

Cite: Agha, N., & Taks, M. (2019). Economic impact of minor sporting events and minor league teams. In P. Downward, B. Frick, B. Humphreys, T. Pawlowski, J. Ruseski, & B. Soebbing (Eds.), *Handbook of Sports Economic* (pp. 395-404). London, United Kingdom: SAGE Publications Ltd.

Title: Economic Impact of Minor Sporting Events and Minor League Teams

Introduction

A considerable amount has been written on mega sporting events, large events, and professional sports, despite the fact that there are many more minor events and minor league teams (development teams) across the globe. To illustrate the scope of minor events, nearly every sizeable city in North America has a convention and visitor's bureau (CVB), a destination management organization (DMO), or sport authority whose purpose is to bring these, mostly minor, sporting events or teams to the city.

Since many more minor events and teams exist compared to professional teams and mega-events, one would expect a greater focus on these minor teams and events to better understand their economic effects. The tourism, leisure, and recreation literature is replete with studies in the context of traditional minor events such as soccer tournaments, hockey championships, and swim meets (e.g., Cela, Kowalski, & Lankford, 2006; Veltri, Miller, & Harris, 2009; Wilson, 2006). These studies are mostly *ex ante* using the direct expenditure approach (DEA) (Davies, Coleman, & Ramchandani, 2013) or input-output models, only look at benefits, and do not subtract out costs. On the other hand, research on minor events in the economics literature is rare and when it focuses on small stadiums and arenas (Colclough, Daellenbach, & Sherony, 1994; Hodur, Bangsund, Leistritz, & Kaatz, 2006) and minor events (Ryan & Lockyer, 2001) it often takes the same DEA or *ex ante*, benefit-only approach. An exception to this approach is Taks, Késenne, Chalip, Green, and Martyn (2011), who contrasted and compared the outcomes of a DEA with a cost–benefit approach (CBA) for a medium-sized international sport

event. For teams, the only exception is Agha (2013), who used an *ex post* regression approach to identify the effect of Minor League Baseball teams.

The dearth of research on minor events and teams in the economic literature can be explained in various ways. To begin, there is less motivation to conduct the studies because minor sports are assumed to have smaller significance (Marsh, 1984) and generally lack status or prestige that draws attention and interest (Agha & Coates, 2015). In addition, economists generally prefer the *ex post* approach to economic impact as it more naturally controls for net effects (e.g., Agha, 2013) but data are harder to obtain for smaller events (Coates, 2012). Baade, Baumann, and Matheson (2008) pointed out that it is tough to find the effect of a large championship in a large economy due to normal fluctuations in the regional economic activity. By extension, it would be hard to find an effect of a small event in a small economy. Figure 39.1 illustrates not just the difficulty of identifying impact in the *ex post* approach, but also helps to explain why so little research has been conducted on smaller events and teams.

Despite these reasons to overlook inquiry on minor sports in the economic literature, there has been a long history suggesting that minor events are likely to be more beneficial than major sports (e.g., Coates, 2012; Daniels & Norman, 2003; Marsh, 1984; Matheson, 2006; Taks, 2013; Walo, Bull, & Breen, 1996). In part due to both increased data availability and a shift towards cost–benefit analysis (CBA) approaches (e.g., Késenne, 2005, 2012), recent efforts to develop theory specific to minor events (e.g., Agha & Rascher, 2016; Agha & Taks, 2015) and to conduct studies on minor events (Taks et al., 2011) and teams (Agha, 2013) using more robust approaches occur in the literature. Thus, we focus for the remainder of the chapter on the more recent theoretical and empirical contributions that take either the CBA or the *ex post* approach for both minor sport events and minor teams. We start by defining minor sport events and teams followed by an explanation of the different approaches to measuring impact. We then present

theoretical models and provide empirical examples of economic impact of minor sport events and leagues. We end the chapter with recommendations for future research.

Defining minor sporting events and teams

It is easy to distinguish minor league teams from their major league counterparts, simply based on their labeling (i.e., minor league versus major league). Similarly, there is consensus that the Summer Olympic Games and the FIFA World Cup are mega-events. Researchers, however, do not agree if other large events, such as the Commonwealth Games, EURO Football Cup, and Winter Olympics are mega sport events (e.g., Getz, 2012) with them sometimes referred to as ‘second tier events’ (Grix, 2014). It is less clear what is understood by a minor sporting event and, thus far, the classification has generally been up to the researcher. Researchers refer to the following events as ‘small’ events: the Giro d’Italia, Windsurf World Cup, and Ski Jumping World Cup (Kwiatkowski, 2016); a North Dakota State University football game with 5,100 spectators (Hodur et al., 2006); the Cooper River Bridge Run/Walk and the National Softball Association Girls Fastpitch World Series (Daniels & Norman, 2003).

Several definitions of small events exist. Saayman and Saayman (2014) defined events based on seven variables, one of which is size. Higham (1999) suggested they could be ‘regular season sporting competitions (ice hockey, basketball, soccer, rugby leagues), international sporting fixtures, domestic competitions, Masters or disabled sports, and the like’ (p. 87). This expansive definition spans from local to international events and from regular season games to one-off events. Gratton and Taylor (2000) proposed a typology of four different types of events (Types A, B, C and D) specifically for economic impact purposes; the smaller Type C and Type D events also include an extremely broad range of events. Wilson (2006) extended the model and suggested a smaller Type E category to cover regional and local events. Based on this, Ramchandani (2014) classified Type A events as ‘Mega’, Type B and C events as ‘Sub Mega’ (National and International), Type D and E as ‘Domestic’. Unfortunately, these typologies do

little to help us understand what is minor and major because they focus on event outcomes (media coverage or assumed impact) instead of the event features. Taking a different approach, Daniels and Norman (2003) studied seven small events and found the unifying features of minor events were a lack of government investment and a reliance on existing infrastructure.

