

# Is It Worth It?

Hosting the Olympic Games and other mega sporting events is an honor many countries aspire to—but why?

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**W**HEN Rio de Janeiro won the bid last October to host the 2016 Summer Games, thousands of jubilant Brazilians danced on Copacabana Beach and the news made headlines around the world. Chicago's failed bid for the same games reportedly cost that city about \$100 million. Why do countries place so much value on hosting the Olympics or similar mega sporting events?

Hosting a large sporting event potentially offers both direct and indirect economic benefits. Direct benefits include capital and infrastructure construction related to the event, long-term benefits such as lower transportation costs thanks to an improved road or rail network, and spending by tourists who travel from out of town to attend the games. Indirect benefits may include advertising effects that showcase the host city or country as a potential tourist destination or business location in the future and an increase in civic pride, local sense of community, and the perceived stature of the host city or country. But there is also a potential downside, resulting from possible cost overruns, poor land use, inadequate planning, and underutilized facilities.

The Olympic Games are much like other large sporting events, such as the World Cup, Super Bowl, or World Series, but they involve many more participants, officials, and fans; require more infrastructure construction; generate many more out-of-town visitors; and generally have a much higher profile.

## Potential benefits

Of the direct economic benefits generated by mega sporting events, tourist spending is probably the most highly touted. An average of 5.1 million tickets were sold for the past six Summer Olympic Games, and an average of 1.3 million tickets for the past five Winter Olympics. Even though many of the tickets are sold to local residents, especially for the Summer Games, which typically take place in large metropolitan areas, a sporting event of this size and scope has the potential to attract a

significant number of visitors from outside the host city. Also, since the games are spread over more than two weeks, these visitors may spend considerable time in the host area, generating substantial spending in the lodging and food and beverage sectors. Additional visitors for the games, however, are likely to be at least partially offset by fewer visitors for other purposes (tourism or business), as the latter seek to avoid the higher prices and congestion associated with the Olympics. Further, even if hotel occupancy rates and room prices rise during the games, the extra revenue often leaves the local economy as hotel profits are transferred to the company's home office.

Hosting a mega event like the Olympic Games often requires expansive infrastructure to move the participants, officials, and fans to and from the venues. A majority of past transportation infrastructure construction has been on roads. But host cities and regions have also spent considerable sums on airport construction as well as on the renovation and construction of public transportation systems (Essex and

## Hosting the games

Year	Host of Summer Olympics	Host of Winter Olympics
1976	Montreal, Canada	Innsbruck, Austria
1980	Moscow, Soviet Union	Lake Placid, United States
1984	Los Angeles, United States	Sarajevo, Yugoslavia
1988	Seoul, South Korea	Calgary, Canada
1992	Barcelona, Spain	Albertville, France
1996	Atlanta, United States	Lillehammer, Norway
1998		Nagano, Japan
2000	Sydney, Australia	
2002		Salt Lake City, United States
2004	Athens, Greece	
2006		Turin, Italy
2008	Beijing, China	
2010		Vancouver, Canada
2012	London, United Kingdom	
2014		Sochi, Russia
2016	Rio de Janeiro, Brazil	



China marks one-year anniversary of the 2008 Beijing Olympic games.

Chalkley, 2004). The bullet train built for the Nagano Games greatly reduced the travel time between that city and Tokyo.

In less-developed cities, building modern telecommunications capacity also represents a substantial investment. The construction of this infrastructure generates appreciable economic activity in the host community. Many construction workers must be hired and large quantities of construction materials must be purchased and transported.

Beyond the construction period, sports-event-generated infrastructure can provide the host metropolitan area or region with a continuing stream of economic benefits. The venues built for these events can be used for years or decades afterward. More important, upgrades to the transportation infrastructure can provide a significant boost to the local and regional economy, if local businesses are able to make use of the improved transportation infrastructure.

