impact, but serves as guidance for those managers who are looking for ways to gain a better understanding of the economic impact of their event or venue. Thus, based on the work we have done, we have come up with five themes we

believe event and venue managers and their stakeholders should be aware of when assessing the economic impact of their event or venue.

Economic Impact Study Themes

1. Event tourists ignore the sunk costs of travel in other spending
2. 'Vacationing at home' should count
3. Spending inside the facility should not count
4. Spending inside the facility could be used as a proxy
5. Adding on a night really helps

Event tourists ignore the sunk costs of travel in other spending

One of the projects the first author was involved in with Matthew Brown, Chad McEvoy, and Mark Nagel on golf tourism in Ohio questioned whether the distance golfers traveled to play golf affected how much they spent once they arrived. A theory proposed by Armen Alchian and William Allen back in 1964 (known as the Alchian-Allen Theorem or as the Third Law of Demand) suggests that as a fixed cost is added to the price of two products, the more expensive product becomes relatively cheaper compared to the less expensive product, and that consumers will then be more likely to purchase the more expensive product. In applying this theory to sport tourism, the researchers wondered whether consumers would ignore the sunk costs of travel when making their choices about food, hotels, and other expenses. Sports tourism is a great place to study this phenomenon. Their study showed high correlations between distance traveled and spending on green fees, total golf spending, and total spending on their trip. Therefore, the authors concluded that the theory holds:

The analysis of spending by golf tourists in Ohio is not just about the support for the Alchian-Allen theorem. It is also about whether golf consumers bundle decisions together or separate them out sequentially. Here, the customer has a choice regarding whether to bundle costs or not. The data from this study indicates that most golfers, especially golf tourists, do bundle the quality costs with the intermediate costs of transportation, lodging, and food. (Brown et al., 2007, p. 52)

These findings are consistent across other events, whether participatory (as with the golfers in Ohio) or spectator events. For example, the 2007 Valero Alamo Bowl pitted Penn State University against Texas A&M University. An examination of the data from the economic impact study conducted by the first author and Dick Irwin showed that there is a pos-

itive and statistically significant correlation between miles traveled and the amount of money spent on concessions and merchandise at the event. The 2006 NASCAR Busch Series motorsports event at O'Reilly Raceway Park also showed a positive correlation between spending on food and whether the fan was from out of state. Similarly, the 2008 Rock 'n' Roll Marathon in San Antonio exhibited statistically significant and positive correlations between whether the participant came from out of state, and how much they spent on food, beverages, and entertainment while in San Antonio.

Understanding how event tourists behave, and targeting customized offers to them based on their sunk cost of travel to the event, can therefore provide additional opportunities to increase the economic impact of an event. For event stakeholders tracking this economic impact, categorizing attendees according to their distance traveled may also provide a more comprehensive and nuanced analysis of the impact.

'Vacationing at home' should count

It is typical in economic impact studies to assume that all spending by local residents is substitute spending that would have been spent in town on some other forms of entertainment, had it not been spent on the event in question. In other words, the spending by local residents is not counted toward economic impact. This is done to be conservative—to have a measurement of economic impact that is likely to be lower than the true measurement (not higher than the true measurement and thus subject to legitimate scrutiny). However, this concept often feels at odds with the instincts of event owners, who note that many local residents vacation at home, and spend their money locally instead of leaving town to spend it on some other external vacation.

This concept of 'vacationing at home' was analyzed in depth by Steven Cobb and Douglas Olberding. Using the Cincinnati Flying Pig Marathon, they found that many local runners, who account for a significant percentage of race participants in many marathons, actually use their home-city marathon as a substitute for an out-of-town race. The researchers found that the economic impact was actually more than 20% higher when accounting for these local residents.

A key element of this type of analysis is that the researcher should count how much money the local resident would have spent had he or she traveled to another location and ran a marathon, not how much they actually spent locally related to their hometown marathon. The reason for this is because the amount they would have spent abroad was not spent and is therefore available for them to spend locally, whether it be during that same few days or within a reasonable time period. In other words, the money stayed home and likely would eventually be spent at various local businesses.

Following this approach, the study on the 2007 Valero Alamo Bowl found that over 25% of county residents and a third

of state residents indicated that they would have attended the event had it been hosted outside of Texas. The economic impact from spectators of this bowl game on Bexar County and the State of Texas was more than 25% higher than was measured by the typical methodology of not counting local residents at all in measuring economic impact.

