University of South Dakota

USD RED

Honors Thesis

Theses, Dissertations, and Student Projects

Spring 5-1-2023

No More Empty Stadiums: A Meta Analysis of Mega Sporting Events and Their Economic Impact

Tayte O. Gleason
University of South Dakota

Follow this and additional works at: https://red.library.usd.edu/honors-thesis

Part of the Finance Commons, Growth and Development Commons, International Economics Commons, Public Economics Commons, and the Sports Management Commons

Recommended Citation

Gleason, Tayte O., "No More Empty Stadiums: A Meta Analysis of Mega Sporting Events and Their Economic Impact" (2023). *Honors Thesis*. 288.

https://red.library.usd.edu/honors-thesis/288

This Honors Thesis is brought to you for free and open access by the Theses, Dissertations, and Student Projects at USD RED. It has been accepted for inclusion in Honors Thesis by an authorized administrator of USD RED. For more information, please contact dloftus@usd.edu.

No More Empty Stadiums: A Meta Analysis of Mega Sporting Events and Their Economic
Impact

by

Tayte Gleason

A Thesis Submitted in Partial Fulfillment

Of the Requirements for the

University Honors Program

Department of Economics and Decision Sciences

The University of South Dakota

May 2023

The members of the Honors Thesis Committee appointed to examine the thesis of Tayte Gleason find it satisfactory and recommend that it be accepted.

Dr. Kathryn Birkeland

Associate Professor of Economics

Director of the Committee

Prof. Tyler Custis

Assistant Professor of Management

Prof. Reed Muehler

Instructor of Management

Prof Wendy Johnson

Instructor of Kinesiology and Sports Management

ABSTRACT

No More Empty Stadiums: A Meta Analysis of Mega Sporting Events and Their Economic

Impact

Tayte Gleason

Director: Kathryn Birkeland, Ph. D.

Mega sporting events have faced increased scrutiny in recent decades for their negative

economic impacts, externalities, and environmental effects. As multimillion dollar stadiums lay

abandoned and future host city bids are withdrawn as public opinion on mega sporting events

worsens with time, economists, governing bodies, and sports fans worry about the future

locations of these massive sports festivals. In my thesis, I will conduct a meta analysis of articles

measuring the various impacts and effects of hosting a mega sporting event. I will begin by

performing an extensive literature review of the various factors contributing to a mega sporting

event's legacy and will summarize how each determines the overall success (or failure) of the

host city. Next, the results of each of the sources will be analyzed, formulating a perspective on

the current state of mega sporting events' economic viabilities for their host cities. Finally,

discussion about the results of the literature and will provide my own recommendations and

solutions about optimizing the MSE for its host city.

Keywords: Mega Sporting Event, Olympics, FIFA World Cup, Economic Impact, Legacy

TABLE OF CONTENTS

Introduction	1
Literature Review	3
Economic Impacts	4
Intangible Impacts	13
Legacy	19
Sustainability	23
Results, Discussion, and Solutions	27
Conclusion	333

Introduction

In a world dominated by sports competition and its accompanying entertainment events, there exists a certain category of sporting event that draws global crowds, massive infrastructure development, and greater media attention than other organizations of athletic competition. Upon increased interest and research in their local planning, hosting, and post-hosting effects, mega sporting events (MSEs) have earned their title through their unparalleled reach in the international sports market. Also called sporting mega-events, MSEs have grown into more than just sporting contests; the influx of activity turns host regions into the environment of a cultural festival on a global stage.

What determines if any average sporting event is really a mega-event? While consistent classifications among researchers have been lacking, Müller synthesized a multi-factor definition which encompasses those generally-accepted sporting events that are deemed to be MSEs: "Mega-events are ambulatory occasions of a fixed duration that attract a large number of visitors, have a large mediated reach, come with large costs and have large impacts on the built environment and the population" (Müller 2015b). This definition applies to all ambulatory events of this nature, but most research regarding any mega-event refers to the sporting variety. With a definition established, many MSEs become apparent to those looking to categorize them. Large-scale, international events like the Olympic Games (summer and winter) and the FIFA World Cup are the most prominent for their large representational turnout and event popularity. Other events like the Asian Games, the Commonwealth Games, the Euro, and the Expo also fit into this definition (Müller 2015b).

Because MSEs bring such substantial attention and change to a host region, many countries and cities have been vying to host an MSE of their own. In most iterations of the MSE,

a governing committee determines the terms and regulations of current and future events, including awarding the host of the event to a selected city through a formal bidding process. Of course, the picture created for local politicians of vast visiting populations staying in a city, spending money, and bolstering economic activity through created jobs before and for the duration of the event is sure to make such an occasion attractive for prospective hosts (Baade and Matheson 2002). Additionally, event hosts laud the intangible aspects of hosting an event so massive. Civic pride among locals, physical legacy for future sporting events through newly built stadiums, and the creation of a lasting positive image for a host region all exist as probable outcomes for hosting an MSE (Baade and Matheson 2016).

However, research scrutinizing the economic viability, legacy, and sustainability of MSEs has changed the attitudes of many would-be hosts. Upon inspection of optimistic ex-ante economic estimates for hosting Olympic Games, most research clearly finds that hosting justifications in the form of these too-early-to-tell analyses grossly underestimate the costs of hosting events while overestimating the benefits (Baade and Matheson 2002, 2016; Mobilian 2016). With revenue shortfalls in the billions and minimal intangible benefits to show for it, cities and their populations have begun to sour on the idea of taking on such daunting projects. Concerns about creating a positive legacy have also arisen as global audiences can react negatively to the planning disasters and increased security risks that come with being a host city. Finally, attitudes against unsustainable development have created a huge problem for cities left in the wake of their giant, unused sports stadiums left standing after their MSE has reached its conclusion.

With much of the research pointing to mega sporting events being unviable in most dimensions, cities are looking for solutions to what has been deemed as "The Mega Event

Syndrome" by Müller, a structural deficit created by hosting MSEs (Müller 2015a; Müller, Gogishvili, and Wolfe 2022). Given the devastating symptoms of this syndrome, what can host cities and MSE organizing committees do to remedy them and optimize the MSE-hosting model?

In attempt to answer this question, I read and analyzed over 50 articles pertaining to the many facets of hosting and managing mega sporting events. In these articles I looked for any problems and persistant externalities that may lead to symptoms of economic failure caused by hosting MSEs. Additionally, I explored the merits of economic or policy decisions host city planners took to leverage aspects of their locational contexts and municipal strengths to achieve better outcomes than the norm. By compiling a variety of data, case studies, and anecdotes, it becomes apparent that the sheer scale of mega sporting events and their governing procedures that the average host city cannot economically, socially, or sustainably host a one-time event like the Olympics or the FIFA World Cup. Given this information, I looked toward policy recommendations to change the format in which MSE host cities create their legacies for the better.

Literature Review

When researching to determine the economic and intangible effects of MSEs for their host cities, the sheer number of impacting factors required an extensive search about how each individually and collectively affected the overall outcome of hosting an MSE. Certain impacts caused or were caused by other impacts, and specific factors heightened or mitigated the impacts of other factors. Nonetheless, by process of separation, four separate categories were determined to sufficiently summarize the impacts of MSEs: Economic Impact, Intangible Impact, Legacy, and Sustainability.

Economic Impacts

The economic impacts of hosting an MSE like the Olympics or FIFA World Cup have fittingly received the highest amount of quantitative research determining how economic factors are affected before, during, and after their duration. Effects on tourism, employment, infrastructure development, and international trade all have been studied in combination to determine the viability of hosting such a large sporting event for a host city's economy.

Tourism and Outsider Business

The abrupt increase in tourism that MSEs bring to a host city can significantly increase business activity in a host region. Not only are foreign tourists of sporting events paying money hotels, transportation, food, and the tickets to the events themselves, but host cities have the potential to "spread the word" through media attention for future tourism after a sporting event ends. The arrival of athletes and coaches alone demands thousands of hotel and lodging spaces to be available (Baade and Matheson 2016), and floods of tourists both attending the games and just visiting for the celebration are allegedly further spurning business in the host city. For this reason host cities are using these prospects to leverage their city as a tourist destination, with some countries including MSEs in their national and regional tourism plans (Jago et al. 2010).