The indirect economic benefits generated by mega sporting events are potentially more important than the direct benefits, but are more difficult to quantify. One possible indirect benefit is the advertising effect of such events. Many Olympic host metropolitan areas and regions view the Olympics as a way to raise their profile on the world stage. In this sense, the intense media coverage before and during the Olympic Games or other big events is a form of advertising, possibly attracting tourists who would not have otherwise considered the city or region, and who may generate significant, broad, and long-lasting economic benefits.

Reality, however, often departs from theory. For instance, one of the goals of the Sydney Games was to generate increased tourism after the games, but Graham Matthews, a former forecaster for the Australian Federal Treasury, stated: “While having the Olympics may have made us feel warm and fuzzy and wonderful, in cold hard terms it’s actually hard in international experience to determine if there has been a positive, lasting impact on tourism from having that brief burst of exposure” (Burton, 2003).

Public awareness of past Olympic host sites in both Europe and North America was the subject of a study by Ritchie and Smith (1991). Based on several thousand telephone interviews carried out over 1986–89, fewer than 10 percent of the North American residents surveyed and fewer than 30 percent of the Europeans could recall that Innsbruck, Austria, was the site of the 1976 Winter Olympic Games. Only 28 percent of the North Americans and 24 percent of the Europeans surveyed remembered that the 1980 Winter Games took place in Lake Placid, New York. Other research showed that the memory of Calgary having hosted the 1988 Winter Games had almost entirely faded by 1991 (Matheson, 2008). And if accompanied by bad weather, pollution, unsavory politics, or terrorist acts, the games may actually damage a location’s reputation.

Other mega sporting events, such as the Super Bowl or the World Cup, experience similar economic dynamics to the Olympics, although construction expenditures are considerably lower. Multivariate econometric studies of the impact of the World Cup have found that hosting this quadrennial international competition brings little or no income or employment benefit to the host venue.

Nonetheless, hosting an event like the Olympic Games or the World Cup can generate significant intangible benefits for the host city or region, whose residents are likely to derive appreciable pride and sense of community from hosting the event. Their homes are the focus of the world’s attention for a brief but intense period. The planning and work required to host the event take significant time and effort—much by volunteers—and engender a considerable local and national sense of accomplishment. These factors are both important and valuable, even though researchers find it difficult to place a dollar value on them.

### **Potential downside: Uncertainties and heavy costs**

In 1976 a watershed event shook up the financing model for the Olympic Games and set them on their current economic course. That year, Montreal hosted the Summer Games. After city officials projected the games would cost \$124 million, Montreal incurred a debt of \$2.8 billion, or about \$10 billion in 2009 dollars, which took three decades to pay off (Burton, 2003).

By the end of the Montreal Games, Moscow had already committed to hosting the 1980 Olympics, but no city wanted to bid for the 1984 Games. After some scrambling, Los Angeles agreed to host the games, but only on the condition that it not incur any financial obligation. With no alternative, the International Olympic Committee (IOC) accepted the condition and Los Angeles was awarded the 1984 Summer Games.

The Los Angeles Organizing Committee for the Olympic Games (LA OCOG) generated a modest surplus of just over \$300 million and reset the Olympic financial model for less public and more private financing. Los Angeles spent very little on construction, and the chair of the LA OCOG, Peter Ueberroth, was able to raise substantial sums by selling sponsorships to corporations. The relative financial success of the Los Angeles Games led to a new era of international competition among cities to host the games.

Unfortunately, the Los Angeles experience was exceptional. Subsequent host cities found it impossible to procure the same proportion of private support. Several billion dollars in public monies was committed in Seoul (1988), Barcelona (1992), Nagano (1998), Sydney (2000), Athens (2004), and Beijing (2008).

The Barcelona Olympics left the central Spanish government \$4 billion in debt, and the city and provincial governments an additional \$2.1 billion in the red. The Nagano Organizing Committee showed a \$28 million surplus, while the various units of Japanese government were left with an \$11 billion debt (Burton and O'Reilly, 2009). In Athens, public investment exceeded \$10 billion, and in Beijing, more than \$40 billion.

