The winner’s curse: why is the cost of mega sporting events so often underestimated?

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1 INTRODUCTION

Grenoble taxpayers were not very happy to pay local taxes until 1992 in order to cover the financial deficit from the 1968 Winter Games! The 1976 Summer Olympics in Montreal outperformed the Grenoble Winter Olympics in terms of deficit: the latter was so large that Montreal taxpayers were repaying the debt until 2006, a period of 30 years. After Montreal’s financial mess, the number of candidate cities wishing to host such mega sporting events dropped, and since the 1984 Games in Los Angeles the watchword of local Olympics organizing committees (LOOCs) and the International Olympic Committee (IOC) became ‘the Games will pay for the Games’. This was incentive enough to trigger an increase in the number of candidates to host the Olympics but not enough to cure the financial deficit disease. After having claimed for seven years that the Games would pay for the Games, the 1992 Winter Olympics in Albertville resulted in a $60 million deficit. Were those three exceptions proving the rule that mega sporting events are usually organized at a reasonable and correctly anticipated cost? Unfortunately not.

In the same vein, when the 2012 Summer Games was awarded to London in July 2005, the expected and advertised cost was about £2.4 billion. By the end of 2008, the cost estimates ranged from £9.4 billion to £12 billion. Some press articles have suggested that the promoters of the London candidature had deliberately underestimated the Olympics bill in order to be awarded the Games. In particular, the London candidature file had intentionally underestimated the overall cost in neglecting to account for the VAT, the Paralympics budget and a part of security expenditure. London 2012 promoters of course were neither talking about nor expecting the creation of a new fund in 2008 to cover the rising cost of the Games. There is an impression that having won a harsh struggle in bidding primarily over Paris 2012, London, its authorities, inhabitants and taxpayers are now cursed despite a study based on a contingent valuation method which found a positive willingness to pay for hosting the
Olympics by non-London residents – located in the Bath region (Walton et al., 2008). As to the 2014 Sochi Winter Olympics, the city was awarded the Games in June 2007, with an estimated $8.5 billion budget. Since then the budget has skyrocketed. By August 2010, it had already reached $33 billion – a more than threefold increase within three years, with an amount that is larger than the reported cumulative cost of the Winter Olympics in Nagano 1998, in Salt Lake City 2002 and in Turin 2006.

These facts give rise to three long standing questions to those cities (countries) that apply to host mega sporting events. Why are the actual ex post costs of hosting an event predictably much larger than the ex ante estimated and expected costs? Consequently, why do the promising prospects exhibited in an economic impact study or a cost–benefit analysis during the candidature usually vanish before the opening ceremony? And thus, why is the initial euphoria of an Olympics (or other mega sporting event) bid followed up with a post-bid curse, post-Olympics disillusion and a substantial bill for the taxpayers of the host city?

Politicians – city mayors, sports ministers, presidents of the Republic, and so on – respond to these questions by making a tabula rasa of the past: previous mega sporting events may have shown unexpected extra costs but our candidature is based on a sound economic evaluation and will not be disappointing in any respect. The success story is to come. Most economists are much more sceptical and criticize analytical flaws and methodological tricks that are usually found in economic impact studies and cost–benefit analyses of sporting events. But no one asks why such tricks and flaws are repeatedly reproduced after so many years of published academic criticism. Our contention is that ex ante benefit overestimation and more basically cost underestimation are deeply rooted in auctioning the allocation of mega sporting events which so often evolves into a so-called ‘winner’s curse’ – or the misfortune of winning a bidding war. The focus here is on the Summer and Winter Olympics, but the background idea is that the same analysis must be relevant for many mega sporting events which are allocated through an auction as soon as the number of bidders exceeds one, such as FIFA’s Soccer World Cup, the Rugby World Cup or UEFA’s European football championship (Euro). The hypothesis of a winner’s curse has not yet been examined in such a context, though it is sometimes referred to (Leeds and von Allmen, 2002) or further analysed (Swindell and Rosentraub, 2002) with regard to cities bidding to host professional team franchises in North American team sports leagues.

With a view to validating the winner’s curse assumption, the chapter starts with a brief overview of the candidature puzzle (Section 2). Then three analytical variants of the winner’s curse are presented (Section 3) in order to adopt the one which best fits with the Olympics centralized
monopolist allocation process based on auctioning in a context of asymmetrical information (Section 4). From this pioneering analysis are derived a few indicators that can detect a winner’s curse, with emphasis on its major expected outcomes (Section 5). Finally, a preliminary attempt to verify the winner’s curse hypothesis with such indices is undertaken for the Summer Olympics from 1972 to 2012 and the Winter Olympics from 1980 to 2014 (Section 6). The conclusion (Section 7) recommends a halt in bidding for the Games, an alternative being to fix an Olympics site once and for all.

2 BIDDING FOR MEGA SPORTING EVENTS: THE CANDIDATURE JIGSAW PUZZLE

The cradle of the winner’s curse, if any, lies in bidding to obtain the Olympics, which means that the roots of the curse emerge during a precise time span. First, it must be identified. Let us define the overall sequencing of an Olympiad as follows. In $t-3$, a city considers the opportunity to participate in bidding for the next Olympics. In $t-2$, it starts preparing and promoting its candidature in order to have its application ready in due time for the bid (the IOC votes). In $t-1$, the IOC votes determine the winner which will host the Games. Let us date $t$ the day of the Olympics opening ceremony and $t+1$ the day of the closing ceremony. Further, assume a post-Olympics economic recession, following growth between $t-1$ and $t+1$, occurs up to a date $t+2$. Let us fix $t+3$ as the date when all economic and social effects of the Games conclude – taxpayers have finished repaying the debt if any, residents have benefited from sporting and non-sporting infrastructures built up for the Games as well as from positive intangible effects such as feel-good, image and reputation satisfactions. Therefore: $t-3$ to $t-2$ is a preparation stage for a city’s candidature; a simplifying assumption is adopted, that is, this stage does not involve any cost even though some preliminary study may be achieved.