When implemented into economic analysis tools, however, the effects of MSEs on tourism are arguably insignificant. While there is an increase in foreign inflows due to tourist expenditure during the games, the overall change in expenditure in a host city is overstated (Mobilian 2016; Addair 2020). Due to crowding out, substitution, and leakage effects cited by Mobilian and Addair, economies are unable to fully reap the benefits of their MSE as a tourist attraction. Crowding out occurs when current local populations are discouraged from visiting and engaging in the economy during the games due to congestion from tourists (Addair 2020). Other

would-be tourists are also discouraged from entering the host region. Kirkup reinforces this claim by citing that during and immediately following the Sydney 2000 Olympic Games, non-host regions of Australia saw a smaller increase or even a decrease in visitor tourism than in years before the games (Kirkup and Major 2010). With locals and traditional tourists displaced, the only money being spent is on sports-related excursions instead of on other businesses unrelated to the MSE. This "substitution" of economic expenditure only displaces GDP during the sporting event, failing to increase total economic activity (Addair 2020). Finally, with tourism-centric businesses appearing during an MSE being temporary and specific to the event, the money spent at those businesses are not recycled into the economy to increase expenditure in the future. As Mobilian states, "these businesses will flock to the city to make sales only to depart with any revenues once the [Olympic] Games are complete" (Mobilian 2016). This expenditure exists as "leakage" from the economy, and the combination of these three effects serves to decrease the positive economic impact of tourism during an MSE.

Despite the overstated effects of tourism expenditure during the games, most research recognizes the potential for an MSE to create a lasting tourist destination out of its host city (Li and Jago 2013; Jago et al. 2010; Baade and Matheson 2002). However, outside of a few instances where cities were simply "hidden gem" tourist destinations underrepresented in comparison to nearby neighbors (in the cases of the Barcelona 1992 Olympics and the Salt Lake City 2002 Winter Olympics), the impact of hosting an MSE on long-run tourism is also overstated (Baade and Matheson 2002). Müller refers to tourism effects of MSEs as one of the greatest overpromises and opportunity costs of economic benefit, citing that funds allocated to the 1994 Lillehammer Winter Olympic Games were nearly one hundred times greater than a

traditional tourism development project but only increased tourism by two times during the period of the events (Müller 2015a).

Tourism and its increases during an MSE are ultimately more of a replacement for economic activity as opposed to a supplement. However, the potential from mega sporting event tourism inflow is still there; researchers contribute this failure to poor planning and exploitation rather than the inherent nature of visiting populations of that scale (Kirkup and Major 2010; Jago et al. 2010). If a relatively undiscovered host city were able to have the appropriate tourism infrastructure and long-term destination-leveraging plan necessary to take advantage of an MSE, it perhaps could realize the economic benefits of the event's massive tourist draw without any of the costs.

Employment

Another key factor considered when measuring the economic impact of hosting an MSE is the increased demand for jobs to prepare for and run the event. One of the largest sources of this employment need comes from the development and building of infrastructure in the forms of housing, stadiums, and other event venues (Jago et al. 2010). As Jago states, "the employment created, skills developed and cash injected to local businesses during the construction phase can help respond to short-term economic needs, contribute to longer term poverty alleviation and increase the skills base of the workforce in the host destination" (Jago et al. 2010). The potential outcomes of a massive employment shock could provide an artificial, positive stimulation for a host economy; with more employed workers making money and consequently spending it in that economy, the city would observe steep economic increases from the previously-unemployed and non-spending population. Of course, these opportunities are only best capitalized upon when host cities are providing adequate planning for how to realize their optimal outcomes.

Articles detailing the effects of employment provide a variety of results and explanations for employment shocks. First, research shows that while employment may increase before or during the MSE, these increases do not last long and are lower than what is expected (Baade and Matheson 2016). In fact, even the most optimistic employment estimates cited by Kirkup and Major show a steep decline in new employment following the Sydney 2000 Olympic Games hosting period, with average annual jobs estimated to drop to zero in the years after the games (Kirkup and Major 2010). Without a need for new buildings or event-related vendors, many unskilled laborers are unable to leverage jobs they received in preparation for the games for anything following the events. Findings by Li and Jago support these drop-offs in employment and even go on to criticize the reliability of the measurements for them. Attributing failures of economic studies to an overreliance on estimations as well as a lack of data collection following the events, it becomes difficult to even justify hosting MSEs with lauded increases in employment with how little actual data we have on its impacts (Li and Jago 2013). Interestingly, there have been a few factors that notably did increase employment in a host city region. Billings cites studies that host cities which had existing MSE venues had a relative increase in employment to those cities who built them new for their events (Billings and Holladay 2012), while Baade and Matheson note that countries in recessions can realize longer-term employment increases that can alleviate high unemployment rates (Baade and Matheson 2016). Baade goes on to emphasize that recessions are impractical to predict in planning to increase employment, and countries at full employment receive no net increase.

Perhaps a stark increase in employment is too much for a one-time event to inspire.

Substitution and crowding out effects explained by Addair and Mobilian indicate that countries often outsource jobs for the events, which ultimately results in no economic boon for a local

economy (Addair 2020), (Mobilian 2016). Jago supports this finding especially for developing countries that lack the skilled workers needed to typically plan for and develop infrastructure for the events, so they are forced to hire from neighboring nations (Jago et al. 2010). The unsustainability of these employment effects indicates that hosting a mega sporting event is an opportunity cost which only serves to bring in jobs and tourists for a short period of time rather than a long-term economic investment plan (Baade and Matheson 2016).

Infrastructure Development

The infrastructure development required to host a mega sporting event is in most instances extremely tumultuous, especially with the shifting trend towards cities in developing nations hosting large MSEs like the Olympics and the World Cup (Matheson 2013). Billions of dollars are funneled into projects to revitalize transportation, hotel, and sports infrastructure within hosting cities in preparation for the athletes and tourists who will soon be entering the city. Economists argue that this investment in the city streamlines much-needed development which would have otherwise faced political opposition (Matheson 2013; Müller 2015a). However, with the rapid increase in costs and the limited utilization of event-specific infrastructure, are the expenditures in infrastructure worth it?

The most unique aspect of the infrastructure demands of MSEs are the various sporting and ancillary facilities that are built specifically for the event. Olympic Games, for instance, require specialized stadiums to host dozens of different events. Certain developed cities may have a few of these stadiums, but additions of events in each iteration requires even the wealthiest of hosts to invest in new infrastructure (Baade and Matheson 2016).

Delving into the stadiums themselves, building costs have only increased in the past decades, and the nature of MSEs themselves have led to even greater expenditure than is usually necessary. Apart from the 1984 Los Angeles Summer Olympic Games, costs invested into Olympic sports venues have not been below one billion dollars since the 1970s, with costs totaling over 10 billion dollars in the most recent games (Müller, Gogishvili, and Wolfe 2022). Müller goes on to note that the Winter Olympic Games and World Cup have seen similar steep increases, with each totaling in the billions in sports infrastructure costs for each 21st century event. These sports facilities are faced with a myriad of problems on their own. For one, they are hardly ever used enough to be worth their investment. In almost all articles reviewed pertaining to sports facility infrastructure, the massive sports stadiums and other sports infrastructure required to host an MSE are deemed excessive and are often too large to be utilized after the games end. Hanrion Nicholls mentions the 1984 Sarajevo and 2006 Turin Winter Olympic villages which were immediately left abandoned after the games (Hanrion Nicholls et al. 2022), and Preuss scrutinizes over the failure to leverage demand with newly-built stadia following the World Cups in South Africa and Korea (Preuss, Solberg, and Alm 2014).

Another issue with building sports-based infrastructure is the challenge of completing development without ruining public support by far exceeding budgets (Lauermann 2022; Baade and Matheson 2016; Müller 2015a). Because of the one-time, fixed-date nature of MSEs, organizers must ensure that buildings and infrastructure are complete by the beginning of the events. Müller outlines the fixed nature of these games as an incentive for contractors and builders to "profiteer" off of organizers, postponing work and demanding premiums to finish on time (Müller 2015a). Poor planning and corruption also drive up costs, with the Rio de Janeiro

2014 World Cup and 2016 Summer Olympics being notorious for its public misuses of funds in its development (Kirby and Crabb 2019).

