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### The Economics of Hosting the Olympic Games

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#### Introduction

The Olympics have evolved dramatically since the first modern games were held in 1896. In the second half of the twentieth century, both the costs of hosting as well as the revenue produced by the spectacle grew rapidly, sparking controversy over the burdens being shouldered by host countries. A growing number of economists argue that both the short- and long-term benefits of hosting the games are at best exaggerated and at worst nonexistent, leaving many host countries with large debts and maintenance liabilities. Instead, many argue, the bidding and selection process should be reformed to incentivize realistic budget planning, increase transparency, and promote sustainable investments that serve the public interest.

As Rio de Janeiro struggles with rising crime, funding shortfalls, underequipped police forces and hospitals, and worries over the Zika virus, its 2016 Games have highlighted the ongoing debate over the costs and benefits of hosting such a mega-event.

#### When did the costs of hosting the games become a concern?

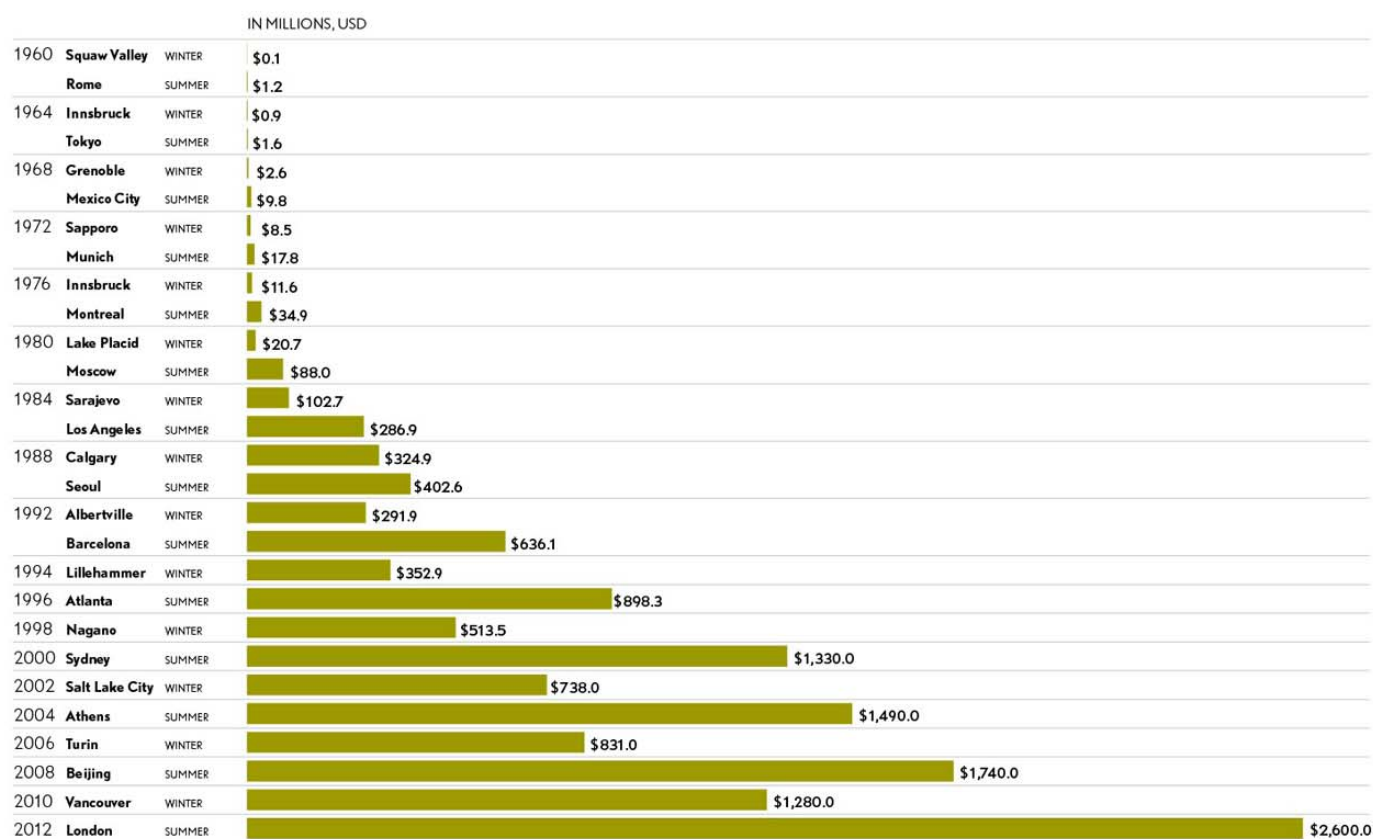
For much of the twentieth century, the staging of the Olympic Games represented a manageable burden for the host cities. The events were held in developed countries, either in Europe or the United States, and in the era before television broadcasting, hosts didn't expect to make a profit. Instead, the games were publically funded, with these advanced countries better positioned to bear the costs due to their larger economies and more advanced infrastructure.