$t-2$ to $t-1$ is a candidature stage; *ex ante* potential or expected costs are assessed and eventually documented in the city’s application file submitted first to the country’s OC (Olympic Committee) and then to the IOC in $t-1$. This stage usually lasts six to seven years. It is the stage during which the winner’s curse emerges, if any, in the form of an *ex ante* underestimated potential cost $c_{t-1}$. A bidding city usually commands and finances at least one *ex ante* study regarding the economic impact of hosting the Olympics. Since the cost of such a study is small compared to the expected overall cost of organization, sporting and non-sporting infrastructural investments contained in $c_{t-1}$, it is neglected in the analysis below.
\[ t - 1 \) to \( t \) is an investment stage both in organization and (sporting and non-sporting) construction. During this stage the real cost of hosting the Games materializes into an \textit{ex post} actual cost in \( t \), that is \( C_t \), which may or may not differ, from \( c_{t - 1} \). Both \textit{ex ante} expected and \textit{ex post} actual costs are to be taken into account when it comes to identifying a possible winner’s curse.

\( t \) to \( t + 1 \) is a Games unfolding stage which reaches a peak in direct tangible revenues accruing to the LOOC and also a peak of the Olympics economic boom, including sometimes some unexpected last-minute extra costs.

\( t + 1 \) to \( t + 2 \) is the time span of the post-Olympics recession when local economic activity is slowing down for some months up to one year or so, despite the possibility of modest post-Olympics revenues and intangible social costs and benefits.

\( t + 2 \) to \( t + 3 \) is a longer period of time along which all medium- and long-term tangible (paying the debt, using and maintaining sporting and non-sporting facilities) and intangible (local population satisfaction, improved image of the host city, better social cohesion, various social costs and benefits) effects come to an end.\footnote{Nearly all bidding cities hire a consulting company or research centre to carry out an \textit{ex ante} economic impact study or an \textit{ex ante} cost–benefit analysis, usually a contingent valuation at this stage. The projected costs and revenues from the Games are a requisite part of the application file remitted to the IOC. A glance at the existing literature shows that \textit{ex post} economic impact and cost–benefit analyses are substantially fewer than \textit{ex ante} studies. Host cities generally do not commission an \textit{ex post} evaluation of the actual costs, revenues and benefits that could reveal too many differences between initial costs and benefits and the \textit{ex post} reality. Thus, the few existing \textit{ex post} studies are mainly due to academic research, for which there is a good reason. When there are both \textit{ex ante} and \textit{ex post} studies for the same mega sporting event, the latter exhibit a disappointing economic outcome. One of the rare events for which one can compare an \textit{ex ante} economic impact study commissioned by the OC (ESSEC, 2007) with an \textit{ex post} economic impact study and cost–benefit analysis with a rigorous methodology (Barget and Gouguet, 2010) is the 2007 Rugby World Cup in France. The results are:

- \textit{Ex ante} economic impact: €8 billion.
- \textit{Ex post} economic impact: €539 million.}

If any supplementary information happens to be published about \textit{ex post} costs after \( t \), it must be picked up for the assessment of a possible winner’s curse.
• *Ex post* net social benefit (social benefits minus social costs): €113 million.

The aim here is not to discuss the analytical flaws and methodological tricks of economic impact studies and cost–benefit analyses. Most economists do not trust the former and prefer the latter though with some reservations (Crompton, 1995; Porter, 1999; Baade and Matheson, 2001; Hudson, 2001; Johnson et al., 2001; Kesenne, 2005; Walker and Mondello, 2007; Matheson, 2009; Barget and Gouguet, 2010). They raise serious doubts about the excessively optimistic estimates of the *ex ante* studies. Scepticism is widespread among academic economists who generally adopt more rigorous methods to moderate the anticipated net benefits exhibited in studies that will be utilized by bidding cities for the purpose of announcing and promoting their candidature. However, no economist has yet analysed why such overestimation of the positive economic impact of mega sporting events, including their *ex ante* cost underestimation, is so systematically reproduced from one bidding city to the other, and from one Olympiad to the next. This is due to a missing relationship that economists have not yet established between economic impact studies underestimating the costs and overestimating the benefits, on the one hand, and the need for a city to outbid other bidding cities, on the other, that is, to show *ex ante* the biggest expected economic impact or net social benefit, and then to be plagued with a winner’s curse.

Moreover, the sceptical assessments of professional economists remain unheeded, or even unheard, by decision makers and city authorities who repeatedly commission *ex ante* economic impact studies, in particular between $t-2$ and $t-1$. All city mayors and candidature promoters of bidding cities are eager to obtain a study that will show a positive economic impact derived from hosting the targeted sports events, and are ready to pay a significant amount of money (to a prestigious consultant) to get such a conclusion. Recognizing this, consulting companies obligingly deliver impact studies which exaggerate positive economic spillover, since providing a conclusion that predicts a significant economic impact is a precondition for future selection as a consultant by other cities or countries applying to be potential hosts for some sports event.

Thus, when focusing on methodological weaknesses of economic impact studies, most economists touch a really sensitive issue. However, they do not perceive that methodological shortcomings are deliberate, to support and embellish the application file of a bidding city. Cost underestimation and benefit overestimation are embedded in the process of bidding for the Olympics, and this guarantees that *ex ante* expected costs will be higher than *ex post* actual costs (and anticipated benefits higher than the real
ones). In some sense, wrong (that is, overestimating) economic impact studies are a launching pad for the winner’s curse. This is why comparing costs publicized during or at the end of the candidature stage with actual organization and investment costs at the end of the investment stage or later, is crucial to check the very existence of a winner’s curse and, by the same token, the fallacy of nearly all *ex ante* economic impact studies delivered to cities bidding for a sports event.

Are *ex ante* impact studies and cost–benefit analyses really needed or useful, a relevant question correctly raised by Baade, Kesenne, Matheson and others? One may have some doubts since the result is known in advance: an underestimated initial cost of hosting the sports event and, consequently, a cost overrun resulting in an extra cost to be paid by taxpayers whatever their willingness to pay that was indicated *ex ante*. Our point here is not to assess the accuracy of *ex ante* studies. Nevertheless, if they had sometimes forecast *ex ante* negative or nil economic impact then we would not have suspected them to be so involved in the generation of a winner’s curse.