Ultimately, none of these typologies and suggested definitions is based on economic theory. To address this problem, Agha and Taks (2015) developed a definition based on resource demands. They defined Event Resource Demand (ERD) as the continuum of resources needed to stage an event. Specifically, events require investments of three resource types: human (e.g., employees, volunteers), financial (e.g., private or government investments), and physical (e.g., venues, accommodation, transportation). As a result, events are operationalized by the multivariate combination of demanded resources where ‘large’ events are defined as those with high ERD and ‘small’ events as those with low ERD. There are an infinite number of events falling on the ERD continuum between the largest and smallest events.

To put this definition into context, Lamla, Straub, and Girsberger (2014) investigated the UEFA EURO 2008 football competition which hosted over 1 million game attendees in four stadiums in Austria and four stadiums in Switzerland. For this pan-continental championship, no new stadiums were built and no new hotels were necessary to host the event (suggesting a small ERD in terms of physical resources). In addition, the host cities were common tourism destinations with available employees in the hospitality sector (suggesting a small ERD in terms of human resources). On the other hand, the financial resource demand was large, with Swiss taxpayers alone responsible for over US\$130 million (SwissInfo, 2005). Given the ERD continuum, the EURO football championship was not the largest or smallest event, but somewhere in between (see Figure 39.2).

While the prior discussion focused on events, it is worth noting that minor league teams have traditionally been defined very differently – simply as those teams not at the highest level

of competition. It would be incredibly useful to apply the ERD definition to development teams to accurately capture the resource demands they place on host cities. While there are generally low human resource demands of minor league teams, a new minor league baseball stadium can have a large ERD if it places large financial demands on the local government to produce the physical resources. For instance, Ramapo, NY, a small town of 127,000 inhabitants, issued \$25 million in bonds to build a minor league baseball stadium in 2011 that ultimately cost the city \$60 million (Klopott, 2013).

Approaches to measuring impact

Minor sporting events create an impact if they are out of the ordinary (i.e., not part of the regular season), thus create a temporary ‘shock’ in the economy (Taks, Chalip, & Green, 2016). Generally, they require a whole range of resources, including products, services, and facilities for a very short period of time, thus increasing consumption in the local economy. As mentioned previously, a DEA measures this increased demand by focusing on the new money coming in to the local economy. While a DEA occasionally corrects for leakages (i.e., money not spent locally), it generally neglects the cost, and completely neglects the opportunity cost (e.g., diverting investments from other projects, crowding-out regular tourists, etc.). By only considering the positive impacts while ignoring the negative impacts, the standard DEA constantly overestimates the ‘economic benefits’ (Késenne, 2012). This overestimation is found by comparing *ex post* to DEA results (e.g., Baade & Matheson, 2001). However, no such *ex post* challenge of DEA has been conducted in minor events because no *ex post* research exists for minor events.

Sport economists’ reliance on *ex post* regression began with Baade and Dye (1990) and is based on externalities. If events and teams produce positive production externalities in a local economy they will, theoretically, manifest themselves through pecuniary effects. These effects have been operationalized and observed through standard economic variables such as spending,

sales tax collections, income, and employment. These pecuniary effects are then identifiable, measurable, and econometrically testable. The bulk of economic research to date relied on this approach but focused entirely on larger and medium-sized events, with the exception of Agha (2013) who studied minor league teams. One benefit of an *ex post* regression approach is it more easily captures net effects, especially since costs, leakages, and crowding-out are very difficult to identify and measure with a DEA. In part, this explains the stark differences between *ex ante* and *ex post* estimates of impact (e.g., Baade & Matheson, 2001). *Ex post* analysis also makes sense for major events and teams because they are the most likely to have production externalities. Smaller events have smaller production externalities and when organized in larger cities it becomes close to impossible to find the impact of smaller events *ex post* (e.g., a swim meet in a city of 1 million people – a tiny event, which will hardly make a difference in a large city). Thus, in general, *ex post* analysis makes little sense for minor events.

More recently, calls for alternative methods of measuring economic impact of events, such as CBA (e.g., Késenne, 2005) or computable general equilibrium (CGE) (e.g., Dwyer, Forsyth & Dwyer, 2010), were made, which revealed more realistic (and often negative) outcomes (e.g., Taks et al., 2011). A CBA is concerned with net benefits for the local population (i.e., welfare economics), whereby the best option to improve the efficiency of resource allocation is the one in which the marginal social benefit exceeds the marginal social cost by the largest amount. CBA identifies which money flows in a standard economic impact study should be considered a cost and which are a benefit. It also identifies the value of intangible social benefits and social costs not reflected in market prices, such as consumer surplus (e.g., Falconieri & Palomino, 2004), public good value (e.g., Johnson & Whitehead, 2000), and opportunity costs (e.g., Késenne, 2012). Opportunity costs represent foregone earnings from spending public money on sport events. For example, money spent on sport facilities could alternatively have been used to build a school or a hospital. The return on investments (ROI)

on these alternative projects could be higher than the ROI of the sport facility. It is very challenging to estimate the ROI of all possible alternatives. Thus, CBA estimates opportunity costs on the basis of crowding-out effects (e.g., regular tourists, local businesses) and all government expenditures related to the event (Taks et al., 2011).