The 1970s marked a turning point, writes Andrew Zimbalist, author of [Circus Maximus: The Economic Gamble Behind Hosting the Olympics and the World Cup](#). The games were [growing rapidly](#), with the number of Summer Olympics participants almost doubling and the number of events increasing by a third during the 1960s. Every Olympics since 1960 has seen major [cost overruns \(PDF\)](#). The killing of protestors in the days before the 1968 Mexico City Games and the fatal assault on Israeli athletes at the 1972 Munich Games tarnished the image of the Olympics, and public skepticism of taking on debt to host the games also grew. In 1972, Denver became the first and only chosen host city to [reject its Olympics](#) after voters passed a referendum refusing additional public spending for the games.

The 1976 Summer Olympics in Montreal came to symbolize the fiscal risks of hosting. The projected cost of \$124 million was [more than \\$2.6 billion short](#) of the actual cost, largely due to the construction delays and cost overruns of a [new stadium](#), saddling the city's taxpayers with billions of dollars of debt that took nearly three decades to pay off.

As a result, in 1979 Los Angeles was the only city to bid for the 1984 Summer Olympics, allowing it to negotiate exceptionally favorable terms with the International Olympic Committee (IOC). Most importantly, L.A. was able to rely almost totally on existing stadiums and other infrastructure rather than promise lavish new facilities to entice the IOC selection committee. That, combined with a sharp jump in television broadcast revenue (see graphic) made L.A. the only city to turn a profit on hosting the Olympics, finishing with a \$215 million operating surplus.

## Broadcast Revenue From Olympic Television Rights Fees



Source: IOC, *Olympic Marketing File*, 2014 via Andrew Zimbalist, *Circus Maximus* Credits: Eleanor Albert, David Foster

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L.A.'s success led to a rising [number of cities bidding](#)—from two for the 1988 Games to twelve for the 2004 Games. This allowed the IOC to choose the cities with the most ambitious—and expensive—plans. In addition, as researchers Robert Baade and Victor Matheson [point out](#), bidding by developing countries has more than tripled over the past two decades. The result has been an increase of bids going to countries like China, Russia, and Brazil, which have been eager to use the games to demonstrate their progress on the world stage. However, these countries have needed to invest massive sums to create the necessary infrastructure. Costs spiraled to over \$45 billion for Beijing's Summer Games in 2008, over \$50 billion for the Winter Games in Sochi, Russia, in 2014, and an estimated \$20 billion for Rio de Janeiro in 2016.

These costs have led to renewed Olympics skepticism, and a number of cities have withdrawn their bids for the 2022 and 2024 Games over cost concerns. Oslo and Stockholm both [backed out](#) of their 2022 bids upon realizing that costs would be higher than originally conceived. Boston [withdrew from consideration](#) for the 2024 Games, with its mayor saying that he “refuse[d] to mortgage the future of the city away.”