Three final dimensions of the candidature puzzle must be mentioned. First, it is difficult to explain with standard econometric models what are the determinants of bidding success for the Olympic Games. Feddersen et al. (2008) have attempted to do this for Summer Games between 1992 and 2012 with a model comprising 17 variables that should be considered before the IOC votes – the distance of sporting venues from the Olympic village, local weather and unemployment being the most significant variables. The outcome is interesting and, at first sight, surprising. The model correctly predicts the IOC decision for 100 per cent of failed bids. In contrast, it correctly explains only 50 per cent of successful bids. Feddersen et al. include no variable that represents the cost of the Games as publicized by bidding cities. Excluding cost from the model is probably a good econometric choice since cost must not be a priority variable in IOC votes. However, if cost is ignored as an IOC decision criterion, the probability that a successful bidder will be cursed and pay the price for that during the investment stage of the Olympiad is extremely high.

Second, it is not always the least expensive Olympics project that is voted for by IOC members. For instance, Chappelet and Kübler-Mabbott (2008) found that on several occasions IOC votes came as a complete surprise since it was not the best-quality candidature file that had been selected; they identify the 1996 and 2012 Summer Olympics and the 1998, 2006 and 2014 Winter Olympics. Does this mean that IOC voters do not care about the cost of the Games, while bidding cities are very much concerned about it? If so, a winner’s curse may be rooted in such an attitude asymmetry.
The winner’s curse

A third dimension of the candidature puzzle is in line with the previous argument. Very often the bidding city with the highest organization and/or investment cost is eventually successful. Table 4.1 reinforces this assumption with the 2012 and 2016 Summer Olympics. Both London and Rio de Janeiro exhibited the highest investment and overall costs in their bids.

### THREE VARIANTS OF THE WINNER’S CURSE

According to those sports economists who explicitly refer to the winner’s curse, it is defined as ‘the tendency of a winning bid to be in excess of the real value of the asset sold in the auction’ (Sandy et al., 2004, p. 309) or, in other words, ‘since the most optimistic among the potential bidders makes the winning bid, there is a good chance that the actual revenues . . . will be less than that bidder anticipated’ (ibid., p. 131). Note that here the winner’s curse is merely understood as the result of bidders’ behaviour, it is comprehended only as a demand-side triggered mechanism. No specific mention is made of the supply side except that it is a monopoly, like the IOC or FIFA for instance. Leeds and von Allmen (2002, p. 160) comment: ‘Economists call this paradox – in which the “winning” city is actually worse off than it would have been had it lost the bid – the winner’s curse’. One implication from these definitions is that, on the demand side for an auctioned asset, there must be more than one bidder for the winner’s curse to emerge.

Sports economists have placed less emphasis on the supply-side aspect: is there any specific strategy and, derived from it, issues of monopolist...
organizations such as the IOC, FIFA, UEFA, and so on, that could influence the auction in such a way as to result in a winner’s curse? One objective of this chapter is to answer this question as well. Combining the demand- and supply-side dimensions gives rise to analytical problems such as bilateral monopoly, or moral hazard and adverse selection issues in a relationship between one monopoly and several bidders; such issues are related to information asymmetry in principal–agent theory. Since usually more than one city is bidding for the next Olympics, the latter framework is the most relevant given that the IOC is, to some extent, a centralized and private bureaucracy at a global level. Although there are strong rivalries across its members (decision makers, voters), the IOC is not operating, properly speaking, on a competitive supply-side market for the Olympics. It does not sell its exclusive sports event in a genuine market where a fully-fledged market mechanism determines an equilibrium price.

From the very beginning, the winner’s curse had been imported into sports economics from auction theory where it was first recognized in 1971 in Western economics literature. In fact, the winner’s curse was well known even earlier in centrally planned economies (CPEs) because it was inherent in centralized allocation of inputs and state finance.

The Winner’s Curse: ‘You Have Won the Bid and Will Lose Money’

The winner’s curse hypothesis was first advanced by Capen et al. (1971) to explain the low returns on investments to companies engaged in competitive bidding for oil and gas leases. The impression was that winning bidders had paid too high a price for oil and gas leases (Gilley et al., 1986); they had been cursed. In other words, they had paid an auction price higher than any likely market price and had undertaken too high a cost to be recouped by the revenues of their investment in oil and gas exploitation. Similarly, Gilberto and Varaiya (1989) have provided evidence of a winner’s curse to explain large takeover premiums in auctions for failed banks, in sharp contrast to the orthodox view endorsed by the mainstream finance literature.

In all such circumstances, it was noted that in any auction-type setting, where the value of the auctioned object is uncertain but will turn out to be the same for all bidders, the party that overestimates the value of the object is likely to outbid its competitors and win the contest. The items won, however, are more often than not those whose value has been overestimated. Auction winners who fail to recognize this possibility are likely to be cursed by having paid more for an item than its true value. Thus, there is adverse selection in this outcome. The bidding process results in winning bids that produce below-normal or even negative returns, contrary to the
theory of rational investment decision. Thaler (1994) stresses the asymmetric information across bidders, which leads to an extreme form of the winner’s curse in which any positive bid yields an expected financial loss to the bidder. An increase in the number of other bidders implies that to win the auction, the bid must be more aggressive. Yet the presence of more bidders also increases the chance that the winner will have overestimated the value of the object for sale – suggesting that the bid should be less aggressive.