In criticizing the CBA approach to impact, Davies et al. (2013) stated, ‘...CBA is arguably too data intensive from a practitioner perspective, especially for medium-sized Type C and D events, and given increasing constraints with public sector funding across many countries, is unlikely to be adopted by event organisers and local governments as a regular tool for evaluation’ (p. 34). While data collection is a challenge for any attempt to measure impact (Wilton & Nickerson, 2006), we note that as soon as events do not require public subsidies, which is more likely the case with small events, there are, technically speaking, no opportunity costs. There still might be leakages and crowding-out effects if the local economy is at full capacity, and technically they should be identified, calculated, and subtracted from the benefits. In the absence of public subsidies, no data must be collected to calculate opportunity costs based on taxpayers’ dollars. Therefore, the overall economic impact is highly likely to be positive. In contrast to Davies et al. (2013), we argue that the CBA is a better approach than both DEA and regression-based *ex post* analysis for small events with no government subsidies.

Theoretical impact of minor sporting events and teams

A typical DEA or *ex ante* approach to economic impact requires hundreds or thousands of variables. Simplistic examples include the number of visitors, how long they stay, the amount spent in different industries, and an organizing committee’s budget. In taking a CBA approach, Agha and Taks (2015) noted that these variables could be simplified and categorized into 10 economic impact drivers: five that increase and five that decrease economic impact (see Figure 39.3). While a DEA generally focuses on B1 (and occasionally captures B2–B5 and C4) a CBA accounts for all 10 drivers.

Note that some drivers are a function of the type of event (e.g., B1, New spending spent locally by visitors) while others are a function of city characteristics, such as normal tourism rates and the available hotel stock (e.g., C1, Crowding out other visitors). Seeing the necessity of defining cities in the same terms as events, Agha and Taks (2015) extended the idea of ERD by defining City Resource Supply (CRS) as the resources available in the host city to stage the event, including the human resources (supply of labor and volunteers), financial resources (public and private investments), and physical resources (infrastructure such as transportation, venues, and accommodation). Defining a city in terms of supply allows for local economic conditions and the reality that cities with excess capacity will benefit more than fully productive economies (Baade & Sanderson, 1997). Traditional city characteristics, such as population or GDP, are less relevant in this multivariate continuum of CRS because it is possible for a city with a smaller population to have better transportation, lodging, and venue options than one with a larger population (e.g., a small city which is a popular tourism destination). Similarly, some cities are well off financially and may have financial surpluses, regardless of their population size. In this conceptualization of cities, ‘large’ cities have high CRS and ‘small’ cities have low CRS in the context of events. An infinite number of cities fall on the CRS continuum between largest and smallest city.

Economic impact is then a function of the interaction of the ERD and the CRS. In short, it is often the relative size of the event as a function of the city (or better, the city’s resources) that matters most. Wilson (2006) in the context of swim meets in the UK, Coates and Depken (2011) in terms of American college football games, and Coates and Agha (2015) in the context of Minor League Baseball support this point.

We can see this idea of relativity expressed as the interaction of ERD and CRS in Figure 39.4. Whereas the demanded resources for event 1 (E_1) exactly match the resource supply of city 1 (C_1), city 2 (C_2) actually has a surplus of resources to host event 1. On the other hand,

Agha and Taks (2015) introduced the idea of resource deficiency to illustrate that the lack of local resources often leads to a realization of zero or negative impact, as when event 2 (E_2) is held in city 1 (C_1). Because CRS is a multivariate measure, the deficiency (D_1) could be too few hotel rooms for visitors, too few venues, or a lack of financial resources. Regardless of the specific deficiency, there will be a local cost to obtain them which decreases economic impact. Thus, only an equilibrium between ERD and CRS will lead to an optimal economic impact as in points O_1 and O_2 in Figure 39.4. Using the concept of resource deficiency, and bringing local economic conditions into the analysis, Agha and Taks (2015) demonstrated that theoretically: (1) no city has the resources required to host a mega-event and will therefore never achieve the optimal economic impact; (2) smaller events have a higher potential for maximum optimal economic impact compared to larger events; and, (3) smaller events have positive impacts in many more cities than larger events.

To see this interplay between ERD and CRS in action, we return to the example of EURO 2008. Given the definition of ERD, EURO 2008 demanded eight football stadiums, of which all eight were locally available. Given the strong tourism infrastructure in Europe, no new hotels were necessary although there was not necessarily slack in those establishments in the summer months leading to a resource deficiency, the result of which was crowding-out of other visitors which decreases impact. Lamla et al. (2014) found hotels and restaurants reported lower sales due to crowding-out. The financial ERD of over \$130 million had real opportunity costs for the host cities. The deficiencies in some of the resources and the presence of clear cost drivers suggest a non-optimal economic impact. One could imagine EURO 2008 located at point D_1 in Figure 39.4.

Contrast the resource deficiency of EURO 2008 with the International Tennis Federation (ITF) women's professional tennis tournament, the 2013 GDF-Suez Open in Seine-et-Marne, France. Despite its status as an international event, Schut and Pierre (2016) reported the use of

an existing tennis facility and hotel complex, suggesting an optimal level of physical resources. Little to no crowding-out occurred because 91% of spectators lived in the local area and ‘stayed there for a few hours’ (Schut & Pierre, 2016, p. 77). In terms of financial demands, the Seine-et-Marne Department Council paid €50,000 to subsidize the event. With unemployment in France near 10%, there is supply to match the demand for human resources. Thus, the overall ERD seems likely to be below the CRS and closer to the optimal point (O_1) than EURO 2008.