### What costs do cities incur for hosting the games?

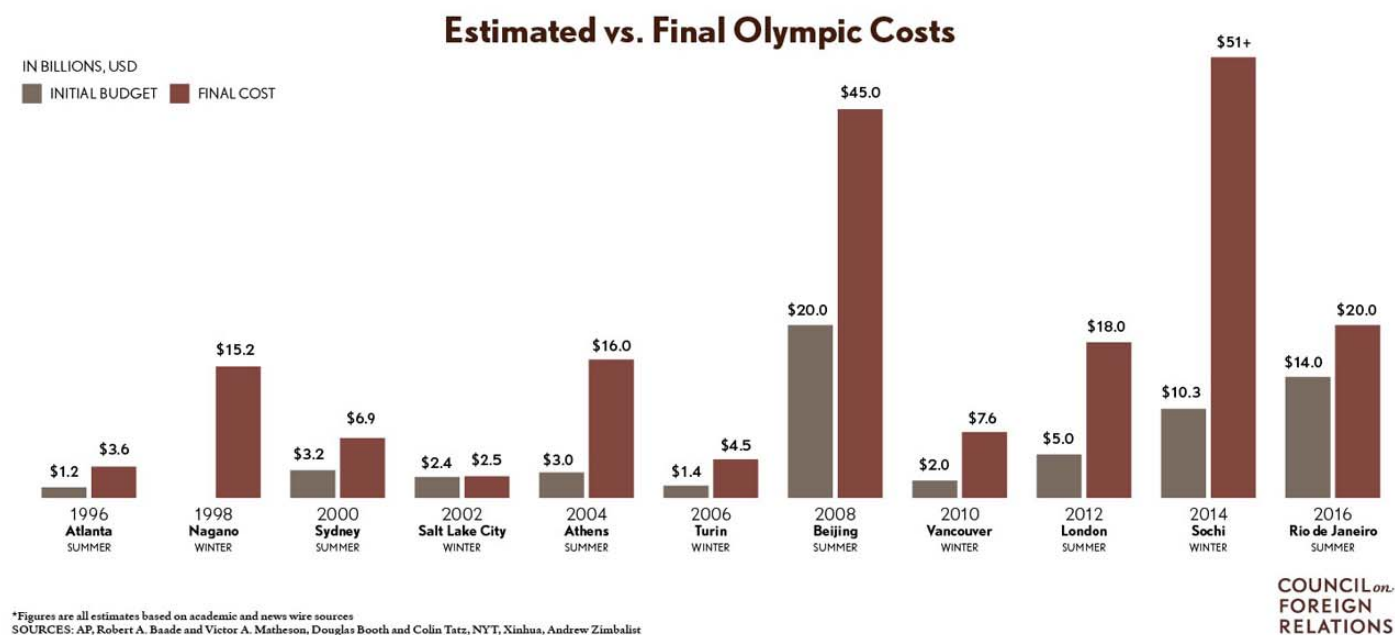
Cities must first invest millions of dollars in evaluating, preparing, and submitting a bid to the IOC. The cost of planning, hiring consultants, organizing events, and the necessary travel consistently falls between \$50 million and \$100 million. Tokyo spent as much as \$150 million on its failed 2016 bid, and about half that much for its successful 2020 bid, while Toronto decided it [could not afford](#) the \$60 million necessary for a 2024 bid.

Once a city is chosen to host, it has nearly a decade to prepare for the influx of athletes and tourists. The Summer Games are far larger, attracting hundreds of thousands of foreign tourists to watch over ten thousand athletes compete in about [three hundred events](#), compared with under three thousand athletes competing in about [one hundred events](#) during the Winter Games. The most immediate need is the creation or upgrading of highly specialized sports facilities like cycling tracks or ski-jumping arenas, the Olympic Village, and a venue large enough to host the opening and closing ceremonies.

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There is also usually the need for more general infrastructure, especially housing and transportation. The IOC requires cities hosting the games [to have](#) a minimum of 40,000 available hotel rooms, which in the case of Rio 2016 has necessitated the construction of 15,000 new hotel room. Roads, train lines, and airports need to be upgraded or constructed.

Altogether, these infrastructure costs range from \$5 billion to over \$50 billion. Many countries justify such expenditures in the hopes that the spending will outlive the Olympic Games. For instance, [some 85 percent \(PDF\)](#) of the Sochi 2014 Games' more than \$50 billion budget went to building non-sports infrastructure from scratch. More than half of the Beijing 2008 budget of \$45 billion [went to](#) rail, roads, and airports, while nearly a fourth went to environmental clean-up efforts.



Operational costs make up a smaller but still significant chunk of hosts' Olympic budget. Security costs have escalated quickly after the 9/11 attacks—Sydney in 2000 spent \$250 million while Athens in 2004 spent over \$1.5 billion, and costs have remained between \$1 billion and \$2 billion since.

Another major issue is the so-called “white elephants,” or expensive facilities that, because of their size or specialized nature, have limited post-Olympics use. These often impose costs for years to come. Sydney's Olympic stadium now costs the city \$30 million a year to maintain. Beijing's famous “Bird's Nest” stadium cost \$460 million to build and \$10 million a year to maintain, and [sits unused](#). Almost all of the facilities built for the 2004 Athens Olympics, whose costs [contributed to the Greek debt crisis](#), are now derelict, leading many experts to conclude that the Olympics too often lead to wasteful spending on unnecessary infrastructure.

Economists say the games' so-called “implicit costs” must also be considered. These include the opportunity costs of public spending that could have been spent on other priorities. Servicing the debt that is left over after hosting the games can burden public budgets for decades. While Greece's [billions in Olympic debt](#) helped bankrupt the country, it took Montreal until 2006 to pay off the last of its debt from the 1976 Games, and the debt and maintenance costs of the Sochi 2014 Winter Games will [cost Russian taxpayers nearly](#) \$1 billion per year for the foreseeable future.