A parallel can be drawn here with allocation of the Olympics through an auction bid. The IOC, when calling for bids from cities and fixing a deadline for the submission of candidature files, is in a situation that compares with a state or a region calling for bids from companies for oil and gas leases. No one a priori knows the real market value of being selected as the next Olympics host city, not even the IOC. What the IOC looks for is to find a city eager to host the Games and organize them in the best way (that is, the \textit{ex ante} supposedly best project). Thus, the IOC is interested in eliciting aggressive bidding to get the ‘best’ project because it will benefit from the resulting winner’s curse. Bidding cities are exactly in the position that Thaler identifies: if they want to have a chance to host the Games, they must outbid other bidders until the date\(^8\) of allocation (IOC members’ vote). Assuming that the IOC chooses the best project from an economic point of view,\(^9\) the winning city is cursed since it has promised to invest and pay excessively to host the Olympics, while the IOC gets a grandiose project for which it will not pay the full price. It appears, first, that the supply side also matters in the analysis of the winner’s curse and, second, that adverse selection is likely to allocate the Games to the city proposing the most expensive project. The more a bidding city has underestimated the announced costs for hosting the Olympics, the more the winner’s curse will materialize in \textit{ex post} extra costs, and a possible financial deficit, and the more the IOC will enjoy the benefit of a magnificent project without paying its full cost.

\textbf{Being Cursed on Financial and Second-Hand Markets}

Forty years after the article by Capen et al. (1971) the literature about the winner’s curse has grown for a very simple reason: the concept has found many applications in financial markets which now comprise the great bulk of the winner’s curse literature (Kagel and Levin, 2002). In particular, it is utilized to explain the share value underestimation in initial public offerings (IPOs) and the positive initial returns earned by investors on new issued equities (Rock, 1986; Levis, 1990). Although it is a widespread phenomenon, it has been under the spotlight during IPOs’
privatization on new tiny stock exchanges in post-communist transition economies (Andreff, 2000, 2003). Overbidding is also present in different auction mechanisms such as sealed-bid auctions, English auctions, first-price auctions with insider information, blind-bid auctions, and bilateral bargaining games (the last would apply to Olympics bids only if there is one single candidature). Furthermore, one finds sophisticated models and many technicalities that would not easily transfer to analysing city bids for hosting the Olympics.

The winner’s curse issue has also been found in second-hand markets, primarily on the market for ‘lemons’ where the true value of a second-hand car is uncertain and unknown to the purchasers (bidders) while hidden by the seller. Akerlof (1970) has demonstrated that with such information asymmetry the market will lead to adverse selection and the winning purchaser will be cursed. There is even an application of the winner’s curse concept in sports labour markets wherein veterans sell their services on the talent market. Cassing and Douglas (1980) have argued that with free agency teams will tend to acquire a biased set of players, those for whom the bidder has overpaid. Because of information asymmetries and uncertainty, bids by potential team owners will not always mirror the true worth of a player, but the team that values correctly has a poor chance of signing a player compared to a team that overestimates the player’s value. The latter is cursed.

Since the previous examples do not closely parallel an auction bid for hosting a mega sporting event, the rest of the chapter does not follow this path.

The Winner’s Curse in a Context of Centralized Allocation of Investment Funds

In (CPEs), investment funds were allocated annually across state-owned enterprises through an auction opened by the central state administration (central planning agency or industrial ministries). It was obviously not a market allocation but a call sent to enterprises to submit investment projects, since the central authorities would finance the best projects. In Yugoslavia until 1956, the Federal Institute for Planning auctioned investment funds every year, collected projects submitted by ‘self-managed’ enterprises and eventually supported those investment projects which were deemed to be the most efficient and closest to central plan objectives (Neuberger, 1959). The national investment fund was allocated across enterprises that provided the best projects. In the USSR, a national investment fund was distributed by Gosplan across industrial ministries whose job was to allocate their industry investment fund among the enterprises
under their tutelage, according to some centralized ‘efficiency’ criteria (Dyker, 1983). These efficiency criteria, which were used in the Soviet Union until the 1960s, were somewhat debatable with regard to their economic rationale (Andreff, 1993). However, after economic reforms, the criteria for investment decision making came closer to those applied in public enterprises in market economies. In the latter, for each investment project $k$ its discounted net benefit (its social profitability) was calculated that is:

$$B_k = \sum_{t=0}^{N} \frac{R_{kt} - C_{kt}}{(1 + a)^t},$$

where $R_{kt}$ stands for all revenues derived from the investment over its lifetime (from $t = 0$ to $N$), $C_{kt}$ stands for all investment costs ($C_{kt} = C_0 + C_t + C_{ft}$ with $C_0$ the initial investment cost, $C_t$ the cost of all further annual investment ‘slices’ in the case of a pluri-annual investment, and $C_{ft}$ the operational cost of the equipment over its lifetime) and $a$ is the national discount rate fixed by a central planner. In the face of rival projects submitted by enterprises, industrial ministries normally should have stuck to two selection rules:

1. choose an investment project if, and only if $B_k > 0$, for any $k$; and
2. choose investment project 1, then project 2, then project 3, and so on, until the industry investment fund is exhausted if $B_1 > B_2 > B_3 > \ldots > B_n$. If the ministry investment fund could afford to finance only, the first three projects, it would allocate all its investment fund to the most socially profitable projects. Once each enterprise, had obtained its own investment fund, it was committed to including the selected investment project (including its costs and revenues) in its own annual plan and to carrying it through.

However, in practice, investment fund allocation did not proceed in such a smooth and theoretical way due to the context of information asymmetry. Each enterprise director was knowledgable about his/her enterprise’s existing equipment, technology, production capacity, real costs, the skills and productivity of manpower and, therefore, the time required to achieve the new investment project with the allocated investment fund. In contrast, the industrial ministry (and of course the central planning agency) had only a vague idea, or no idea at all, about the magnitude of the enterprise’s internal managerial variables. In such a context, in order to augment its chance of obtaining investment funding, each enterprise was keen not to reveal the true value of its internal managerial variables.
information non-transparency creating a moral hazard situation – and inclined to ‘cheat’ with regard to the reality of its investment costs and revenues, and the required completion duration of the investment project. It has been demonstrated that cheating on investment projects tended to be the rule rather than the exception in CPEs (Kornaï, 1980; Andreff, 1993; Dyker, 1983):

- enterprises announced an investment and operation cost \( c_k \) for project \( k \) and not the actual cost \( C_k \), with \( c_k < C_k \), in order to augment their chance of obtaining investment funding from the ministry;
- enterprises declared a very optimistic – often completely unrealistic – completion duration for project \( k \); Soviet economies are well known for their unfinished investment building sites resulting from unattainable completion duration; and
- enterprises anticipated overestimated revenue from the investment: \( r_k > R_k \), with \( r_k \) the \textit{ex ante} announced revenues and \( R_k \) the actually expected revenues.