Similarly, the 2007 Dr. Pepper Big 12 Championship (college football game) economic impact study found that approximately 5% of San Antonio residents, 27% of Bexar County residents, and 44% of in-state respondents indicated they would have attended the event if it were hosted outside of the State of Texas. This is highly correlated with those fans who said that they were a fan of one of the two teams playing. Almost half of the spectators from within the State of Texas (but outside of Bexar County, where the game was played) indicated that they would have traveled to a nearby state to watch the championship if it had not been held in Texas. The money stayed home—the football game helped keep residents of the state from taking their money outside of the state. As a result, the money that fans would have spent traveling to the game outside of Texas should be counted towards the economic impact of hosting the game, as those funds would be available to spend within the state on local consumption.

Spending inside the facility shouldn't count

Many economic impact studies count the money spent by visiting spectators inside of a sports or entertainment facility as part of economic impact. The rationale is quite straightforward—the facility is a business in the community like any other business (e.g., local hotel or restaurant) and spending by incremental visiting spectators (spectators from outside the area, who came to the event because of the event, and did not replace another trip with this one) on that business ought to count toward economic impact just like it does for the other local businesses. It is true that the facility is a local business (just like a hotel), but if the goal of the economic impact analysis is to measure how much money comes into the community and works its way to the local residents, then it might be more accurate to measure how much money comes out of the facility into the community. In other words, of the millions of dollars spent inside the building by incremental visitors because of the event, how much is then spent in the community?

This is really the second round of spending: the first round being the purchase of concessions, parking, merchandise, and other items at the event; and the second round being

how the facility/team/event owner spends that money. This could equally be applied to the local restaurant in town, although it is usually not possible to determine how much money the local restaurant takes in from the incremental visitors and then spends in the community. This is the *raison d'être* of the *multiplier effect* that is so often controversial in economic impact studies. The multiplier effect is based on estimates by the federal government on how money flows within a county once that money is initially spent in the county on various types of businesses (e.g., lodging, restaurants, and retail). If it were feasible, standard economic impact methodology would measure that second round of spending.

While we might not be able to do this for a local restaurant, for a sport or entertainment venue, this is possible, and the first author did just that as part of an economic impact study of a major professional sports team and its host facility. An audit of the sports team's pattern of expenditures was conducted and revealed that about 22% of the expenditures by the team took place in the local community. When comparing this amount to what is spent by visiting spectators in the sports facility, the second round of spending was lower. In other words, counting economic impact by measuring what visitors spend at the event generally provides an estimate that is larger than counting what is thrown off by the event (at least for a sports team and its facility). Of course, reporting both estimates and explaining the methods and differences is probably the most useful analysis. That way the stakeholders can know what the estimates are under both conditions, and more informed debates could occur about the real impact.

As an example of how this can change economic impact estimates, a study for a major professional team evaluated the expected impact of a new facility, while critiquing an existing economic impact study (Turnkey Sports and SportsEconomics, 2004). The existing study measured \$68 million in ticket sales, \$8.5 million in parking revenues, and \$28 million in concessions. This direct spending of \$104 million led to about \$155 million in total economic impact on the surrounding