Other development put into motion by MSE planning are touted as the real benefit from hosting events, as improvements in transportation (highways and airports) and hotels create a long-term infrastructure for the city that investors and tourists can utilize. However, similar to the issues of creating massive stadiums and sport villages to host the increased demand of MSEs, these infrastructural investments also often become excessive. Airports built to accommodate over 20,000 daily passengers fall to 10 percent utilization the year after their MSE ends, and massive rail systems too costly to operate following their use are forced to shut down (Müller 2015a). Following the 1994 Lillehammer Winter Olympics, an MSE which has actually been praised for its planning and utilization of sports venues after the event, most of the luxury hotels built to accommodate tourists declared bankruptcy almost immediately following the games (Matheson 2013; Hanstad and Lesjø 2020).

The concepts of the entrepreneurial city or ecosystem has recently gained momentum as a model for city planning. By acting like an entrepreneur, a city markets itself and invests in public infrastructure in order to attract growth and business startups. Some researchers have argued that if cities acting entrepreneurially can use the infrastructure development and marketing opportunities of hosting an MSE can serve those goals, demand will follow and will solve the problem of unused infrastructure left after a mega sporting event is over (Helsen, Taks, and Scheerder 2022; Lauermann 2022). However, this ideology has resulted in little success, as MSEs are noted to have minimal effects on developing an entrepreneurial ecosystem by attracting startups (Hayduk and Naraine 2022). Further, hosting an MSE has been increasingly viewed as a risky investment often providing little return (Lauermann 2022), and as cities'

focuses shift away from flashy investments in sports tourism, the appeal of hosting an MSE has declined.

With cost overruns becoming the norm, the burden of infrastructural budget deficits faced by host cities often are placed on their local communities. Organizing committees demanding the exorbitant requirements of hosting MSEs usually have no liability for the costs, and private investors frequently fail to sufficiently recoup costs (Müller 2015a; Müller, Gogishvili, and Wolfe 2022). Massive sports facilities taking up valuable urban space sit as nothing but a tax liability for cities who are forced to fund them through public subsidies, which lead to denials of other public infrastructure needs. These sports facilities that have been discovered to provide no significant economic improvement in the long-run (Siegfried and Zimbalist 2000) become a deficit to be paid back over time through subsidies and taxes, and previously optimistic host cities are unexpectedly put into debt (Lauermann 2022; Müller, Gogishvili, and Wolfe 2022; Müller 2015a).

International Trade

While other economic benefits of hosting an MSE seem pervasive, the impact of hosting such an international event has a predictable increase in trade for a country. In economic studies conducted by Lertwachara and Rose, countries that had a city host certain MSEs saw a significant increase in international trade and foreign direct investment before, during, and after the event was held (Rose and Spiegel 2011; Lertwachara, Tongurai, and Boonchoo 2022). In fact, even countries that submitted unsuccessful bids for the events reported similar increases. Why, then, does the intention to host an MSE leave such a permanent impact on a country's international trade?

Perhaps the most important implication of submitting a bid for a mega sporting event is the signaling effect that country gives with their submission. Rose contextualizes this effect in a broader economic sense.

Mega sporting events such as the Olympics may serve as costly strategies through which countries can credibly signal their intent to pursue more open trade policies. The transmission of this signal may bring sufficiently valuable benefits, such as increased investment in the nation, that more than offset the costs of hosting the sporting event (Rose and Spiegel 2011).

Choosing to host an international event on the scale of the MSE indicates an interest in playing on the global stage, and it provides other countries with incentives to trade.

Consequently, certain cities and events observe greater trade impacts from this signaling effect.

Lertwachara discovers greater impacts resulting from hosting FIFA World Cups before the games are held while Olympic Games net a greater increase in foreign direct investment after the games (Lertwachara, Tongurai, and Boonchoo 2022). Additionally, less-developed countries in regions such as the Middle East, South Africa, and Latin America were found by Lertwachara to observe the greatest increases in foreign direct investment, likely due to their previous lack of prominence in the global marketplace. Perhaps submitting a bid can function as a global "coming out party" for nations looking to trade in increased capacities.

Overall Economic Impact

In summary, there were minimal optimistic results as to the economic impacts that result from hosting an MSE. While there are areas to leverage in attracting tourism, generating employment, and developing or redeveloping infrastructure, most host cities fail to plan

accordingly for the steep costs to accommodate each. Tourist and employment impacts are frequently overstated or overshadowed by crowding out and substitution effects. Infrastructure costs are often underestimated relative to benefits, and scope creep and corruption cause debts to far surpass their budgets. While there are positive signaling effects countries can reap to increase international trade opportunities, these same benefits can be realized even by submitting a losing MSE bid. Overall, very few cities can successfully plan for the multi-faceted nature of hosting such a large sporting event, and even fewer are set up in positions that can leverage this planning to effectively realize positive economic impacts in the long-run. Otherwise, hosting an MSE has been found in just about every reviewed article to be an undesirable opportunity cost of the city; invested resources would be better spent on any other economic expenditure.

Intangible Impacts

Several intangible impacts are often used as justification for hosting mega sporting events despite their negative economic consequences. Whether these impacts entail bringing a psychological sense of pride to local populations, presenting an opportunity to market a country into a more positive global image, or providing political figures justification for policy plans, most articles reviewed concede that certain subtle effects of hosting MSEs can work to balance out the overwhelmingly dissuading economic reasons to host such an event. Being that intangible impacts are more difficult to measure quantitatively, studies have been limited to surveys and anecdotal evidence from a variety of case studies. In this section, a variety of these intangible factors will be scrutinized over, referring to what the literature states about the impact of these factors, positive or negative, on an MSE host city.

Public Image

When considering potential intangible effects of hosting a globally-viewed sporting event like the Olympics or the FIFA World Cup, one would instantly presume that this widespread media attention could provide a host city an easy opportunity to create a new public image. Many articles support this notion, citing that one of the main justifications for host cities in submitting bids lies in the opportunity to set or enhance a global image to bolster tourism and global opinions in the long-term (Kirkup and Major 2010; Matheson 2013; Jago et al. 2010; Burton 2003). However, are these sentiments misplaced in most cases? While host cities do have a positive destination image to market, are the ramifications of such media scrutiny potentially more damaging than they are enhancing?

Beginning with positive image enhancement, only a few widely-accepted examples of a country benefiting in the long term from MSE brand destination efforts exist. As Matheson suggests, cases of "hidden gem" cities like Barcelona or Salt Lake City that provide previously underrepresented cultural destinations can benefit from a "perfect storm" of global media attention to boost their international profile (Matheson 2013). Los Angeles has also been touted publicly as a successful MSE host and tourist destination after successfully hosting the 1984 Summer Olympics, although the circumstances were also uncommon (Burton 2003).

Many argue, in fact, that global media attention can result in neutral or negative consequences for a host city unless properly accounted for. Burton and Kirby mention the cases of the 1976 Montreal Summer Olympics and the 2014 and 2016 Rio de Janeiro MSEs where media attention highlights the misallocations and cost overruns of cities, criticizing the poor administration and corruption of the location (Burton 2003; Kirby and Crabb 2019). Other instances of global images failing to achieve intended goals include failure to leverage long-term

tourism efforts, such as the case of the 2000 Sydney Summer Olympics, as the Australian Tourism Manager is quoted saying that the country "blew its Olympic Legacy" by repeatedly slashing tourism budgets since the games were held (Kirkup and Major 2010). While the 2026 FIFA World Cup being held across the North American continent promoted an image of unity among its host nations, media backlash regarding President Donald Trump's contrasting international policies pertaining to continental unity has threatened that image (Beissel and Kohe 2022).

Some cities opt to mask unsavory aspects of their destination image through the suppression of media reporting and spending data, as in cases of the 1980 Moscow Olympic Games or the 2008 Beijing Olympic Games (Burton 2003). Other forms of image sanitization efforts have been used in what Wolfe refers to as "geoporn" (Wolfe et al. 2022), where host cities use gentrification policies and excessive regulations before events to artificially improve the perception of areas seen by tourists while harming impoverished locals.

When pursued with proper image planning techniques under advantageous circumstances, a country can successfully and ethically reap rewards of hosting an MSE to boost global image. Unfortunately, these cases are few compared to the prevailingly common instances of the opposite effect.

Civic Pride

The benefit of local support during and following the period of hosting an MSE cannot easily be quantified, but it is important. Public support for an MSE can be where a host city's bid begins and ends, as some MSE governing bodies require majority public support for a bid to be approved. Additionally, some bids are only submitted upon a public referendum vote (Müller

2015a). Proponents of the intangible impacts of MSEs as justifications for host cities to bid link public support and overall well-being effects of hosting MSEs to a sense of "Civic Pride."

