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## MIT Technology Review



### Business Impact

# Full Scale of Olympic Financial Disasters Revealed

The average Olympics goes over budget by 156 percent. For a third of the games since 1960, nobody even knows the cost overruns.

by **Emerging Technology from the arXiv**

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**When the Rio Olympics kicks off next month, the Brazilian government will have spent over \$4.5 billion on** new stadiums, an Olympic village, international broadcast and media centers, transportation, administration, the workforce, and so on. That's significantly more than it planned when the games were awarded to Rio in 2009. The cost overrun is probably around 50 percent, but nobody can be certain until after the games end. Whatever the final figure, it is set to break the original budget by a substantial margin.

Olympic games are well known for their breathtaking cost overruns. But are they any more profligate than other megaprojects such as the construction of new bridges, railway lines, freeways, power stations, and IT projects?

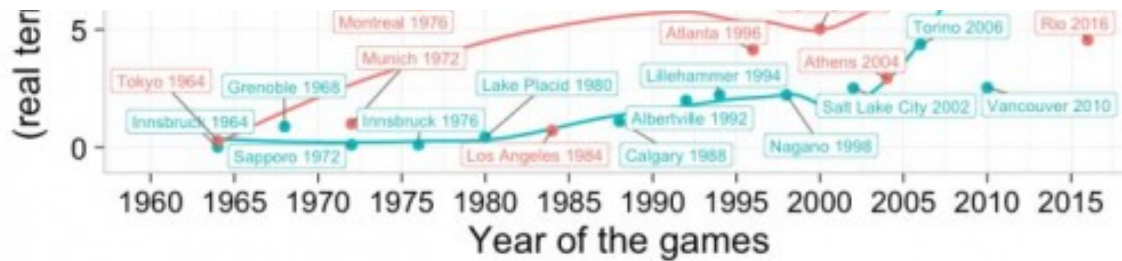
The surprising answer is that nobody knows because there has never been an independent large-scale study of the costs and cost overruns associated with the Olympics.

Today that changes thanks to the work of Bent Flyvbjerg, Allison Stewart, and Alexander Budzier from the University of Oxford in the U.K. They've carried out a detailed study of Olympic costs and overruns for all Winter games since the Munich Olympics in 1960. The research reveals the scale of the financial disasters that have plagued the games for the first time. Their research shows that the most expensive games in history and show once and for all that cost overruns are 156 percent, dwarfing the overruns at every other kind of megaproject.



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The team began by researching and then adding up the costs for every Summer and Winter Olympic games since 1960 and comparing this to the budget worked out beforehand. They say this data is available for 19 of the 30 games in this period, which is an interesting finding in its own right. “It means—incredible as it may sound—that for more than a third of the games between 1960 and 2016 no one seems to know what the cost overrun was,” they say.

The team only includes the costs of staging the games, such as for transportation, workforce administration, security, catering, medal ceremonies, and so on. They also include direct capital costs such as the building of competition venues, an Olympic village, media facilities, and the like.

But they do not include indirect capital costs, such as the money spent on upgrading the local transport infrastructure, which at many games added up to more than the other costs put together.

The team also followed international convention in comparing costs in real terms to take into account currency variations, inflation, and so on.

The results make for interesting reading. It turns out that the most expensive Summer Olympic games in history was London 2012, which cost \$15 billion and overran its original budget by a margin of 76 percent.

The team is particularly critical of the hosts that year. They say that London secured the bid in 2005 with a budget estimate that proved inadequate just two years later and was revised upwards by 100 percent.

“Then, when it turned out that the final outturn costs were slightly below the revised budget, the organizers falsely, but very publicly, claimed that the London games had come in under budget,” say Flyvbjerg and co. “Such deliberate misinformation of the public about cost and cost overrun treads a fine line between spin and outright lying.”

The cheapest Summer games were held in Tokyo in 1964, for a grand total of only \$280 million, and the cheapest Winter games were in the same year in Innsbruck and cost just \$22 million.

In general, Winter games are much cheaper than Summer games, costing on average \$3.1 billion versus \$5.2 billion.

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exception, have cost overruns," say Flyvbjerg and co. The average cost overrun for Olympic games is 156 percent. The games with the biggest overrun is Montreal 1976, which overspent by a whopping 720 percent and took the city 30 years to repay. This is followed by the Winter games in Lake Placid 1980, which had a 324 percent cost overrun, Sochi at 289 percent, and Barcelona at 266 percent.


Curiously, the smallest cost overrun was for Beijing 2008, which was only 2 percent over budget. Flyvbjerg and co examine the reliability of the figures and conclude that they seem reasonable given other measures, such as the cost of the games per athlete, which match those at other games. "The reported costs are therefore deemed adequate for hosting the Beijing games, and we have seen no direct evidence that the official numbers have been manipulated," say the team.

Of course, China is known to have spent significantly on non-sport-related costs, such as transport infrastructure, and these costs are thought to have topped \$40 billion.

Finally, the Oxford team compared cost overruns from the Olympics with those from other megaprojects. The Olympics do not come out well.

The average cost overrun for major transportation projects is 20 percent for roads, 34 percent for large bridges, and 45 percent for rail projects. There is an average 90 percent cost overrun for dams and 107 percent overrun for IT projects.

So why do the Olympics overspend by so much more? The researchers say that one reason may be the fixed deadline of a games, which cannot be moved even if there are serious problems. "All that managers can do at the Olympics is throw more money at problems, which is what happens," they say. In other words, Olympic games effectively require a blank check.

However, there are some efforts to reduce cost overruns at the games, and these appear to be working. During the 1990s, the International Olympic Committee began a program to learn how best to organize a games, accumulate this knowledge, and transfer it to the next games, a system called the Olympic Games Knowledge Management Program. The program began before the Sydney Summer games in 2000 and has been used ever since. 

This program seems to have been effective, say Flyvbjerg and co. The average cost overrun for games before 1999 was 230 percent, compared with 75 percent after 1999 (which includes the 289 percent overrun at the Sochi games). "The Olympic Games Knowledge Management Program appears to be successful in reducing cost risk for the games," they conclude.

Rio will have an overrun of about 51 percent and is similar to the average in terms of total cost and cost per athlete. And these games appear to have reversed the huge expenditure of the last two games in London and Sochi.

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Ref: [arxiv.org/abs/1607.04484](https://arxiv.org/abs/1607.04484): The Oxford Olympics Study 2016: Cost and Cost Overrun at the Games

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