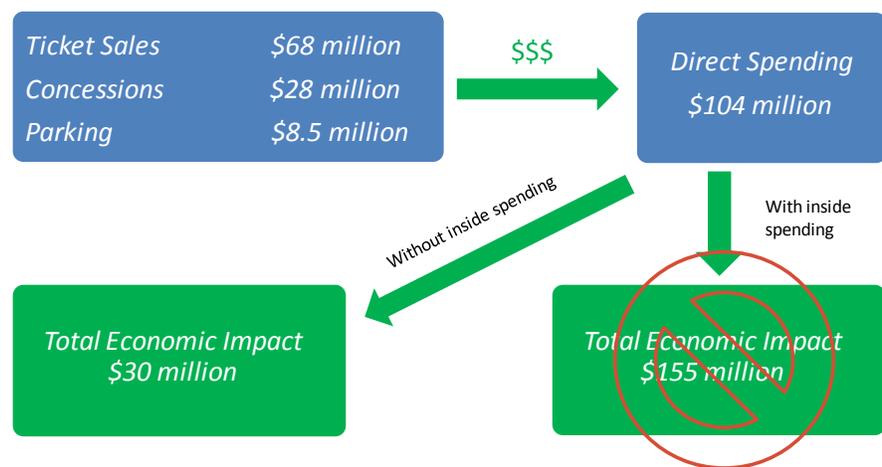


Figure 1. The Impact of Counting Spending Inside of a Sports Facility

city. However, without those revenues inside of the stadium, economic impact would fall from \$155 million to about \$30 million in the city. This very large decrease influenced the decision of one of the prospective cities about whether or not to bid to host the new stadium. A key issue is that most of the revenue generated inside of a major professional sports stadium goes to the major tenant in that stadium. The extent to which that tenant then spends the money in the community, as part of their normal business operations, should be measured as economic impact.

Spending inside the facility can be used as a proxy

Event owners and venue managers often have economic impact studies conducted in order to determine how much the local community is financially impacted by the event, team, or facility in general. However, there are times when the economic impact study does not take place, perhaps due to cost or planning constraints. Is it possible then to use known information about an event to help determine how much money was likely spent outside of the facility?

Using a set of studies that SportsEconomics (the consultancy firm founded by the first author) conducted in two cities using the same methodology, it was found that a highly statistically significant estimate of outside spending could be measured using the amount that was spent inside of the event.¹ On a per visitor basis, the average amount spent outside can be estimated by multiplying the number of days the event was attended (for multi-day events) by \$224 plus nearly \$1 spent outside for each \$1 spent inside, minus \$290. On average, a visitor in those studies stayed 2.5 days for the events and spent \$96 inside of the event. The events in the study averaged 3.3 days because some of the events were multi-day festivals or were tournaments that lasted a number of days. Although the data from these studies is limited, the statistical model used held up well and suggests that the

formula could be used to estimate the financial impact on the local community.

Adding on a night really helps

In order for an event to really generate substantial economic impacts, it needs visitors to stay overnight, causing them to spend money on lodging and a number of meals. Those are the big-ticket items when it comes to economic impact. Many events, however, are single-day events, which may view these benefits as out of reach. A solution that we are increasingly seeing is to create additional and related event components that encourage overnight stay. For example, Elite Racing (now owned by the Competitor Group) has turned a one-day event into a three-day event. Their Rock 'n' Roll Marathon series, which is expanding to more and more cities every year, requires runners to register at a marathon expo, which is hosted the day before the race. That's two days. Then, at the end of the marathon, Elite Racing created a musical event that goes late enough into the evening that it's hard to get on a plane and get out of the city until the next morning. That's three days. Based on the economic impact of three Rock 'n' Roll Marathons in two locations, not only do marathon runners spend a lot per day when they travel to an event (they do generally have relatively high incomes, too), but they make a mini-vacation out of it and often bring along a friend or two.

Where do spectators and participants spend their money? Figure 2 shows where visitors spend their money for a variety