Having their city represented for the world to view can bring a feeling of national honor and dignity to constituents of a country, let alone the host city. Justifying a massive economic investment based on a feeling has been contested on its validity, but researchers continue to search for a way to measure its impact. Articles like Atkinson's attempt to measure public support as a collective "willingness to pay" that offsets some of the costs of hosting the event (Atkinson et al. 2008), but most research simply considers civic pride nothing more than a positive externality with an immeasurable value. Either way, it has been proven that feelings of pride and support for the prospect of hosting an MSE greatly influence both the success and public participation in the planning of the MSE (Kassens-Noor and Lauermann 2017; Nunkoo et al. 2018) as well as the willingness to host mega events in the future (Lee and Krohn 2013). Lee and Krohn stress the importance of emphasizing positive outcomes of MSEs while minimizing the negative externalities to maintain and leverage this support.

Despite the value of having a supporting host city population, several studies question how far the sense of civic pride can go for a country. To start, Chen argues that without a comprehensive leveraging strategy which considers "existing local strategies, resources, sociocultural, and political conditions more broadly" in a country, civic pride effects lose much of their value in non-host regions of a country (Chen and Misener 2019). Müller additionally questions the motives for leveraging civic pride in a host city, stating that civic pride outcomes incentivize underrepresenting costs and overrepresenting benefits of MSEs, which can lead to public backlash in the long run as cost overruns occur (Müller 2015a). Finally, while surveys conducted by Groothuis show that United States citizens accept and appreciate the impacts of

civic pride from hosting MSEs (Groothuis and Rotthoff 2016), they still do not believe that the benefits justify the exorbitant costs. This can be shown in the negative trends in public support for bids across the United States in Boston's 2024 Summer Olympic bid (Kassens-Noor and Lauermann 2017), and across the world, as anti-Olympic protests have pressured cities and countries to back out of their risky bids (Panja 2017; Lauermann 2022). Civic pride does have an accepted impact on the success and support from host-city populations before, during, and after MSEs, but if everyone is aware of the economic deficits their city takes on in hosting a mega sporting event, what is there to be proud of?

Political Leverage

The final factor to be discussed relating to the intangible outcomes of hosting MSEs is their ability to spurn public infrastructure and urban revitalization projects otherwise held back by political processes. Supporters of hosting MSEs for these outcomes claim that the necessary development to run an event on such a scale provides "a 'shot of adrenaline' for cities to... get projects done that would otherwise have stalled or never happened" (Müller 2015a). Matheson further elaborates on the sentiment: "Mega-events can serve as an impetus to engage in needed infrastructure investments held back by a lack of political will" (Matheson 2013). While Matheson provides that mega sporting events have proven to accelerate political action and infrastructure development, economists and political scholars argue that choosing to host MSEs for these reasons may be misguided.

There are several important arguments as to why political leverage from hosting MSEs can be detrimental in the long-run. First, the opportunity and associated costs of building sports infrastructure in addition to politically-supported development may make what was a needed investment much less attractive. Matheson argues that "spending billions on unproductive sports

infrastructure" cannot be the best method of advancing development projects (Matheson 2013), and that government investment choices are better made without MSEs pressuring deadlines, encouraging cost overruns, and inspiring corruption. Second, economists claim that using MSEs to enact investment policies makes the investment happen only for that reason, rather than because there is proven need for development or alignment with existing city plans (Müller 2015a). Finally, and perhaps most importantly, using MSEs to streamline policy change undermines the reason political action is slow in the first place. De Nooij explains it best as they caution policymakers from getting ahead of themselves in using the political leverage of an MSE to influence policy decisions.

Speeding up the decision-making trajectory, and maybe even skipping steps, because of a mega event may mean that not all stakes are properly considered and that hidden costs of, for example, environmental effects are incurred. These projects are generally publicly funded and may crowd out alternative investment projects that might be better for general welfare (de Nooij and van den Berg 2017).

Overall Intangible Impact

Intangible impacts assuredly have significant impacts on the viability of a host city's MSE investment, but their volatility can be just as significant. The abstract nature of intangible impacts relies on outside influences and unpredictable factors that can make an MSE's positive impact a negative one in an instant. Global images created for a host city can be tarnished by poor planning and hostile press, public support can waver as perceptions of MSE economic viability sour, and political investments accompanying MSE bids can backfire without proven need. Only those events which deftly plan for and leverage intangible impacts in the long term can utilize them to offset economic shortcomings.

Legacy

How effectively host cities create and leverage the legacy of their mega sporting event is arguably the most pivotal aspect of whether that MSE is successful or not. The term "legacy" was referred to in the most literature and most often within those articles, but how does one define such a vague term? A valid definition perhaps evades economists due to the relatively recent focus on legacy, but Preuss provides a broad definition for the term in the MSE context: "[MSE legacy is] all planned and unplanned, positive and negative, tangible and intangible structures created for and by a sport event that remain longer than the event itself" (Preuss 2010).

With a definition so vague, it is reasonable why so many people mold legacy to their own objectives and areas of analysis. Legacy has been widely regarded in more recent literature as a justification for hosting MSEs (Stewart and Rayner 2016), but the legacy sought after usually differs in what it is measured by. Articles may refer to physical and economic legacies left by stadiums and infrastructure (Preuss, Solberg, and Alm 2014; Preuss and Plambeck 2021; Searle 2002; Hanstad and Lesjø 2020), or they may attempt to measure lasting social or symbolic legacies left on host-city residents in wake of an MSE (Smith 2014; Beissel and Kohe 2022; Kassens Noor 2020). Cornelissen describes five separate legacy classes of their own, supporting the notion that the literature has not established a concrete categorization (Cornelissen, Bob, and Swart 2011). However, Stewart notes that in most bid documents throw specificity to the wind and use the term "legacy" in a vague, encompassing way as an attractive buzzword associated with a variety of benefits without needing to provide strategies to achieve them (Stewart and Rayner 2016).

In accordance with its primary use by host cities, this section will analyze the culmination of legacy categories after individually surveying specific subsections of legacy. Examples of

positive and negative legacies will be provided, and literature regarding how to effectively manage legacy will be reviewed.

Beginning with a more concrete characterization of legacy, the physical legacies left by urban and sports infrastructure development planned in preparation for an MSE are perhaps easier to conceptualize. Physical legacies are created both in the process of implementing infrastructure as well as how stadiums and other buildings are used after their MSE. Because of the one-time, ancillary nature of MSEs, host cities must incorporate plans for any new sports infrastructure to be utilized effectively following the games. If stadiums are built too large to accommodate future sporting events at a comparable scale and appropriate consistency, a large, unused "white elephant" will be created from the underutilized building (Baade and Matheson 2016). Further, the presence of a unutilized structure like an Olympic stadium creates an eyesore as it falls into disrepair, and the gigantic space it occupies would otherwise be used for productive interests (Müller 2015a).

Examples of physical legacies left by stadiums and infrastructure projects after MSEs highlight the seemingly endless ways planning can go right or wrong. Built legacies are cemented in the storied development of the structures themselves. Major setbacks, delays, and misappropriations of assets plagued the construction of infrastructure during preparation for the 2014 and 2016 Rio de Janeiro World Cup and Summer Olympic Games, creating buildings that spiraled the city into debt and left locals critical of the organizing committee's administration (Kirby and Crabb 2019; Nunkoo et al. 2018). Conversely, planning the utilization of sports facilities after MSEs end is where host cities make or break physical legacies. Stadiums in Athens, Sydney, and Korea built stadiums too large and expensive to meet demand for sporting events and failed to secure contracts to utilize the facilities after their respective MSEs, and they

are now left with underutilized white elephants (Baade and Matheson 2016; Preuss, Solberg, and Alm 2014; Searle 2002).

Cities which have existing demand and already-established legacies as sporting destinations, however, have been able to better leverage the legacy of their stadiums in the future. Germany is a historically prominent soccer country and has been able to fill its new stadiums following the 2006 World Cup (Preuss, Solberg, and Alm 2014), and Los Angeles' existing stadiums and sports entertainment legacy lent well to its legacy after hosting the 1984 Summer Olympics (Kassens Noor 2020; Minter 2017). A particularly interesting example of a host city saving its legacy comes from the 1994 Lillehammer Winter Olympics, in which government intervention and guidance saved the relatively small Norwegian host city from its original legacy plans by securing contracts for a host of future international winter sports events (Hanstad and Lesjø 2020). Lillehammer officials realized just in time that ensuring its stadiums would be utilized after the games was imperative, and the stadiums are still used to this day.