Looking at the interaction of ERD and CRS in the context of minor league teams, we see a similar pattern whereby some minor teams can exceed the capacity of their cities even though they are small. Returning to the example of Ramapo, NY, the financial demand of the team for the stadium was in excess of the CRS. The per capita cost of \$472 to build the stadium vastly exceeded the average per capita MLB stadium cost of \$79 (Agha & Coates, 2015). The city of Ramapo is now fiscally stressed, and Moody’s issued a negative outlook on the debt (Klopott, 2013). This is illustrated by point D_1 in Figure 39.4. In contrast, the San Jose Giants are a minor league baseball team (Class A) located in San Jose, CA, a city with a population over 1 million inhabitants. The team employs 25 full-time personnel year-round, about 265 part-time seasonal, four full-time paid interns, and no unpaid volunteers (C. Seike, 2017, personal communication, May 10, 2017). The stadium requires approximately \$100,000 in annual maintenance, and the few out-of-town visitors are easily accommodated in existing hotels. Given the CRS, the team is best represented by point S_1 in Figure 39.4.

Application and outcomes for small events

All the theories and concepts discussed thus far relate equally to major and minor events including CBA, the economic impact drivers, and the ERD/CRS framework. Although the theories apply equally to all events, the impacts for minor events and teams are more consistently positive than those of major events and teams. There are a variety of reasons for this, some of which extend naturally from the ERD/CRS framework. Simply by the nature of

their ERD and the number of cities with available CRS, minor events have a lower likelihood of exceeding local capacity (Agha & Taks, 2015), including a lower likelihood of public subsidies for infrastructure (Agha & Rascher, 2016; Higham, 1999), security (Matheson, 2006), and bidding costs (Higham, 1999) (driver C5). Available capacity also means minor events have a lower likelihood of crowding-out (Agha & Rascher, 2016; Matheson, 2006) (drivers C1, C2, and C3), a result that runs contrary to major events. Taks et al. (2011) and Matheson (2006) state minor events are less likely to influence changes in normal business activity (including both positive changes in driver B2 and negative changes in driver C3) and thus are less likely to affect competing industries, multipliers, and exchange rates.

Whereas the primary explanations for neutral and negative effects of major teams are substitution and leakages (e.g., Siegfried & Zimbalist, 2000), Agha and Rascher (2016) suggested that minor league teams have lower leakages (driver C4) and a higher propensity for new visitor spending to be captured locally (driver B1; what Ryan and Lockyer (2001) refer to as retained expenditures). Overall, the theoretical explanations for the differences are consistent with empirical findings of both minor teams and events.

Empirical examples of minor sporting events and teams

Despite Matheson's (2006) call for more *ex post* analysis of 'less prominent sporting events,' (p. 194), little work has been done, in part because, as Figure 39.1 indicates, it is not an easy task to identify the effect. In this section we provide details of two empirical studies.

Minor events

Taks et al. (2011) compared the outcomes of a standard economic impact analysis (EIA based on DEA and input-output modeling) with a CBA for the Pan American Junior Athletic Championships. While one-off, and international in nature, this event is considered a non-mega sport event. The 2005 edition was hosted in Windsor, Ontario, a medium-sized city in Canada

of approximately 250,000 inhabitants. Thirty-five countries were represented by 443 athletes and 144 coaches. Most of the 600 volunteers were residents. The event attracted a substantial amount of local media attention, as if the Olympic Games were in town. It drew 16,000 spectators to the stadium over the course of the four-day event. Most of the spectators were residents, while the competitors and participants were almost exclusively non-locals. This event is a rare example of a non-mega sport event for which a new \$9.5 CND stadium was built (on University premises). Private funds covered 75% of the cost and the remainder through increased student fees. The results are presented in Tables 39.1 and 39.2.

The DEA of the event indicated \$11,023,162 in new spending (visitors: \$971,759; capital: \$9,506,883; and, operational spending: \$544,521). After correcting for leakages (i.e., some of this money was re-spent locally, while the rest was re-spent outside the host region), the net increase in economic activity in Windsor was estimated to be \$5,617,681. Furthermore, the event generated a total of 75.8 Full-Time Job Equivalents for the city. The total impact from wages and salaries was estimated to be \$3,396,524. The example clearly demonstrates that even when standard EIA are corrected for leakages, the outcome is always positive, because it does not take into account the costs for hosting the event (Table 39.1).

The benefit side of the CBA includes the non-local visitor spending, the revenue of the local organizing committee (LOC), the consumer surplus, and the public good value. The cost side consists of opportunity costs, which included: (1) the costs for building the stadium (labor costs, the cost of borrowing); (2) imports; and (3) ticket sales to locals. Money spent on building the new stadium, crowds-out other projects. The imports are considered a cost, as money flows out of the local economy because of the event (the numbers were retrieved from the standard EIA which provided numbers on imports). Ticket sales to locals crowd-out local businesses (e.g., movie theatre, bars, restaurants). This is particularly problematic in cases where the organizing committee takes its profits outside the host community (e.g., the IOC in the context

of Olympic Games, or the FIFA in the context of the World Cup Soccer; Késenne, 2005). When subtracting the overall costs of approximately \$4.5 million from the overall benefits of approximately \$2.1 million, the outcome is *a negative net benefit* of \$2.4 million (Table 39.2). What is important here is how the positive signs from the standard EIA revert into a negative sign when a CBA is executed for the same event, from an estimated net increase in economic activity in the City of \$5,617,681, to a negative net benefit of \$2.4 million – a discrepancy of about \$7 million.