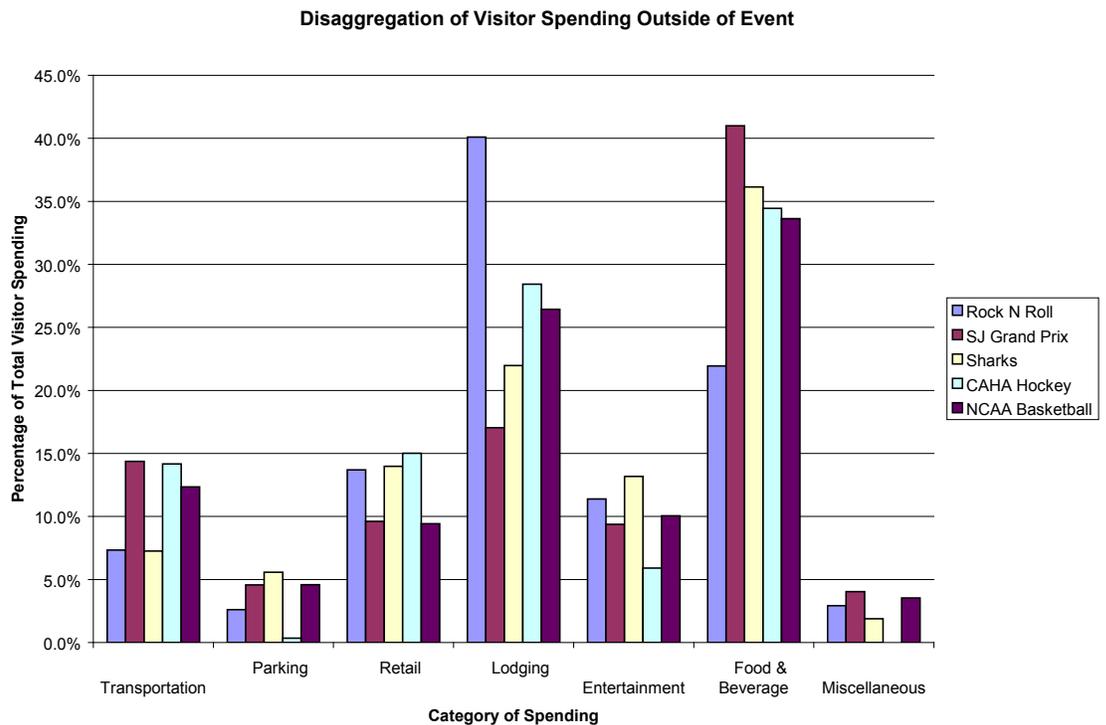


Figure 2. Where Do Visitors Spend Their Money?

of events in the City of San Jose. Three of the events are mostly spectator-driven (San Jose Grand Prix, San Jose Sharks National Hockey League game, and NCAA Men's Basketball Regionals), and two of them are more participant-driven (the Rock 'n' Roll Marathon and the CAHA Youth Hockey Tournament). As can be seen, lodging, and food and beverage make up over 50% of the spending by visitors to these events. Transportation, retail, and entertainment account for just over 10% each.

The Importance of Getting it Right

With so much economically, politically, and even socially riding on the decisions to host sports and entertainment events, there is growing pressure to develop and use more comprehensive and accurate economic impact approaches. The traditional economic impact studies are receiving more and more criticism, and in order to address those critics, we need to continue to advance our understanding on what the economic impact of sport and entertainment events truly is. As we continue to work on this, two additional questions should be considered, which have received very little attention to date. Fiscal impact analysis, which is the measurement of the tax impact of an event on local government coffers, often fails to account for the full set of possible tax impacts. Most studies measure the impact of an event/team/facility on sales, hotel, and maybe rental car taxes. Yet, these typically make up less than 25% of a local government's tax revenue sources. What about franchise fees, utility taxes, licenses and permits, or property taxes? While an event might or might not pay taxes directly into these sources, the businesses that support the event and make money off of the event (i.e., the recipients of the economic impact spending) do pay into these sources and may pay more because of the event itself. Also, what about future tourism caused by a major event that is covered on television nationally or internationally? That hardly ever gets measured as part of economic impact, but if an event causes people to travel to that area in the future, that event is partially responsible for the future economic growth of the area. This is extremely hard to measure, but should not be forgotten.

Our colleagues in the field of tourism management have done considerable work on this, referring to this phenomenon as *destination branding*. The media coverage of an event is akin to a tourism board taking out an advertisement or running a commercial asking the viewer to come and vacation in that area or state. While the findings for one-time events are not necessarily that encouraging, as they note that most outcomes are short-term and the effects of hosting a sport or entertainment event wear off quite rapidly, the findings on recurring events or sport (and entertainment) entities indicate the power of sport and entertainment to create a brand for the city. There are many examples of cities around

the world that have used sport or entertainment to create a brand for themselves in a convoluted tourist industry (e.g., Augusta – The Masters, Las Vegas – gambling, Orlando – amusement parks, Barcelona – FC Barcelona, France – the Tour de France, etc.).

The five themes outlined here point to the ongoing efforts to improve the methods employed in this ever-evolving field. For event or team owners, facility managers, and government decision-makers, the lessons learned from over 50 sport industry economic impact studies help make sense of the approaches that have been employed, and will most likely be employed in the coming years.

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Endnote

- ¹ The events for which economic impact was measured includes: San Jose Grand Prix, ZeroOne Festival, San Jose Jazz Festival, Tapestry Arts Festival, San Jose Mariachi Festival, San Jose Rock 'n' Roll Marathon, NCAA Men's Regional Basketball Tournament, San Jose Sharks Hockey game, California Amateur Hockey Association tournament, 2004 Mastercard Alamo Bowl, 2007 Valero Alamo Bowl, NCAA Women's Volleyball Championships, and San Antonio Rock 'n' Roll Marathon.