Initially publicized budgets—in the case of the Olympics, that of the OCOG—invariably understate the ultimate cost of staging the games. The OCOG budget covers only the operating costs of hosting the games, including the opening and award ceremonies, transportation of the athletes to the various venues, entertainment, a telecommunications/broadcasting center, and security, among other things. The total cost to the host city also includes construction and upgrading of the competition venues, accommodations for athletes and visitors, facilities for the media, and associated infrastructure. Many of the venues—such as a velodrome for bicycle racing or a bobsled/skeleton/luge run—are especially costly to build because of their specialized nature. Olympic venues require exceptionally large seating capacities: the stadiums hosting the opening and closing ceremonies for the Summer Olympic Games often seat 100,000 or more spectators.

Between the time a host city puts in its bid for an event and the time it takes place, construction costs and land values may increase significantly. Also, early proponents of hosting an event in a particular city find it in their interest to underrepresent the true costs while they seek public endorsement. And as would-be host cities enter into competition with other bidders, there is a natural tendency to match their competitors' proposals and to add bells and whistles to their plans.

Projected budgets are never enough to cover actual costs. Athens initially projected that its games would cost \$1.6 billion, but they ended up costing closer to \$16 billion (including facility and infrastructure costs). Beijing projected costs of \$1.6 billion (the operating cost budget of the Beijing OCOG), but the final price tag was \$40 billion, including facility and infrastructure expenditures such as expansion of the Beijing subway system. The 2014 Winter Games in Sochi, Russia, were initially budgeted at about \$12 billion; the projected cost in late 2009 reached \$33 billion—\$23 billion from public sources (*Sports Business Daily*, 2009).

Interested cities spend up to \$100 million just to conduct their bids to host the Olympics. If the bidding process for the games were perfectly competitive, any expected local economic benefit would be bid away as cities competed with each other to host the games: the city with the highest expected gain could win by bidding just \$1 more than the expected gain to the second-place city, yielding a small benefit to the winning city. But the process is not based on dollar

amounts; rather, cities bid by offering facilities and guaranteeing financing and security. And since September 11, 2001, security costs have been huge: total security costs in Athens in 2004 topped \$1.4 billion, with 40,000 security people employed. Beijing in 2008 reportedly had more than 80,000 security personnel at work.

London expected its 2012 Games to cost less than \$4 billion, but they are now projected to cost \$19 billion (*Sports Business Daily*, 2009). As expenses have escalated, some of the projects have been scaled back—for example, the planned roof over the Olympic stadium has been scratched—but the stadium will still end up costing more than \$850 million, against the initial projection of \$406 million. The government has been unsuccessful in its effort to find a soccer or rugby team to be the facility's anchor tenant after the 2012 Games. This will saddle British taxpayers with the extra burden of millions of dollars annually to keep the facility operating. It is little wonder that London Olympics Minister Tessa Jowell said, "Had we known what we know now, would we have bid for the Olympics? Almost certainly not" (*Sports Business Daily*, 2008, citing the *London Telegraph*).

Some of these expenditures result in an improved, more modern infrastructure for the host city, but others leave the host with white elephants. Many facilities built especially for the games go un- or underutilized after the 16 or 17 days of the competition itself, require tens of millions of dollars a year to maintain, and occupy increasingly scarce real estate. In Turin, for example, the bobsled-run venue cost \$108 million to construct, and Deputy President of the Turin Olympic Organizing Committee Evelina Christillin commented to a *Wall Street Journal* reporter, "I can't tell you a lie. Obviously, the bobsled run is not going to be used for anything else. That's pure cost" (Kahn and Thurow, 2006).