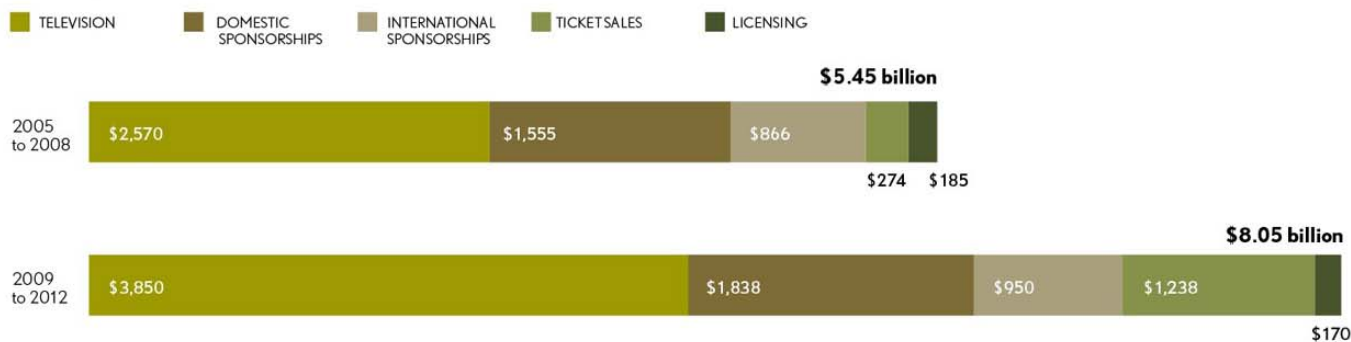
### How do the benefits compare to the costs?

The 1984 Olympics in Los Angeles are the only games to have produced a surplus, in large part because the city was able to almost totally rely on already existing infrastructure.

As the costs of hosting have skyrocketed, revenues cover only a fraction of expenditures. Beijing's 2008 Summer Olympics generated \$3.6 billion in revenue, compared with over \$40 billion in costs. Vancouver's Winter Games in 2010 generated \$2.8 billion compared with \$7.6 billion in costs, and London's Summer Games in 2012 generated \$5.2 billion compared with \$18 billion in costs. What's more, much of the revenue doesn't go to the host—the IOC keeps more than half of all television revenue, which represents the single largest chunk of money generated by the games.

## Sources of Olympic Revenue

IN MILLIONS, USD



Source: IOC, *Olympic Marketing File*, 2014 via Andrew Zimbalist, *Circus Maximus*. Credits: Eleanor Albert, David Foster

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Impact studies carried out or commissioned by host governments before the games often argue that hosting the event will provide a major economic lift by creating jobs, drawing tourists, and boosting overall economic output. However, research carried out after the games shows that these purported benefits are dubious.

In a study of the 2002 Salt Lake City Games, for example, Matheson, along with economists Robert Baumann and Bryan Engelhardt of Massachusetts's College of the Holy Cross, found [a short term boost \(PDF\)](#) of seven thousand additional jobs—about one-tenth the number promised by officials—and no long-term increase in employment. As a study by the European Bank for Reconstruction and Development (EBRD) [explains](#), the jobs created by Olympics construction are often temporary, and unless the host region is suffering from high unemployment, the jobs mostly go to workers who are already employed, blunting the impact on the broader economy. (Only 10 percent of the 48,000 temporary jobs created during the 2012 London Olympics went to previously unemployed people, according to the study.)

Perhaps unexpectedly, economists have also found that the impact on tourism is mixed, as the security, crowding, and higher prices that the Olympics bring dissuade many visitors. Barcelona, which hosted in 1992, is cited as a [tourism success story](#), rising from the eleventh to the sixth most popular destination in Europe after the Summer Games there, and Sydney in 2000 and Vancouver in 2010 both saw slight increases in tourism. But London in 2012, Beijing in 2008, and Salt Lake City in 2002 [all saw decreases in tourism](#) the years of their Olympics.

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Ultimately, there is little evidence for an overall positive economic impact. Boston's National Bureau of Economic Research has [published findings](#) that hosting has a positive impact on a country's international trade. But [economists Stephen Billings of the University of North Carolina and Scott Holladay](#) of the University of Tennessee-Knoxville, and [Fidelity's Robert von Rekowsky](#), looking at several decades of Olympic Games, find no long-term impact on GDP.

Experts say this is largely because of “substitution effects”—meaning that much of the spending on the Olympics is merely spending that would have happened anyway, on something else. In addition, much of the profit brought in by hotels, chain restaurants, and construction firms goes to international companies rather than remaining in the local economy.