An obvious consequence of investment cost underestimation and investment revenue overestimation is that the social profitability of an investment project \( k \) sent by an enterprise to the ministry was somewhat higher than its real social profitability: \( b_k > B_k \).

Since all enterprises had adopted such strategic behaviour, central authorities and ministries were confused, and unable to make rational decisions about how and to whom to allocate the national investment fund. Facing a myriad of fabulous investment projects, ministries had a tendency to inflate the number of financed projects in the first year of a five-year plan – overinvestment – which generated a typical investment cycle in CPEs (Bauer, 1978) with fewer investment projects financed by the end of the five-year plan. Indeed, all the projects submitted to a ministry were unrealistic, exhibiting an extraordinary social profitability, unbelievably low costs and a very short completion time. Thus, the aforementioned decision rule 1 eliminated not even one project. Rule 2 eliminated projects that seemed to be the least realistic. In such a confused situation, adverse selection was the most common outcome and inefficient or low-efficiency investment projects were financed, including some that were subject to bargaining, lobbying and bribery of the ministry’s civil servants in charge of enterprise investment funds.

Generally, enterprises more often cheated by underestimating costs and completion duration than by overestimating investment revenues. Therefore in order to simplify the issue, we shall consider only the costs.
Let us assume that during the auction, a ministry received details of investment projects such as:

\[ c_1 < c_2 < c_3 < \ldots < c_k < \ldots < c_n. \]

If it choose the first three, it might well have selected the least efficient or, at least it could not be sure that it had kept the three most efficient ones. If in reality all projects had the same actual cost \( C^* \), it would have meant that \( c_1 = C_1 - C^* \) was the investment project for which the ex ante cost announced by an enterprise was the most underestimated compared with its actual cost. It follows that \( c_2 = C_2 - C^* \) was the second most underestimated project in terms of cost, and \( c_n = C_n - C^* \) was the project with the least underestimated cost. The last was nevertheless the one which had no chance of being funded while the first projects 1, 2 and 3 were the most likely to be financed by the ministry although they were the most underestimated, that is, the least feasible in terms of cost and completion duration. Adverse selection is evident.

Now, let us relax the assumption that all projects had the same actual cost \( C^* \) but, instead, they had different costs. Then all ministry decision making would depend on the relationship between actual costs and the announced costs \( c_1 < c_2 < c_3 < \ldots < c_k < \ldots < c_n \), that is, on the degree of cost underestimation specific to each investment project. Let us imagine that actual costs were indeed, such that \( C_1 < C_2 < C_3 < \ldots < C_k < \ldots < C_n \) then the risk of adverse selection is difficult to assess exactly but it is minimal. On the other hand, the risk of selecting inefficient investment projects would be quite high if the actual costs \( C_1, C_2 \) and \( C_3 \) were such that the real social net benefits were \( B_1, B_2 \) and \( B_3 < 0 \), despite ex ante announced social benefits \( b_1, b_2 \) and \( b_3 > 0 \) declared by enterprises during the auction. Now, if actual costs were such that \( C_n < \ldots < C_k > \ldots < C_3 < C_2 < C_1 \), then adverse selection reached its maximum. The latter hypothesis corresponds to a reality where the less efficient an investment project is, the more the enterprise underestimates (hides or cheats about its own inefficiency) its actual costs. Such a hypothesis was more than realistic in Soviet economies because those enterprises submitting the lowest-quality investment projects were more prone to cheat (underestimate costs) than rival enterprises.

The conclusion is that when a centralized organization in a monopoly situation utilizes an auction to proceed with fund allocation to bidding enterprises, adverse selection is highly likely. And the winner’s curse lies therein. The ministry is cursed in so far as it has allocated investment funds to less-efficient projects and it will become aware of this when enterprises which have benefited from the fund allocation are unable to complete their
investment projects at the announced cost within the announced deadline. The state-owned enterprise, in some way, is also cursed: through cheating, it has submitted an infeasible investment project and, in practice, it will not be able to complete it within the deadline at the \textit{ex ante} announced cost. In the Soviet system, an enterprise which did not satisfactorily complete its plan was normally sanctioned (lower bonuses, fewer honorific rewards, dismissal or even worse under Stalin). In an attempt to avoid sanctions, enterprises also added some bad management practices to informational cheating (Andreff, 1993) known as ‘strategic behaviour’ in standard economic theory.\footnote{Andreff, 1993}

When it was lagging behind its annual investment plan time schedule, an enterprise attempted to bargain an extension of its initial investment fund, allocated at the beginning of the year, but which was found to be too short due to cost and completion duration underestimation. First, it bargained with centralized authorities (ministries) to obtain a facilitating revision of its planned objectives: allocation of extra investment funds, extra inputs or manpower, downward revision of plan targets including that the investment project initially submitted would not be completed in due time and so on. Large Soviet enterprises had elaborated a specific strategy based on \textit{tolkachi}. A \textit{tolkach} was an enterprise employee especially engaged to stay in Moscow and canvass relevant ministries with demands for extra investment funds, extra inputs, and downward revision of plan targets. In other words, it was the Soviet variant of lobbying. The \textit{tolkachi} had become (informal) quasi-institutions, in the Soviet economy and, in some sense, they were a product derived, from the enterprise winner’s curse. Being cursed by its own cost underestimation strategy, a Soviet enterprise always attempted to obtain extra means for completing its investment project through putting pressure on and attracting the attention of centralized authorities.