Minor teams

In order to investigate the effect of minor league baseball teams and stadiums on local per capita income, Agha (2013) relied on an *ex post* approach taken by Coates and Humphreys (1999) on major league teams and stadiums. To find the effect of smaller teams, she pooled data on 238 different metropolitan areas over 27 years. The bulk of the team and stadium effects for each classification were insignificant, which aligned with decades of results at the major league level. There were two important differences though. First, whereas there were known negative effects in major league results, there were no significant negative effects at the minor league level. Second, positive effects were found in four cases: teams at the AAA and A+ classifications and stadiums at the AA and rookie classifications. The results were particularly surprising because, as the first *ex post* investigation of any type of minor league team, the *a priori* expectations were that the results would be negative. Teams are small businesses that have shorter seasons, more frequent moves between cities, seasonal employees, and no national media exposure. Furthermore, the leagues in which the teams play have no national revenue sharing and they fold with much higher frequency than do major leagues. Agha (2013) concluded, ‘Although these are undeniable features of minor league baseball, they are simply descriptive features of the product. It is faulty to assume they are sufficient to explain the relationship between the presence of a team and per capita income’ (p. 245). Instead, the reasons given for these positive

results included little or no crowding-out, low leakages, and a higher likelihood of retained expenditures – explanations that align with the ERD/CRS framework.

Conclusions and future research

When events do not exceed the resource capacity of their host cities there is greater potential for a host of other benefits as evidenced by the lengthy literature on the social benefits, quality of life, and network effects of minor events (e.g., Taks et al., 2016). As Walo et al. (1996) stated, ‘enhancement of the host population’s way of life, economy, and environment is possibly the most significant difference between local special events and large-scale events’ (p. 104). If crowding-out is one reason why economic impact of large events is non-positive, then multiple smaller events will likely bring greater benefits than one large event (Matheson, 2006). This comment is consistent with the literature on optimizing event outcomes with strategic planning of an event portfolio (e.g., Ziakas & Costa, 2011).

There is more to learn about minor events and teams. We encourage more comparative studies using a CBA approach rather than a DEA approach to better understand the features of events that increase their likelihood of benefiting an economy. CBA is especially recommended for minor events when there is no government investments, as this voids the need to calculate an important opportunity cost.

More research is also necessary on minor league teams in sports beyond baseball (e.g., hockey, soccer, lacrosse) to capture the resource demands they place on host cities. This research area is increasingly important in the context of relativity as minor league facility costs can have major impacts on small cities. In addition, minor league teams affect thousands of cities across the globe compared to only a few hundred major league cities.

Looking at the drivers of economic impact (Figure 39.3), there has been considerable attention paid to all the benefit drivers except for B2, increased spending (spent locally) by residents and businesses. Although we see claims that this occurs, the evidence thus far seems

to suggest that increased local spending is simply time shifted (Agha & Taks, 2018). If major events do not affect B2, then it is even less likely for minor events, a point in alignment with Higham (1999) that minor events should have negligible impacts on residents. More inquiry is also necessary on the crowding-out effects (drivers C1, C2, and C3).

In conclusion, calculating the economic impacts of events and teams remains a challenge and is often incomplete. In this contribution, we stressed the importance of going above and beyond direct expenditure by taking costs into account. Consistent with other sports economists, we strongly recommend performing CBA over DEA. Moreover, instead of defining event sizes in terms of outcomes, we defined events (and teams) in terms of resources needed (ERD) and combined this with the resource capacity of the host city (CRS) to better understand how events (or teams) can achieve optimal economic impact in the city where they are being hosted. There are no absolute sizes of events; instead it is the equilibrium of resources an event demands relative to the resources a city can supply that determines economic outcomes. Any event operating within the existing resource capacity of the host city will have low opportunity costs, higher community benefits, and more optimal economic impact. We demonstrated the greater likelihood for minor sporting events and minor league teams to operate within those parameters compared to their major counterparts.

References

- Agha, N. (2013). The economic impact of stadiums and teams: The case of minor league baseball. *Journal of Sports Economics, 14*, 227–252.
- Agha, N., & Coates, D. (2015). A compensating differential approach to valuing the social benefit of minor league baseball. *Contemporary Economic Policy, 33*, 285–299.
- Agha, N., & Rascher, D. A. (2016). An explanation of economic impact: Why positive impacts can exist for smaller sports. *Sport, Business and Management: An International Journal, 6*, 182–204.