Research into the lasting social and symbolic legacies of MSEs emphasizes the more abstract ways that legacy can be created for a host city. Previously-mentioned intangible impacts like public support and global image creation can influence or determine the longstanding legacy of a host city, and the possibility of a negative legacy makes these peculiar impacts daunting to plan for. In fear of creating these negative social and political legacies, some potential host cities recoil bids altogether upon negative public perceptions of hosting a mega sporting event, as in the case of Boston's 2024 Olympic Bid (Kassens-Noor and Lauermann 2017).

With the volatility of public opinion and government action making it increasingly difficult to sustain a positive legacy, some host cities have compromised or jeopardized their social legacies. As news outlining human rights violations and government corruption in development for MSEs emerged, the South Africa, Brazil, Russia, and Qatar FIFA World Cups have all been tainted in their legacies (Nunkoo et al. 2018; Beissel and Kohe 2022). Even the 2026 North American World Cup has come under scrutiny for its symbolic legacy plans juxtaposed against political leaders' policies (Beissel and Kohe 2022). While the prospect of encouraging unity among North American countries should ideally create a legacy of harmony, this legacy is fickle. Even with proper planning and coordination, intangible legacies can be derailed by outside, unpredictable forces.

Los Angeles has once again been cited for its positive legacy in sustainability, economic conservatism, and sociocultural aspects when hosting the 1984 Summer Olympics (Lauermann 2022; Kassens Noor 2020). Given its unique circumstances of being the only bidder left standing, the host city was able to utilize existing infrastructure to promote an athlete experience-focused legacy. With its low expenses creating an uncommon profit, money was funneled back for public use by the city, creating one of the most successful Olympic Games legacies ever (Kassens Noor 2020). Kassens Noor stresses, however, that Los Angeles must focus on its plans to retain its intangible legacies heading into the 2028 Summer Olympics. Should the city fail to plan for its population's needs, its legacy as host city could be tarnished by lasting public opposition to future MSEs.

Previous examples and analyses have dealt with instances of mega sporting event legacies more manageable due to their specific categorical nature, but a comprehensive legacy is much more complex to deal with. As MSEs exist today, managing and planning to create an

entirely positive legacy is perhaps impossible. Byers has offered a new perspective to conceptualize MSE legacies as those of "wicked problems." Like MSE legacies, wicked problems are complex issues that are difficult to define, varying in complexity, "one-shot" in nature, and present a number of potential solutions that may be good or bad (Byers, Hayday, and Pappous 2020).

Under the wicked problem framework, event legacies are constantly-changing issues to be monitored, with problems and solutions constantly causing each other and requiring intense monitoring and coordination from all stakeholders to potentially reach a positive outcome. Rayner recognizes these legacies as wicked problems and claims that they result in "uncomfortable knowledge," which is "knowledge that calls the underlying belief system of the preferred view into question and can therefore be both awkward and dangerous to those interested in preserving the central view" (Stewart and Rayner 2016). If a host city believes that it can achieve a positive physical legacy through utilization of existing infrastructure but doing so displaces impoverished communities and compromises public perceptions of the event, this uncomfortable knowledge creates a new wicked problem to be solved. The complex, intertwining nature of creating positive MSE legacies can create a seemingly insurmountable wicked problem for host cities to tackle, and it becomes that much more difficult to justify hosting such events under most circumstances.

Sustainability

Concerns regarding the environmental impact and overall economic sustainability of mega sporting events have recently been brought to the forefront of organizing committee agendas in the past decade. The staging and development of MSEs often incurs detrimental effects on local environments through excessive electricity resource use for infrastructure

development and maintenance, increased greenhouse gas emissions from increased traffic and tourism, and rising waste production from construction polluting surrounding areas (Fermeglia 2017). Sustainability has been a goal pursued in varying capacities by MSE host cities since the late 90s, but only in the past decades have international organizing committees of MSEs actively prioritized, monitored, and incentivized the use of sustainable practices in event development (Fermeglia 2017; Schnitzer and Haizinger 2019).

The International Olympic Committee has included "sustainability in all aspects of the Olympic Games" as one of the primary recommendations of its 2020 Olympic agenda (Schnitzer and Haizinger 2019; Müller et al. 2021), and the FIFA World Cup Bid Committee has implemented an extensive list of sustainability provisions into its bidding process reinforced by evaluations of bidders' environmental impacts of hosting the games (Fermeglia 2017). The 2022 Qatar World Cup, which demanded exorbitant costs and resource use for the development of comfortable stadiums and infrastructure to handle soaring temperatures, was under immense pressure to meet these conditions after winning its bid (Sofotasiou, Hughes, and Calautit 2015). While sustainability has increased in importance for host cities and organizing committees in general, there exists no enforcement power for committees to absolutely ensure sustainable practices are followed through upon (Fermeglia 2017; Hanrion Nicholls et al. 2022). With that being the case, this section will observe how host cities effectively tackle sustainability issues in hosting MSEs, and best practices for seeking economically and environmentally sustainable games will be discussed.

MSE organizing committees have touted sustainable development and minimal environmental impact since their introduction in discussions of economic viability, but claims have been relatively vague as to what sustainable actions they are taking. Given the multi-faceted

nature of MSEs and their impacts, it could be argued then that sustainability is multi-faceted as well. In a study conducted by Müller concerned with the sustainability of Olympic Games, a more encompassing definition of sustainability is analyzed on a spectrum of ecological ("limiting environmental and material footprints"), economic ("demonstrating ecnomic efficiency"), and social ("enhancing social justice") sustainability (Müller et al. 2021). In evaluating these sustainability metrics of sixteen Summer and Winter Olympic Games, results showed that host cities scored a middling 48 out 100 on average in overall sustainability. Where are the discrepancies in sustainable intentions and practices created, then?

The economic viability of MSEs plays a crucial role in sustainable events become. As bid promises and infrastructure projects become excessive, host cities devote unsustainable amounts of money and resources to facilities that are often left abandoned (Hanrion Nicholls et al. 2022). Massive new sports stadiums become the obvious culprit. Without the necessary justification and long-term utilization plans needed to make stadiums worth their monetary and resource investments, they are likely to become "White Elephants" that exist as bleak legacies of irresponsible spending (Baade and Matheson 2016).

In order to prevent mistakes of previous MSE hosts, economists have offered a number of potential solutions to increase sustainable operation of MSE infrastructure during and after the events. Müller begins by suggesting that mega events should just be limited in scale, reducing the need for unnecessarily large stadiums and infrastructure projects unlikely to be utilized effectively post-games (Müller 2015a; Müller et al. 2021). This solution seems most obvious, but there is pushback from organizers fearing a proportional limitation of event revenues. Other options to create sustainable MSE stadium legacies include using existing infrastructure or building facilities that have more long-term, multi-purpose uses. Los Angeles was able to save

hundreds of millions of dollars by utilizing its existing stadiums in the 1984 Summer Olympics (Kassens Noor 2020), and the 2026 North American FIFA World Cup won its bid in large part from its point of using existing stadiums among its three host countries (Beissel and Kohe 2022). However, some host cities simply lack the sports infrastructure needed to host an MSE. If these cities insist on hosting and building stadiums, a number of avenues and solutions have been developed.

First, infrastructure should be planned beforehand and should be assessed for its utilization feasibility before bids are even submitted (Müller 2015a). Research suggests that sustainable stadium development legacies only occur with substantial government planning and frameworks for utilization post-MSE (Hanstad and Lesjø 2020). Preuss provides a conceptual model of how host cities should utilize expert knowledge and historical experience to leverage a large stadium to serve a number of purposes for a community (Preuss and Plambeck 2021). Additionally, they offer that stadiums built in cities lacking specific sport demand could opt to be multi-purpose for a variety of different sporting or entertainment events, maximizing utilization of the facility after serving their MSE purpose (Preuss, Solberg, and Alm 2014).