### What are the costs Rio de Janeiro faces in 2016?

Brazil, the first South American country to host the Olympics, faces a number of additional challenges stemming from its precarious economic and political situation. Every Olympics since 1960 has gone over budget, and Rio 2016 is no exception. While the final tally is not yet in, costs are [expected to reach or exceed](#) \$20 billion, compared with an initial estimate of \$14 billion.

Rio's plan involves four clusters of stadiums and facilities, connected by new highways and rail lines. Many of these projects are over budget and behind schedule: the centerpiece subway extension—which has already cost \$1 billion more than expected—is set to [open just days](#) before the games begin. A month before the opening ceremonies, several stadiums [remained](#) half-finished.

The scramble to finish preparations comes amid political chaos after President Dilma Rousseff was removed from office. The country is also facing its [worst recession in decades](#), with the national economy shrinking by 3.8 percent in 2015. The recession has contributed to a financial crisis in the Rio de Janeiro state government, which is responsible for police, hospitals, and other public services in the city of Rio. The state has already required a [\\$900 million bailout](#) from the federal government to cover the policing costs of the Olympics. The games [will require](#) some 85,000 security personnel, more than twice the number needed for London in 2012, with Rio's violent crime rising sharply as [gang warfare increases](#) in the city's favelas, as the city's sprawling slums are known. Rio's acting governor Francisco Dornelles [has warned](#) that the financial crisis "could cause the total collapse of public security" during the Olympics.

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Health worries have placed an additional burden on Rio. As the [Zika virus](#) has spread rapidly throughout Brazil, a number of global health experts [have warned](#) that Rio's health system is too "severely weakened" to effectively fight the disease, though the U.S. Centers for Disease Control and Prevention [has said](#) that the Olympics is unlikely to contribute to its spread. Several high-profile athletes have [withdrawn from the games](#), citing the Zika threat. The Brazilian government says that [two thousand extra health professionals](#) would be made available for the games, but the state budget crisis has led to Rio hospitals [running out of medicine](#) and basic supplies.

City officials say Rio's original plan to use Olympics spending to [overhaul its sewage system](#) and clean up the widespread contamination of its water supply has fallen by the wayside, even as [scientists have found](#) that the water venues set to hold swimming and boating competitions are contaminated with raw sewage and dangerous "super-bacteria."

### **How could the Olympics be made more manageable?**

As costs have risen, a consensus has grown that the Olympic Games need reforms to make them more affordable. Many economists have pointed out that the IOC bidding process encourages wasteful spending, by favoring potential hosts who present the most ambitious Olympic plans. This [so-called \(PDF\)](#) "winner's curse," means that over-inflated bids—often pushed by local construction and hospitality interests—consistently overshoot the actual value of hosting. Observers have also criticized the IOC for not sharing more of the fast-growing revenue generated by the games.

As public opposition to hosting has risen, [some have argued](#) that autocratic governments that do not answer to voters will have the advantage. For example, the only two bids for the 2022 Winter Games came from China and Kazakhstan. At the same time, corruption has dogged the IOC selection process. Bribery scandals marred the 1998 Nagano and 2002 Salt Lake City Games, among others, and new allegations of illegal payments [have surfaced](#) in the selection of Tokyo for the 2020 Summer Games.

In response, the IOC under President Thomas Bach has promoted reforms to the process, known as the [Olympic Agenda 2020](#). These recommendations include reducing the cost of bidding, allowing hosts more flexibility in using already-existing sports facilities, encouraging bidders to develop a sustainability strategy, and increasing outside auditing and other transparency measures.

Some think more drastic measures are necessary. Economists Baumann and Matheson argue that developing countries should be spared the burden of hosting altogether and the IOC [should instead](#) "award the games to rich countries that are better able to absorb more of the costs." For author Andrew Zimbalist, one city should be made the [permanent host](#), allowing for the reuse of expensive infrastructure. Barring that, many economists argue, any city planning to host should ensure that the games fit into a broader strategy to promote development that will outlive the Olympic festivities.

### **Additional Resources**

[This U.S. Federal Reserve paper \(PDF\)](#) weighs the research on the costs and benefits of hosting the Olympic games for a host's economy.

Harvard's Judith Grant Long argues that host cities must rethink how they approach Olympic infrastructure in this [London School of Economics article](#).

The idea that the Olympic games should generate economic growth is a relatively new phenomenon, writes Binyamin Appelbaum [in the New York Times](#).

Fidelity Investments' Robert von Rekowsky explores the history of the economic outcomes of the Olympic Games in [this research paper \(PDF\)](#).

[This report](#) by the European Bank for Reconstruction and Development places the economic impact of the 2014 Sochi Games in context.

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