- Agha, N., & Taks, M. A. (2015). A theoretical comparison of the economic impact of large and small events. *International Journal of Sport Finance*, 10, 199–216.
- Agha, N., & Taks, M. (2018). Modeling resident spending behavior during sport events: Do residents contribute to economic impact? *Journal of Sport Management*, 32(5), 473–485.
- Baade, R. A., Baumann, R., & Matheson, V. A. (2008). Selling the game: Estimating the economic impact of professional sports through taxable sales. *Southern Economic Journal*, 74, 794–810.
- Baade, R. A., & Dye, R. F. (1990). The impact of stadium and professional sports on metropolitan area development. *Growth and Change*, 21(2), 1–14.
- Baade, R. A., & Matheson, V. A. (2001). Home run or wild pitch? Assessing the economic impact of Major League Baseball's All-Star Game. *Journal of Sports Economics*, 2, 307–327.
- Baade, R. A., & Sanderson, A. R. (1997). The employment effect of teams and sports facilities. In R. Noll & A. Zimbalist (Eds.), *Sports, jobs and taxes: The economic impact of sports teams and stadiums* (pp. 92–118). Washington, DC: Brookings Institution.
- Canadian Sport Tourism Alliance [CSTA]. (2006). Canadian Sport Tourism Alliance: Building business through sport. Retrieved from: www.canadiansporttourism.com
- Cela, A., Kowalski, C., & Lankford, S. (2006). Spectators' characteristics and economic impact of local sports events: A case study of Cedar Valley Moonlight Classic Soccer Tournament. *World Leisure Journal*, 48(3), 45–53.
- Coates, D. (2012). Not-so-mega events. In W. Maennig & A. S. Zimbalist (Eds.), *International handbook on the economics of mega sporting events* (pp. 401–433). Cheltenham, UK: Edward Elgar.

- Coates, D., & Depken, C. A. (2011). Mega-events: Is Baylor football to Waco what the Super Bowl is to Houston? *Journal of Sports Economics*, 12, 599–620.
- Coates, D., & Humphreys, B. R. (1999). The growth effects of sport franchises, stadia, and arenas. *Journal of Policy Analysis and Management*, 18, 601–624.
- Colclough, W. G., Daellenbach, L. A., & Sherony, K. R. (1994). Estimating the economic impact of a minor league baseball stadium. *Managerial and Decision Economics*, 15, 497–502.
- Daniels, M. J., & Norman, W. C. (2003). Estimating the economic impacts of seven regular sport tourism events. *Journal of Sport Tourism*, 8, 214–222.
- Davies, L., Coleman, R., & Ramchandani, G. (2013). Evaluating event economic impact: Rigour versus reality? *International Journal of Event and Festival Management*, 4(1), 31–42.
- Dwyer, L., Forsyth, P., & Dwyer, W. (2010). *Tourism economics and policy*. Bristol, UK: Channel View.
- Falconieri, S., & Palomino, F. (2004). Collective versus individual sale of television rights in league sports. *Journal of the European Economic Association*, 2, 833–862.
- Getz, D. (2012). *Event studies: Theory, research and policy for planned events*. London: Routledge.
- Gratton, C., & Taylor, P. (2000). *Economics of sport & recreation*. London: E & FN Spon.
- Grix, J. (Ed.) (2014). *Leveraging legacies from sports mega-events: Concepts and cases*. New York: Palgrave Macmillan.

- Higham, J. (1999). Commentary – sport as an avenue of tourism development: An analysis of the positive and negative impacts of sport tourism. *Current Issues in Tourism*, 2(1), 82–90.
- Hodur, N. M., Bangsund, D. A., Leistritz, F. L., & Kaatz, J. (2006). Estimating the contribution of a multi-purpose event facility to the area economy. *Tourism Economics*, 12(2), 303–316.
- Johnson, B., & Whitehead, J. (2000). Value of public goods from sports stadiums: The CVM approach. *Contemporary Economic Policy*, 18, 48–58.
- Késenne, S. (2005). Do we need an economic impact study or a cost-benefit analysis of a sports event? *European Sport Management Quarterly*, 5, 133–142.
- Késenne, S. (2012). The economic impact, costs and benefits of the FIFA World Cup and the Olympic Games: Who wins, who loses? In W. Maennig & A. S. Zimbalist (Eds.), *International handbook on the economics of mega sporting events* (pp. 270–278). Cheltenham, UK: Edward Elgar.
- Klopott, F. (2013). FBI Ramapo probe shows risks of Minor-League stadium boom. *BloombergMarkets*. Retrieved from: www.bloomberg.com/news/articles/2013-12-23/ramapo-fbi-probe-shows-risks-of-minor-league-stadium-boom
- Kwiatkowski, G. (2016). Composition of event attendees: A comparison of three small-scale sporting events. *International Journal of Sport Finance*, 11, 163–180.
- Lamla, M. J., Straub, M., & Girsberger, E. M. (2014). On the economic impact of international sport events: Microevidence from survey data at the EURO 2008. *Applied Economics*, 46, 1693–1703.

- Marsh, J. S. (1984). The economic impact of a small annual sporting event: An initial case study of the Peterborough church league atom hockey tournament. *Recreation Research Review*, 11(1), 48–55.
- Matheson, V. A. (2006). Is smaller better? A comment on ‘comparative economic impact analyses’ by Michael Mondello and Patrick Rishe. *Economic Development Quarterly*, 20, 192–195.
- Ramchandani, G. (2014). *Economic, sport development and elite performance consequences of sports events*. Doctoral dissertation, Sheffield Hallam University, Sheffield, UK.
<http://shura.shu.ac.uk/9165/>
- Ryan, C., & Lockyer, T. (2001). An economic impact case study: The South Pacific Masters’ Games. *Tourism Economics*, 7, 267–275.
- Saayman, M., & Saayman, A. (2014). Appraisal of measuring economic impact of sport events. *South African Journal for Research in Sport, Physical Education and Recreation*, 36, 151–181.
- Schut, P. O., & Pierre, J. (2016). The economic impact of a women's professional tennis tournament: The example of the GDF-Suez Open of Seine-et-Marne, France. *Journal of Policy Research in Tourism, Leisure and Events*, 8, 71–86.
- Siegfried, J., & Zimbalist, A. (2000). The economics of sports facilities and their communities. *The Journal of Economic Perspectives*, 14, 95–114.
- SwissInfo (2005). Euro 2008 to cost much more than expected. *SwissInfo*, 2 October. Retrieved from: www.swissinfo.ch/eng/euro-2008-to-cost-much-more-than-expected/4764528
- Taks, M. (2013). Social sustainability of non-mega sport events in a global world. *European Journal for Sport and Society*, 10, 121–141.