Hanrion Nicholls offers a particularly interesting solution for the future of sustainable MSEs. Through the use of modular logistics, the use of "tailor-made construction for different infrastructures which are pre-fabricated in manufacturing plants" (Hanrion Nicholls et al. 2022). While use of modular logistic technology is still evolving and likely unfeasible in such large and complex facilities that MSEs require, this use of pre-fabricated materials could provide a solution to unsustainable white elephant issues. Nicholls boasts the ease, speed, and financial efficiency at which modular logistics can be utilized for temporary facilities:

The modular building is a steel structure to which panels are added and inserted. The assembly is then transferred to its installation site. With one or more modules, this solution allows to elaborate projects with beautiful volumes. Installation is as simple as disassembly for expansion or moving purposes, for example. (Hanrion Nicholls et al. 2022)

Modular logistics may seem like its use is far in the future, but use of such technologies could build things like Olympic villages and stadiums for temporary periods of time, allowing the facilities to be moved to reused in future host cities.

The issues with sustainability are perhaps telling of the issues present in all other impacts mentioned in this paper. Without a consistent sustainable model for hosting the games, money is wasted, environments are destroyed, and citizens are left unhappy. Unsustainable events like this perhaps only exist due to the rotating nature of their locations, leaving future hosts across the world to realize their mistakes when it is too late. While sustainability has become a priority for organizing committees and host cities especially in the past decade, it is crucial that these stakeholders attempt every possible avenue to reduce these unsustainable legacies.

Results, Discussion, and Solutions

After reviewing the extensive literature pertaining to the multitude of impacts mega sporting events bring to their host cities, there are several trends which become apparent. First, the breadth of knowledge pertaining to all impacts of MSEs, tangible and intangible, has significantly increased in recent decades. Economists have shifted their focus from purely quantitative economic measures associated with mega events to recognizing effects of public support, legacy creation, and sustainable practices.

Second, studies indicate that in their current iteration, MSEs are not viable or sustainable in almost all areas. Economic effects on tourism, employment, and infrastructure development are overstated at best and detrimental to a host city's economy at worst. For a variety of reasons, massive one-time sporting events can end up costing host cities multiple times more than they budget for, and any increased activity becomes negligible from substitution and crowding out effects (Baade and Matheson 2016; Mobilian 2016). International trade does increase for MSE bidders and hosts, but the effect is from a signal created from the bid rather than the games themselves (Rose and Spiegel 2011; Lertwachara, Tongurai, and Boonchoo 2022). Intangible effects of MSEs also fail to realize consistent merit. Even with substantial organizational planning, global images and public support can be sullied by unexpected events (Burton 2003), and political justifications are less than optimal reasons to devote such investment into sports entertainment that does little to benefit a local community (Siegfried and Zimbalist 2000). MSEs are facing increased criticism for their unsustainability as well, providing anti-MSE advocates with more reasons to protest their negative impacts on host communities (Hanrion Nicholls et al. 2022). Legacies, seeing the largest increase in research into their impacts left by MSEs, arguably have the highest potential for beneficial results, but they are their own unique "wicked problems" for each host city which can quickly escalate and hold no apparent solutions (Byers, Hayday, and Pappous 2020; Stewart and Rayner 2016).

Third, cities themselves are beginning to recognize the fallacious ideal of bidding to host MSEs. When literature and experience was minimal, cities competed fiercely for the right to host an MSE hoping to catch that same lightning in the bottle as cities like Los Angeles in the 1984 Olympics (Müller 2015a; de Nooij and van den Berg 2017; Kassens Noor 2020). However, as awareness of the unique circumstances surrounding that event as well as the results of MSEs

lacking those circumstances has grown, cities no longer are falling for the false hope of realizing a profit by hosting an MSE (Lauermann 2022; Baade and Matheson 2016). This has become especially apparent in the past decade as MSE bids have dwindled. Organizing committees have pledged to reduce costs and increase sustainable practices for host cities, but public opposition continues to force national bids to be withdrawn (Lauermann 2022; Kassens-Noor and Lauermann 2017; Panja 2017; Schnitzer and Haizinger 2019).

Müller's proposed "structural deficit" and "mega event syndrome" seem to be realizing their inevitable outcomes; without host city interest in staging games, mega sporting events could be left without a home. The wicked problems of leaving positive legacies are too difficult and volatile to be consistently addressed by new hosts each MSE cycle, and cities have given up on the challenge. Even in case studies like Lillehammer where certain impacts are positive (Hanstad and Lesjø 2020), other legacy factors are often neglected and fail to reach the same longevity (Jago et al. 2010). However, we can still look to the fragmented, uncommon instances of fortunate circumstance and adept management to pose some recommendations to solve MSE problems down the line.

The first order of action to improve economic and intangible impacts of MSEs for host cities is to increase information sharing. Jago describes an obvious problem event organizers have failed to remedy with each MSE taking place: data and knowledge gained from successes and failures in hosting MSEs is not being shared and consolidated properly (Jago et al. 2010). First-time MSE organizers are unable to utilize previous event data to learn from mistakes made by other cities, and in turn they make those same mistakes. By having a collection of knowledge and best practices for MSE host cities to use in bidding and developmental decisions, MSEs could progressively improve in their economic and intangible impacts with each event cycle. The

unique nature of each MSE makes some of this knowledge ineffective for certain host geographies, cultures, and legal structures, but having a comprehensive collection of information could assist in capturing consistently positive administrative practices. Jago recognizes the difficulty of this task, but they continue by arguing for its need:

Whilst there would be substantial challenges in consolidating event related information from a wide variety of sources in the vast array of categories of mega-sporting events, the benefits for destinations at all stages of development would be considerable. For the proposed knowledge portal to have any chance of becoming a reality, it would need to be developed and maintained under the auspices of an international body that could muster the support of major events across a wide range of categories and sport codes. (Jago et al. 2010)

The public sharing of data and knowledge could also have positive intangible implications. Public support for MSE host city bids hinges greatly on perceptions of corruption and transparency, and participation from the public in making planning decisions improves feelings of pride (Kassens-Noor and Lauermann 2017; Müller 2015a; Nunkoo et al. 2018). By creating a database where organizing committees input information about their host experience, there is an incentive to be transparent as well as greater opportunities for the public to be informed on policy decisions.

The second recommendation I will make has been widely argued for in the past, as the problems currently created by its condition are enormous. In line with what is recommended by Baade and Müller, I recommend that host cities negotiate for better bidding processes and media rights profit-sharing contracts with International MSE Organizing Committees. Organizations like FIFA and the International Olympic Committee have long benefitted from massive broadcasting profits showcasing host city venues and attractions (that they pay nothing for), but only a fraction of revenue from media deals returns to the hands of the host cities (Müller, Gogishvili, and Wolfe

2022; Baade and Matheson 2016; Burton 2003). The billions of dollars received by these organizations should be split more proportionately to ease the costs of preparation for MSEs.

Additionally, bidding auctions by monopoly organizing committees incentivize overbidding by host cities in fallacious "winner's curse" valuations of unknown hosting outcomes (Baade and Matheson 2016; Mobilian 2016). These cities overpromise extravagant stadiums and development to win bids from organizing committees, and they are left in situations where they are forced to overspend on unsustainable infrastructure (Müller 2015a). Müller suggests that host cities should collectively bargain with these monopoly organizations "to gain concessions from event-governing bodies, including fewer requirements, full taxation of revenues, waiving government guarantees, or additional contributions to cover the cost of hosting" (Müller 2015a). The prerequisites mentioned required for bargaining power are becoming more possible. Demand for bidding has decreased since even Müller's article was published (Hayduk and Naraine 2022; Panja 2017), so if cities band together to improve committee contributions, they could make positive change for host city bidding requirements in the future.

Finally, I will make a suggestion about the short-term future of host cities. In a sentiment shared by several articles (Müller, Gogishvili, and Wolfe 2022; Müller et al. 2021), I recommend that MSE host city locations move to a rotation between a limited number of previous host locations. Arguments to award MSE locations to permanent locations have recently been voiced by the public, with Minter calling for Los Angeles to host the Olympics given its experience with successfully hosting the Games (Minter 2017). This solution provides a number of instant solutions to problems structurally faced by selecting new host cities.

First, previous and repeating hosts would have knowledge of the particular contexts and impacts they face hosting within their city. This helps to remedy the one-shot nature of creating

legacies that host cities face, as countries are able to plan for guaranteed host years. As experience of successfully hosting an MSE develops, cities will be able to mitigate unnecessary costs and externalities in order to more optimally leverage each event's legacy.