\textit{Tolkachi} were endowed by their enterprise directors with (illicit) secret funds that enabled them to bribe those ministry bureaucrats who were likely to deliver extra investment funds and extra inputs to the enterprise, to address the enterprise’s demands as well as those emanating from rival enterprises (also cursed during the auction) and to send the enterprise demand files to decision makers in the Kafka-like universe of a Soviet ministry. It was common practice for Soviet enterprises to corrupt bureaucrats in charge of allocating investment funds and other material means. In a nutshell, with a view to avoiding the worst consequence of the winner’s curse consisting in sanctions for plan non-fulfilment, a Soviet enterprise usually resorted to bargaining, lobbying and bribery, the three ingredients of a ‘successful’ enterprise management in a centralized economy with information asymmetry.
4 THE OLYMPICS CENTRALIZED ALLOCATION PROCESS WITH ASYMMETRIC INFORMATION

There is a similarity between the centralized auction for allocating investment funds in a CPE and the functioning of an auction whereby the Olympics are allocated to a bidding city. However, similar is not identical, even though the selection mechanism of a host city proceeds, in the absence of a genuine market for the Games, with an auction by a (global) centralized authority or organization, that is, the IOC. From the starting point of the comparison, a difference must be underlined. In a CPE, a centralized body offers funds to achieve an investment, then opens an auction for investment projects, and finally allocates investment funds to various enterprises for projects to be achieved within an annual deadline. With the Olympics, the IOC publicizes the task of hosting and organizing the next Games within a precise deadline, then it calls for projects proposals. These proposals are not applications for IOC funding; rather, they are candidates for raising funds from different sources in order to cover the cost of those investments required to host the Games. At the end of an auction, which usually takes several years, the IOC allocates the right to host the Olympics to the most interesting city project. However, the fact that the object of such an auction is not to obtain finance allocated by the IOC but to win the status of being the next host city of the Olympics does not reduce or eliminate the risk of a winner’s curse. The risk may be even higher than in a CPE allocation process because the incentive to cheat is much stronger. A city that wants to host the Games commits itself a heavy investment over a six-to seven-year period and then hopes to benefit from the ‘Olympics host city’ label which provides a unique capacity for collecting and mobilizing finance. The city’s financial commitment and concern are approximately a billion dollars to host the Olympics, whereas, in CPEs, enterprise investment was roughly a million roubles, sometimes less.

Now, considered as an auctioneer, does the IOC behave as a central planner or as an industrial ministry allocating investment funds when it opens an auction for the next Games? A weak variant of a central planner model is due to Oskar Lange (1937), who adapted the Walrasian auctioneer model. The auctioneer announces some price system, enterprises of the planned economy proceed with their economic calculation (profit maximizing under a resource constraint) and then send back to the planner–auctioneer those output and input quantities that maximize their profit. If the quantities supplied and demanded by all enterprises are not equal, the planner revises its price system, then enterprises recalculate their project plans and send revised estimates to the central planner. This
iterative process lasts until there is supply–demand equality for all products and resources at equilibrium prices. The auction for the Olympics differs from the Lange model because the IOC initially does not announce any price. Moreover, the explicit or implicit objective of the IOC is not to reach Walrasian equilibrium prices and quantities.

An inverted planning model to Lange’s has been suggested by Malinvaud (1967), Manove (1971) and, for operational planning in Hungary, by Kornai and Liptak (1965). The idea is that the planner announces quantities of output to be produced and inputs to be allocated and enterprises respond, after making their own economic calculation, with prices and costs. The iterations go on until they converge toward equilibrium – the saddle-point theorem. This process is closer to the IOC auction. The IOC, in some sense, announces quantities to be produced – a defined assortment of sporting venues and infrastructure that must be completed and operational within the opening ceremony deadline. In addition, each bidding city adds an optional number of non-sporting infrastructure investments, some required by the IOC, that may facilitate or embellish hosting the Games: transportation, high-tech telecommunications, urban reconstruction, and so on. Does the IOC receive prices and costs from bidding cities? No. It receives candidature files including both number of sporting venues and amount of non-sporting infrastructural investments, and costs (prices) of all those investments and the LOOC expected organization costs. To pursue this comparative analysis, we shall now examine the objectives of the IOC and bidding cities, respectively.

The very existence of the IOC is justified by four responsibilities or objectives, one of which is to elect (choose) every fourth year a host city for the Summer Olympics and the Winter Olympics, and then to supervise its LOOC (Chappelet and Kübler-M abbott, 2008). Is this objective maximized under some constraint as in the auctioneer–planner model? The constraint is that a bidding city must provide all the required facilities and must commit itself to adhering to an operational budget, which is a minimal precondition for a city to be selected. Are there other conditions that would maximize the IOC objective function? Another one certainly is the best possible quality of the Games which consists of a guarantee of well-functioning and secure sports contests (quality of sporting equipment, distance between Olympic venues and the Olympic village, and so on), an excellent hosting quality (Olympic village, transportation, hotels), overall security, impressive opening and closing ceremonies, high-quality media and telecommunications and, nowadays, an environmental quality, all prerequisites according to the 20 chapters contained in a candidature file. Thus, if the IOC is maximizing something, it is the overall quality of the project which must benefit from worldwide media coverage, leave a
grandiose image of each Olympiad, and an unforgettable memory and indelible marks on the host city landscape. With a view to obtaining a grandiose project, it is in the IOC’s interest to pave the way for or even fuel overbidding across bidding cities. This is what it clearly started to do after the single candidature of Los Angeles for the 1984 Olympics.

I have intentionally, not mentioned the cost of the Games as one of the variables included in the IOC objective function with a view to cost minimization. First, it is more than likely that the cost of the Olympics is not a decisive criterion in the voting of the 104 IOC members. Furthermore, the criterion of minimal cost to some extent clashes with maximizing the desired extravagant quality of the Games. A proof of such a contention is that the IOC often selects the most expensive rather than the cheapest project (see Table 4.1), which means both adverse selection in terms of cost, and that the winner’s curse is at work. Afterwards, cost inflation and cost overruns are basic indices of the winner’s curse.