Total revenue from the Summer Olympic Games now averages in the neighborhood of \$4–\$5 billion, and roughly half that for the Winter Games (which also have lower costs thanks to fewer participants, fewer venues, and less construction). Close to half the money earned supports the activities of the international federations, the national Olympic committees, and the IOC itself.

Clearly, if there is an economic benefit from hosting the Olympic Games, it is unlikely to come in the form of improving the budgets of local governments, which raises the question of whether there are broader, longer-term, or less tangible economic gains.

### Leveraging the benefits

There is relatively little objective evidence on the economic impact of the Olympic Games and other mega sporting events. Much of the existing evidence has been developed by the host cities or regions—which have a vested interest in justifying the large expenditures on such events—and suffers from a number of flaws.

Estimates of the economic impact of such events derived from published academic research offer more reliable evidence, both because the authors have no personal interest in the economic success of the events and because the peer



review process provides an important check on the methods and assumptions used. These studies present the following picture of the economic impact of hosting the Olympic Games: although a modest number of jobs may be created as a result of hosting the games, there appears to be no detectable effect on income, suggesting that existing workers do not benefit (Hagn and Maennig, 2009; and Matheson, 2009). Moreover, the impact of hosting the games depends on the overall labor market response to the new jobs created by the games and might not be positive (Humphreys and Zimbalist, 2008). The economic impact of hosting the World Cup appears, if anything, to be even smaller (Hagn and Maennig, 2008 and 2009).

If the economic gains are modest, or perhaps nonexistent, what can host cities and regions do to maximize the benefits of hosting events like the Olympic Games? A careful examination of past experience suggests two important ways to do so: first, host cities or regions need to make careful land use decisions and, second, they should maximize postevent use of new and renovated facilities and infrastructure.

Land is increasingly scarce both in the large urban areas that typically host the Summer Games and in the mountainous areas that host the Winter Games. Hosting the Olympic Games requires a significant amount of land for sports facilities, parking, and housing for athletes, media, staff, and spectators.

Unsuccessful games leave behind legacies of seldom- or never-used structures that take up valuable land and are expensive to maintain. For example, in Sydney, Australia, it now costs \$30 million a year to operate the 90,000-seat Olympic stadium. Many of the venues used in the 2004 Athens Games are either vacant or seldom used and occupy valuable land in a crowded urban center. The Beijing Games left a legacy of several expensive buildings, including the elaborate Water Cube swimming facility, which is severely underused. In contrast, successful events, like the Los Angeles Summer Olympics, use existing facilities as much as possible, making good use of scarce urban land. The stadium used for the opening and closing ceremonies in the 1996 Atlanta Games was reconfigured into a baseball stadium immediately

after the games. Olympic planners need to design facilities that will be useful for a long time and that are constructively integrated into the host city or region.

### Developing countries gain more

The impact of hosting major sporting events varies according to the level of development in the host city and country. With proper planning, hosting a large event can serve as a catalyst for the construction of modern transportation, communications, and sports infrastructure, which generally benefits less-developed areas more.

Although hosting the Olympics requires a significant outlay of public funds for improvements that could have been made without hosting the games, public policy is often so gridlocked that needed infrastructure investments could be delayed for years or even decades if not for the Olympics. And the IOC does provide some funding to facilitate the completion of desirable projects (Preuss, 2004).

In more developed regions, where land is scarce during the initial bidding and planning period—and destined to become scarcer still over the 7- to 10-year period of Olympic selection and preparation—and labor and resource markets are tight, hosting the games can cause gross misuse of land and provoke wage and resource price pressures, fueling inflation.

### Think before you bid

The economic and noneconomic value of hosting a major event like the Olympic Games is complex and likely to vary from one situation to another. Simple conclusions are impossible to draw. The bidders for the next Winter Olympics—Annecy, France; Munich, Germany; and PyeongChang, South Korea—as well as the many cities thinking of bidding for the 2020 Summer Games would do well to steer clear of the inevitable Olympic hype and to take a long, hard, and sober look at their regions' long-term development goals. ■

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