Second, repeating host cities would allow hosts to reuse existing sports infrastructure and only build new facilities as needed for repairs. Choosing to host the Olympics in, say, five alternating cities across five continents in a 20-year cycle would still allow for a variety of host locations while sustainably and cost-effectively using stadiums that already exist. A consistent setting for mega events allows surrounding economies and locals to better capitalize on and prepare for incoming tourist activity as well, limiting crowding out and substitution effects. By observing recurring, smaller-scale spectator sporting events, businesses and public participation increased substantially in proportional cities (Gibson, Kaplanidou, and Kang 2021; Helsen, Taks, and Scheerder 2022). If the largest events are recurringly given to proportionately large cities, similar outcomes could potentially be realized.

Third, having repeating MSE host cities lends to the development of longer-lasting, positive sports legacies. When cities are known for being a premier host of an international event, a legacy is instantly created. Tourism specifically to see MSE facilities and history would likely increase, and permanent legacies similar to those of smaller-scale event host cities could result, creating a long-standing culture of sports entertainment within the city (Gibson, Kaplanidou, and Kang 2021; Helsen, Taks, and Scheerder 2022).

Opponents of moving MSEs to rotating locations argue that the universal appeal of the games would be reduced in that lesser-known cities from unrepresented countries would no longer have the opportunity to showcase their culture and pride (Müller et al. 2021). The job of governing bodies would also become even less impactful, allowing them to profit from doing less.

However the answer to these concerns is that this solution is short-term in nature. While the rotating host cities would be able to mitigate prevalent economic, social, and environmental problems that MSEs currently have, governing bodies could focus efforts on improving sustainability practices or finding better ways to leverage legacies of host city stadiums for more productive purposes. In time, future solutions like Nicholls' modular logistics technology could advance to the point where any host city could profitably and sustainably host a successful MSE in a temporary location (Hanrion Nicholls et al. 2022). New spots could be added to the rotation, or the rotation could be done away with entirely as permanent solutions to structural deficits are discovered.

Of course, these answers are not guaranteed solutions. Research into the viability and improvement of mega sporting event host city impacts has increased drastically in the twenty-first century, and knowledge will only continue to grow. With the knowledge available for study today, this is just my answer of how to solve the most relevant issues. Either way, I am excited to see how the MSE host city continues to change with each bidding and event cycle.

Conclusion

In this thesis I conducted a meta-analysis of the numerous impacts and outcomes which host cities experience in hosting a mega sporting event. As it became apparent, the body of knowledge emerging in the early 2000s surrounding MSEs was instantly skeptical of the economic viability of these events. As the body of knowledge grew with greater interest in the economic and social debts incurred by host cities, other non-economic factors were measured in their merits of offsetting negative economic impacts. Intangibles impacts and justifications, sustainability concerns, and legacy leveraging were all found to be generally negative in their outcomes as well.

The empirical research and case study evidence provide us with an urgent dilemma: the increasing size and complexity of MSEs can no longer be sustained by current frameworks. Governing bodies need to rework how they award bids and support host cities in preparation processes, and host cities need to reconceptualize how they achieve hosting a successful MSE. No longer are the days where hopeful cities waste billions of dollars building unnecessary sports facilities and infrastructure to be left barren after their three weeks of fame. Organizational committees, city planners, and the public must find a better path forward. We must sustainably restore the economic and social incentives for host cities before mega sporting events, a symbol of peaceful congregation among nations, become extinct. No more empty stadiums.

Works Cited

- Addair, Angela. 2020. "WHAT SHOULD BE CONSIDERED WHEN DETERMINING THE ECONOMIC IMPACT OF SPORTS EVENTS AND VENUES? A LITERATURE REVIEW." *International journal of business research and information technology* 7 (1): 73-.
- Atkinson, Giles, Susana Mourato, Stefan Szymanski, and Ece Ozdemiroglu. 2008. "Are We Willing to Pay Enough to 'Back the Bid'?: Valuing the Intangible Impacts of London's Bid to Host the 2012 Summer Olympic Games." *Urban Studies* 45 (2): 419-444. https://doi.org/10.1177/0042098007085971.
- Baade, Robert A., and Victor A. Matheson. 2002. "Bidding for the Olympics: Fool's Gold?" Transatlantic sport: The comparative economics of North American and European sports 54 (2).
- ---. 2016. "Going for the Gold: The Economics of the Olympics." *Journal of Economic Perspectives* 30 (2): 201-218. https://dx.doi.org/10.1257/jep.30.2.201. https://dx.doi.org/10.1257/jep.30.2.201.
- Beissel, Adam Scott, and Geoffery Z. Kohe. 2022. "United as one: the 2026 FIFA Men's World Cup hosting vision and the symbolic politics of legacy." *Managing Sport and Leisure* 27 (6): 593-613. https://doi.org/10.1080/23750472.2020.1846138. https://dx.doi.org/10.1080/23750472.2020.1846138.
- Billings, Stephen B., and J. Scott Holladay. 2012. "Should Cities Go for the Gold? The Long-Term Impacts of Hosting the Olympics." *Economic Inquiry* 50 (3): 754-772. https://doi.org/10.1111/j.1465-7295.2011.00373.x.
- Burton, Rick. 2003. "Olympic Games Host City Marketing." Sport Marketing Quarterly 12 (1).
- Byers, Terri, Emily Hayday, and Athanasios Pappous. 2020. "A New Conceptualization of Mega Sport Event Legacy Delivery: Wicked Problems and Critical Realist Solution." *Sport Management Review* 23 (2): 171-182.
- Chen, Shushu, and Laura Misener. 2019. "Event Leveraging in a Nonhost Region: Challenges and Opportunities." *Journal of Sport Management* 33 (4): 275-288. https://doi.org/10.1123/jsm.2018-0210. https://dx.doi.org/10.1123/jsm.2018-0210.
- Cornelissen, Scarlett, Urmilla Bob, and Kamilla Swart. 2011. "Towards redefining the concept of legacy in relation to sport mega-events: Insights from the 2010 FIFA World Cup." Development Southern Africa 28 (3): 307-318. https://doi.org/10.1080/0376835x.2011.595990. https://dx.doi.org/10.1080/0376835x.2011.595990.
- de Nooij, Michiel, and Marcel van den Berg. 2017. "The Bidding Paradox: Why Politicians Favor Hosting Mega Sports Events Despite the Bleak Economic Prospects." *Journal of Sport and Social Issues* 42 (1): 68-92. https://doi.org/10.1177/0193723517748552.

- Fermeglia, M. 2017. "The Show Must Be Green." *Carbon & Climate Law Review* 11 (2): 100-109. https://doi.org/10.21552/cclr/2017/2/6.
- Gibson, Heather J., Kyriaki Kaplanidou, and Sung Jin Kang. 2021. "Small-scale event sport tourism: A case study in sustainable tourism." *Sport Management Review* 15 (2): 160-170. https://doi.org/10.1016/j.smr.2011.08.013.
- Groothuis, Peter A, and Kurt W. Rotthoff. 2016. "THE ECONOMIC IMPACT AND CIVIC PRIDE EFFECTS OF SPORTS TEAMS AND MEGA EVENTS: DO THE PUBLIC AND THE PROFESSIONALS
- AGREE?" *Economic Affairs* 36 (1): 12. https://usd.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&d b=buh&AN=113306113&site=ehost-live&scope=site.
- Hanrion Nicholls, Maxime, Baki Altun, Ludovic Pires Dos Santos, and Hamza El Moumni. 2022. "The Tetris of the Olympic Games and the establishment of temporary infrastructure." *PM World Journal* 11 (7): 17.
- Hanstad, Dag Vidar, and Jon Helge Lesjø. 2020. "A positive legacy against all odds Olympic facilities at the 1994 Olympic Winter Games." *Current Issues in Sport Science (CISS)* 5. https://doi.org/10.36950/2020ciss008. https://dx.doi.org/10.36950/2020ciss008.
- Hayduk, Ted, and Michael L. Naraine. 2022. "Can Entrepreneurial Ecosystems Optimize the Impact of Mega-sport Events? Evidence from the 2014 Fifa World Cup And 2016 Summer Olympic Games in Brazil." *Event Management* 26 (5): 1057-1076. https://doi.org/10.3727/152599522x16419948390817.
- Helsen, Kobe, Marijke Taks, and Jeroen Scheerder. 2022. "Involvement, Social Impact Experiences, and Event Support of Host Residents Before, during, and after the 2021 UCI Road World Championships." *Sustainability* 14 (15): 9509. https://doi.org/10.3390/su14159509. https://dx.doi.org/10.3390/su14159509.
- Jago, Leo, Larry Dwyer, Geoffrey Lipman, Daneel van Lill, and Shaun Vorster. 2010. "Optimising the potential of mega-events: an overview." *International Journal of Event and Festival Management* 1 (3): 220-237. https://doi.org/10.1108/17852951011078023.
- Kassens-Noor, Eva, and John Lauermann. 2017. "How to Bid Better for the Olympics: A Participatory Mega-Event Planning Strategy for Local Legacies." *Journal of the American Planning Association* 83 (4): 335-345. https://doi.org/10.1080/01944363.2017.1361857.
- Kassens Noor, Eva. 2020. "Los Angeles and the Summer Olympic Games." *SpringerBriefs in Geography*. https://doi.org/10.1007/978-3-030-38553-8. https://dx.doi.org/10.1007/978-3-030-38553-8.