The objective function of bidding cities is crystal clear and consists in getting the Games. Therefore, each bidding city must promise fixed quantities of sporting facilities and a variable quantity of non-sporting infrastructure, focusing on their excellent quality since it will be selected or not on these aspects of its candidature. Before Montreal 1976, investment cost and the LOOC operational budget did not matter that much. Since then, and after Los Angeles 1984 demonstrated that the local organizing committee of the Games can end up in the black, the cost dimension of candidatures has become much more significant, though not the major decision criterion. The primary interest of bidding cities is to maximize (and focus on) the qualitative components of their candidature, thereby encouraging ambitious project proposals. After 1984, bidding cities started to take an interest in also demonstrating reasonable or even low costs in parallel with the supposedly unbelievable quality of their candidature. The only way to reconcile an extravagant project with costs that are not exorbitant is, explicitly or implicitly, to cheat, that is, to communicate and to complete the candidature file on the basis of costs that are underestimated by different means (omitting the VAT, the Paralympics budget, and so on). All in all, it is in the interest of the bidding cities to overbid upward with respect to the quality and downward with respect to the publicized cost of their project. Such a strategy compares with that of rival enterprises struggling for the allocation of investment funds in a CPE except that cities are seeking to be awarded the Games, because it is a precondition for mobilizing huge finance necessary for hosting the Olympics. Thus, rival bidding cities are in sync with the principal objective of the IOC, which is to balance outward extravagance with the appearance of reasonable cost.
The parallel with enterprises in CPEs cannot exactly be extended to the completion duration of investments since this was mandatory, but almost never met, in Soviet-type planning. Yet, the completion duration is mandatory and cannot be circumvented in hosting the Olympics – it is not feasible to start up Olympics sports contests if the stadium is not completed – but the IOC’s recurrent worries about delayed Olympics building sites can be used as a control variable of the winner’s curse. Building delays usually generate cost overruns when it comes to rushing in order to stick to the deadline. Revising building costs upwards (thus revealing the initial cost underestimation) or even giving up some Olympics building to curb skyrocketing costs are also windfall effects of the winner’s curse. Another revealing factor is when the LOOC or the host city obtains extra finance or extra public subsidies, for instance, from the government. A financial deficit or an \textit{ex post} lower financial surplus than expected by the LOOC provides further proof of the winner’s curse while a sanction of the latter is a bidding city budget deficit which must be covered with a specific post-Olympics taxation. Given all the financial consequences of hosting the Games, one can understand that bidding cities, just like former Soviet enterprises, do not skimp on the means to get the sports event and do not hesitate to engage in lobbying or, in the worst case, in corrupting some IOC voters, that is, the most unscrupulous or greedy members of the IOC.

A last point is that information asymmetry is crucial in the genesis of the winner’s curse. A bidding city knows its candidature project down to the tiniest detail, so it is able to communicate in such a way as to emphasize specific aspects of the file, in particular its supposedly extraordinary quality. In contrast, this in-depth knowledge of the candidature file allows the bidding city promoters to play down those less exciting characteristics of the project, namely excessive costs, stark security issues, negative externalities and a possible crowding-out effect. An economic impact study is instrumental in highlighting the best features and blurring the lesser ones. The IOC cannot have a similar in-depth knowledge (information) about each bidding city project and cannot control how accurate or fallacious is the information delivered in the application file, namely about actual costs, externalities, and so on. The Olympics site visits by the IOC representatives are not enough to compensate for information asymmetry between bidding city promoters and the IOC voters – especially since ‘the IOC members are renowned for not really taking into account the technical recommendations and focus on their political and personal judgment of the candidatures’ (Chappelet and Kübler-Mabbott, 2008, p. 87) when they cast their vote.
5  INDICATORS OF THE WINNER’S CURSE

One can infer from the above analysis some indicators that would enable us to spot and check the existence of a winner’s curse resulting from the auction for allocating mega sporting events to a host city:

1. *Unexpectedly higher net social cost or lower net social benefit*  The most convincing index of a winner’s curse is a significant difference between *ex ante* and *ex post* net social outcome of a mega sporting event that can be observed in comparing the results of an *ex ante* and an *ex post* cost–benefit analysis of the same event. The winner’s curse hypothesis would be confirmed if *ex post* net social cost is significantly higher than *ex ante* net social cost or if *ex post* net social benefit is significantly lower than *ex ante* net social benefit (as with the aforementioned 2007 Rugby World Cup).

A significant difficulty with indicator 1 is that an *ex post* cost-benefit analysis usually is not available or published after each Olympic Games. Therefore, some proxies are required. The three following indicators are consistent with the winner’s curse hypothesis although each of them alone is not sufficient to definitely establish a curse. However, if they are recurring from one Olympics to another (like the recurring cost underestimation of Soviet enterprises), one would lean towards the belief that a winner’s curse is at work in the Olympics allocation to bidding cities:

2. *Cost overruns*  A first proxy is a recurring difference\(^{14}\) between *ex ante* cost in the candidature file and *ex post* cost reached on the opening day or after. Let us call it a ‘cost overrun index’ such as:

\[
C_{t-1} < C_t \text{ (or } C_{t-1} < C_{t+3} \text{ when data are available for } C_{t+3})\.
\]

Given that over a period of six or seven years there is some inflation in any country and that upward cost revisions happen at a more or less clearly defined date and are usually published in current prices, one can accept as a proof consistent with an existing winner’s curse a difference of at least 30 per cent between *ex post* actual and *ex ante* anticipated cost. The data to be found are the initial cost in the candidature file in \(t-1\), the actual cost at the moment of the opening ceremony \(C_t\), and, if one can circumvent data paucity about \(t+3\), the actual cost \(C_{t+3}\). Any extra cost or upward cost revision would fuel relevant data for the cost overrun indicator.
An additional remark is necessary about this indicator as well as the next ones. The announced cost $c_{t-1}$ is an official figure and well publicized by the bidding committee in the candidature file and by the IOC. Such *ex ante* cost is not debatable once published. Looking for the actual cost in $t$ or $t + 3$ is obviously less easy and may be cumbersome and boring. Indeed, it is not in the interest of a host city to reveal that the actual cost of the Olympics has markedly surpassed the *ex ante* cost. Thus the genuine *ex post* actual cost is not always much publicized in official documents. Then there is sometimes no other way for researchers than to rely on data published in the press or in documents published without the IOC or the host city stamp.