- Taks, M., Chalip, L., & Green, B. C. (Eds.) (2016). *Impacts and strategic outcomes from non-mega sport events for local communities*. London: Routledge.
- Taks, M., Késenne, S., Chalip, L., Green, B. C., & Martyn, S. (2011). Economic impact study versus cost-benefit analysis: An empirical example of a medium sized international sporting event. *International Journal of Sport Finance*, 6, 187–203.
- Veltri, F. R., Miller, J. J., & Harris, A. (2009). Club sport national tournament: Economic impact of a small event on a mid-size community. *Recreational Sports Journal*, 33(2), 119–128.
- Walo, M., Bull, A., & Breen, H. (1996). Achieving economic benefits at local events: A case study of a local sports event. *Festival Management and Event Tourism*, 4(3–1), 95–106.
- Wilson, R. (2006). The economic impact of local sport events: Significant, limited or otherwise? A case study of four swimming events. *Managing Leisure*, 11, 57–70.
- Wilton, J. J. & Nickerson, N. P. (2006). Collecting and using visitor spending data. *Journal of Travel Research*, 45, 17–25.
- Ziakas, V., & Costa, C. A. (2011). Event portfolio and multi-purpose development: Establishing the conceptual grounds. *Sport Management Review*, 14, 409–423.

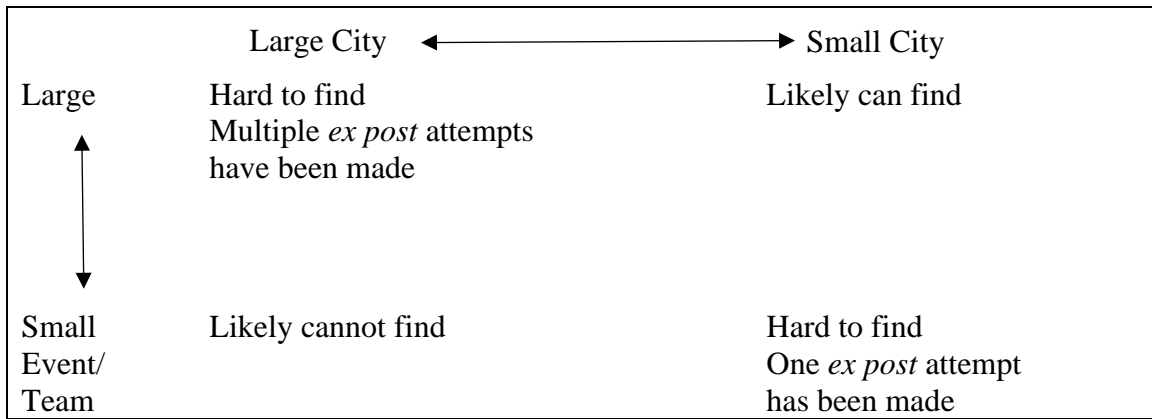


Figure 39.1 Potential to find impact of events/teams using the *ex post* regression method