- Kirby, Seth I., and Lauren A. H. Crabb. 2019. "Priming Host City Physical Legacy Plans: The Bidding Chronicles of Brazil's Derailed Sporting Event Infrastructure Projects." *Event Management* 23 (4): 627-640. https://doi.org/10.3727/152599519x15506259855724.
- Kirkup, Naomi, and Bridget Major. 2010. "Doctoral Foundation Paper: The Reliability of Economic Impact Studies of the Olympic Games: A Post-Games Study of Sydney 2000 and Considerations for London 2012." *Journal of Sport & Tourism* 11 (3-4): 275-296. https://doi.org/10.1080/14775080701400943.
- Lauermann, John. 2022. "The declining appeal of mega-events in entrepreneurial cities: From Los Angeles 1984 to Los Angeles 2028." *Environment and Planning C: Politics and Space* 40 (6): 1203-1218. https://doi.org/10.1177/23996544211066101.
- Lee, Soonhwan, and Brian D. Krohn. 2013. "A Study of Psychological Support from Local Residents for Hosting Mega-Sporting Events: A Case of the 2012 Indianapolis Super Bowl XLVI." *Event Management* 17 (4): 361-376. https://doi.org/10.3727/152599513x13769392444585. https://dx.doi.org/10.3727/152599513x13769392444585.
- Lertwachara, Kaveepong, Jittima Tongurai, and Pattana Boonchoo. 2022. "Mega Sporting Events and Inward Foreign Direct Investment: An Investigation of the Differences Among the Types of Sporting Events and Host Countries." *Journal of Sport Management* 36 (1): 9-24. https://doi.org/10.1123/jsm.2020-0256.
- Li, ShiNa, and Leo Jago. 2013. "Evaluating economic impacts of major sports events a meta analysis of the key trends." *Current Issues in Tourism* 16 (6): 591-611.
- Matheson, Victor A. 2013. "Assessing the Infrastructure Impact of Mega Events in Emerging Economies." In *Infrastructure and Land Policies*, 215-232. Lincoln Institute of Land Policy.
- Minter, Adam. 2017. "Give los angeles the olympic games for good." *Bloomberg.com*: N.PAG-N.PAG.

 https://usd.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=140796264&site=ehost-live&scope=site.
- Mobilian, Zachary E. 2016. "The Economics of Hosting the Olympic Games: The Miscalculation of Cost-Benefit Analyses and Why Cities Continue to Bid." Claremont McKenna College.
- Müller, Martin. 2015a. "The Mega-Event Syndrome: Why So Much Goes Wrong in Mega-Event Planning and What to Do About It." *Journal of the American Planning Association* 81 (1): 6-17. https://doi.org/10.1080/01944363.2015.1038292. https://dx.doi.org/10.1080/01944363.2015.1038292.
- ---. 2015b. "What makes an event a mega-event? Definitions and sizes." *Leisure Studies* 34 (6): 627-642. https://doi.org/10.1080/02614367.2014.993333. https://dx.doi.org/10.1080/02614367.2014.993333.

- Müller, Martin, David Gogishvili, and Sven Daniel Wolfe. 2022. "The structural deficit of the Olympics and the World Cup: Comparing costs against revenues over time." *Environment and Planning A: Economy and Space* 54 (6): 1200-1218. https://doi.org/10.1177/0308518x221098741. https://journals.sagepub.com/doi/abs/10.1177/0308518X221098741.
- Müller, Martin, Sven Daniel Wolfe, Christopher Gaffney, David Gogishvili, Miriam Hug, and Annick Leick. 2021. "An evaluation of the sustainability of the Olympic Games." *Nature Sustainability* 4 (4): 340-348. https://dx.doi.org/10.1038/s41893-021-00696-5. https://dx.doi.org/10.1038/s41893-021-00696-5.
- Nunkoo, Robin, Manuel Alector Ribeiro, Vivek Sunnassee, and Dogan Gursoy. 2018. "Public trust in mega event planning institutions: The role of knowledge, transparency and corruption." *Tourism Management* 66: 155-166. https://doi.org/10.1016/j.tourman.2017.11.010. https://dx.doi.org/10.1016/j.tourman.2017.11.010.
- Panja, Tariq. 2017. "Paris and L.A. Offered Olympics as IOC Moves to Avert Crisis." *Bloomberg.com*: N.PAG-N.PAG.

 https://search.ebscohost.com/login.aspx?direct=true&d
 behave-140792972&site=ehost-live&scope=site.
- Preuss, Holger. 2010. "The Conceptualisation and Measurement of Mega Sport Event Legacies." *Journal of Sport & Tourism* 12 (3-4): 207-228. https://doi.org/10.1080/14775080701736957.
- Preuss, Holger, and Anke Plambeck. 2021. "Utilization of Olympic Stadiums: a conceptual stadium legacy framework." *International Journal of Sports Marketing and Sponsorship* 22 (1): 10-31. https://doi.org/10.1108/IJSMS-06-2020-0110. https://doi.org/10.1108/IJSMS-06-2020-0110.
- Preuss, Holger, Harry A. Solberg, and Jens Alm. 2014. "The Challenge of Utilizing World Cup Venues." *Managing the Football World Cup* 1 (6): 82-103.
- Rose, Andrew K., and Mark M Spiegel. 2011. "Do Mega Sporting Events Promote International Trade?" *The SAIS Review of International Affairs* 31 (1): 77-85.
- Schnitzer, Martin, and Lukas Haizinger. 2019. "Does the Olympic Agenda 2020 Have the Power to Create a New Olympic Heritage? An Analysis for the 2026 Winter Olympic Games Bid." *Sustainability* 11 (2): 442. https://doi.org/10.3390/su11020442. https://dx.doi.org/10.3390/su11020442.
- Searle, Glen. 2002. "Uncertain Legacy: Sydney's Olympic Stadiums." *European Planning Studies* 10 (7): 845-860. https://doi.org/10.1080/096543102200001325.
- Siegfried, John, and Andrew Zimbalist. 2000. "The Economics of Sports Facilities and Their Communities." *Journal of Economic Perspectives* 14 (3): 95-114. https://doi.org/10.1257/jep.14.3.95. https://dx.doi.org/10.1257/jep.14.3.95.

- Smith, Andrew. 2014. "Leveraging sport mega-events: new model or convenient justification?" *Journal of Policy Research in Tourism, Leisure and Events* 6 (1): 15-30. https://doi.org/10.1080/19407963.2013.823976. https://dx.doi.org/10.1080/19407963.2013.823976.
- Sofotasiou, Polytimi, Benjamin Richard Hughes, and John Kaiser Calautit. 2015. "Qatar 2022: Facing the FIFA World Cup climatic and legacy challenges." *Sustainable Cities and Society* 14: 16-30. https://doi.org/10.1016/j.scs.2014.07.007. https://dx.doi.org/10.1016/j.scs.2014.07.007.
- Stewart, Allison, and Steve Rayner. 2016. "Planning Mega-Event Legacies: Uncomfortable Knowledge for Host Cities." *Planning Perspectives* 31 (2): 157-179.
- Wolfe, Sven Daniel, David Gogishvili, Jean-Loup Chappelet, and Martin Müller. 2022. "The urban and economic impacts of mega-events: mechanisms of change in global games." *Sport in Society* 25 (10): 2079-2087. https://doi.org/10.1080/17430437.2021.1903438. https://dx.doi.org/10.1080/17430437.2021.1903438.