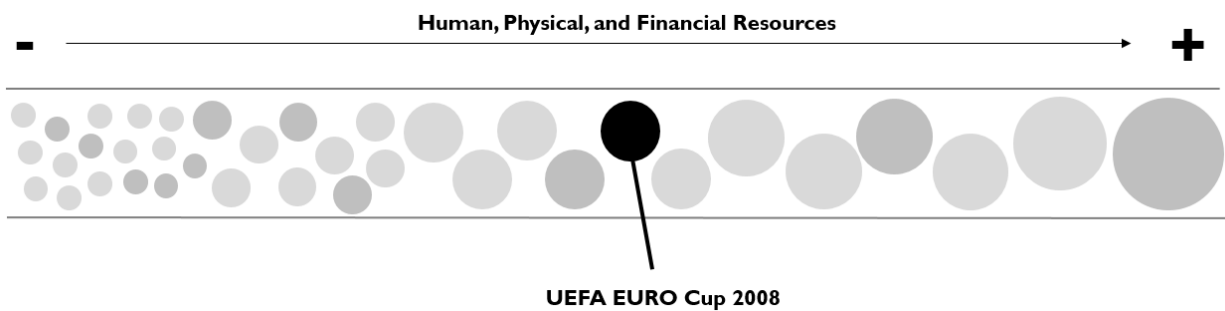


Figure 39.2 Event Resource Demand (ERD) continuum

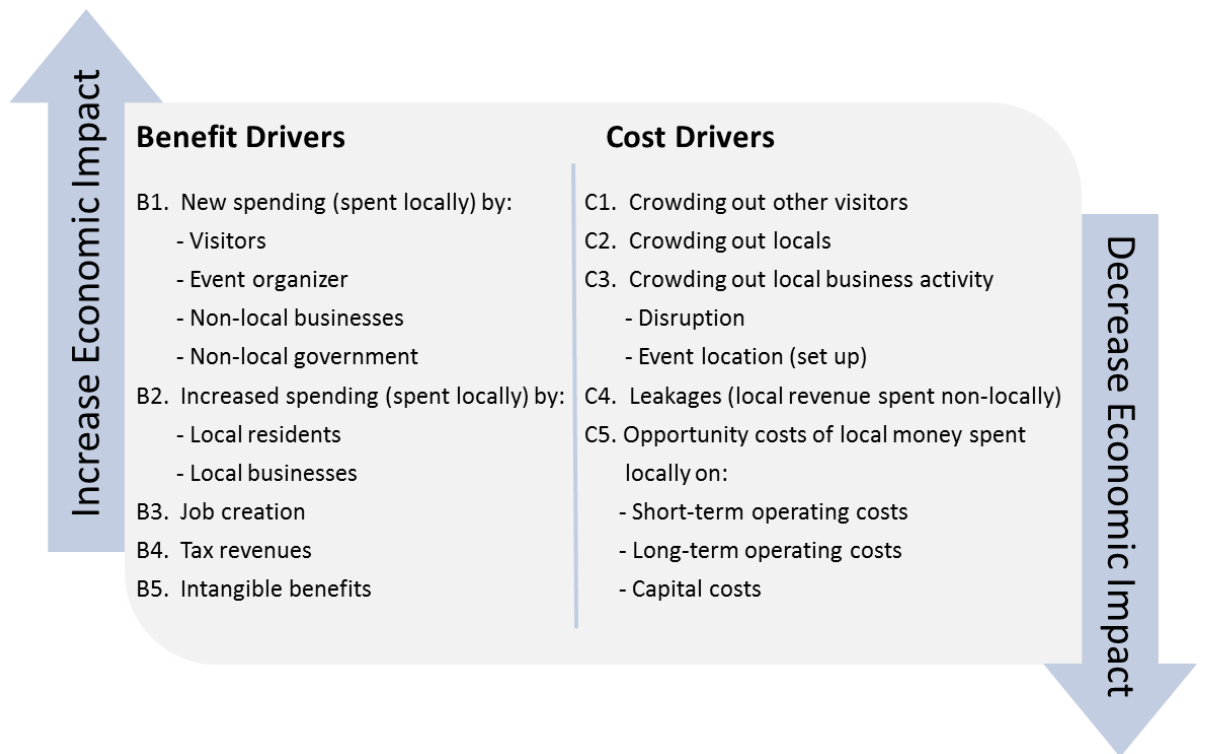


Figure 39.3 Economic impact drivers (Agha & Taks, 2015, p. 203)

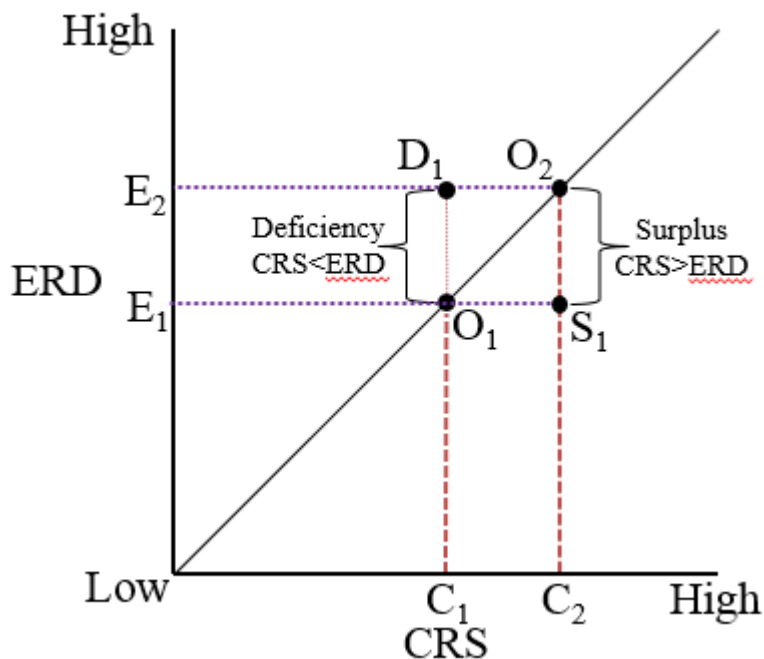


Figure 39.4 Optimum economic impact where Event Resource Demand (ERD) equals City Resource Supply (CRS) (based on Agha & Taks, 2015, p. 210)

Table 39.1 Results from the standard Economic Impact Analysis of the 2005 Pan American Junior Athletic Championships (adapted from Taks et al., 2011, p. 193): Economic Impact Summary – Combined Total (Visitor – Operational –Stadium) for the City of Windsor in \$ CDN (results from the STEAM model; Canadian Sport Tourism Alliance, 2006)

Initial expenditure:			
Visitor spending	\$	971,759	
Organization	\$	544,521	
Construction		\$9,506,883	
			\$11,023,162
GDP			\$ 5,617,681
Employment (full-year jobs)			75.8
Wages and salaries			\$ 3,396,524

Table 39.2 Results from the cost–benefit analysis (in \$ CDN) of the 2005 Pan American Junior Athletic Championships (adapted from Taks et al., 2011, p. 195)

<i>Benefits</i>		<i>Costs</i>	
Non-local Visitor Spending	971,759	Opportunity Cost of Labor	0
LOC-Revenue	564,878	Opportunity Cost of Borrowing	2,500,000
Consumer Surplus	39,944	Imports (indirect)	1,948,368
Public Good Value	530,000	Ticket Sales to Locals	79,889
Total-Benefits (B)=	2,106,581	Total-Costs (C)=	4,528,257
Net Benefit (B – C) =	-2,421,676		