3. **Ex post revisions in the Olympics project**  When there are no data about the *ex post* cost, a second proxy can be used when some significant revisions occur in the Olympics project between $t - 1$ and $t$. For example, the appearance of a new building in the project which was not included in the candidature file is an explicit index of an initial cost underestimation. Similarly, an upward revision of expenditures linked to one sporting facility or non-sporting infrastructure project between $t - 1$ and $t$ can also reveal the existence of a winner’s curse. Or, when a building that was planned in the candidature file happens to be cancelled between $t - 1$ and $t$, this also reveals an initial cost underestimation: due to the latter the bill skyrocketed after $t - 1$ and the host city has no other way to curb cost overruns than by giving up some building described in the candidature file.

4. **Delayed completion of an Olympics investment**  The completion dates of different Olympics facilities which are mentioned in the candidature file simply cannot be missed. Thus, a delayed completion of an Olympics investment merely translates into a time lag between expected and actual completion dates, and in a subsequent final rush in the last weeks before the opening ceremony to complete the unfinished building – which is exactly the investment cycle described for CPEs (Bauer, 1978). A final rush at the very last minute always inflates the actual investment cost.

When none of the three proxy indicators can be fuelled with data or if one wishes to further confirm the existence of a winner’s curse, some other variables can be used as proxies. However, they are less significant than the first three indicators:

5. **Extra public subsidy or extra public finance**  If the cost of hosting the Olympics was initially underestimated, one way out for the LOOC and the host city is to bargain and obtain additional public finance
or an extra subsidy, for instance from the government or from some regional authorities between \( t - 1 \) and \( t \).

6. **Host city fiscal deficit and debt** When the extra cost of the Olympics project results in a heavy financial burden for the host city its budget plunges into a fiscal deficit and a public debt that has to be repaid over time. The same index may register the transformation of *ex ante* LOOC (or overall) surplus into *ex post* LOOC (or overall) deficit.

7. **A disappointing number of ‘foreign’ visitors** When the number of ‘foreign’ (that is, coming from outside the host city or region) visitors in \( t \) is lower than expected in \( t - 1 \), then revenues will be lower than expected and, possibly, will increase financial losses.

Two more qualitative indicators may confirm an existing winner’s curse: (a) there are clear signs that a bidding city has attempted to influence the IOC voters through lobbying with some IOC members; and (b) since outcome uncertainty about who will host the Games lasts until the IOC votes, and given that some IOC members are less scrupulous and disinterested than they should be, a bidding city can be led one step forward into bribery and corruption that can be taken as a confirmation of a winner’s curse. However, lobbying and corruption *per se* are not decisive indicators of a winner’s curse. Lobbying and corruption are unfortunately common practices in various economic activities attempting to influence different decision makers, including in some rigged relationships between money and sports such as fixed matches and online sport gambling (Hill, 2009). Spotting lobbyists, even when lobbying is very effective as during the London campaign for the 2012 Olympics (de Rendinger, 2006), is not an easy task and does not alone guarantee the existence of a winner’s curse, unless if it is to complement, for instance, a cost overrun or a delayed completion indicator.

6 **PRELIMINARY INDICES VERIFYING THE WINNER’S CURSE HYPOTHESIS**

This chapter aims to validate the winner’s curse hypothesis. Tables 4.2–4 provide some readily available data on the costs of hosting the Olympics that are consistent with this hypothesis. The data gathered in these tables must not be taken at their face value since, as mentioned above, some do not bear an official stamp. The only important point here is to check whether \( C_t > c_{t-1} \), *ex post* is higher than *ex ante* cost, meaning that a *cost overrun* had occurred. Data have been collected, when easily available, for the Summer Games since 1972 and the Winter Games since 1980.
Table 4.2 Ex ante and ex post cost of the Summer Olympics

<table>
<thead>
<tr>
<th>Host city, year (No. of bidders)</th>
<th>$c_{t-1} \text{ ex ante cost}</th>
<th>$c_t \text{ ex post cost}</th>
<th>After t cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munich 1972 (4 bidders)</td>
<td>Overall cost: $2,705m</td>
<td>Investment cost: $1,757m00</td>
<td>LOOC operation cost: $656m00</td>
</tr>
<tr>
<td></td>
<td>Investment cost: $549.5m00</td>
<td>LOOC operation cost: $476m00</td>
<td>Operation: $1,592m</td>
</tr>
<tr>
<td>Montreal 1976 (3 bidders)</td>
<td>Olympic stadium cost: $172m</td>
<td>LOOC operation cost: $476m00</td>
<td>Stadium: $1,000m</td>
</tr>
<tr>
<td>Moscow 1980 (2 bidders)</td>
<td>Overall cost: $3.7bn</td>
<td>Investment cost: $1.7bn</td>
<td>Overall cost: $9bn</td>
</tr>
<tr>
<td>Los Angeles 1984</td>
<td>No commitment</td>
<td>LOOC operation cost: $546m</td>
<td>Overall cost: $1,592m</td>
</tr>
<tr>
<td>Seoul 1988 (2 bidders)</td>
<td>Overall cost: $3.1bn</td>
<td>LOOC operation cost: $664m00</td>
<td>Extra cost: $2bn</td>
</tr>
<tr>
<td>Barcelona 1992 (6 bidders)</td>
<td>Investment cost in:</td>
<td>Investment cost: $4,063m00</td>
<td>Debt: $6.1bn</td>
</tr>
<tr>
<td></td>
<td>1990: F35.5bn; 1992: F41.5bn</td>
<td>LOOC operation cost: $1,670m</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOOC operation cost: $1,670m</td>
<td>Investment cost: $1,013m00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall cost in 1990: $2,021m</td>
<td>LOOC operation cost: $1,793m00</td>
<td></td>
</tr>
<tr>
<td>Atlanta 1996 (6 bidders)</td>
<td>Overall cost in 1994: $3,428m</td>
<td>Investment cost: $1,324m00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Investment cost: $2,500m</td>
<td>LOOC operation cost: $1,346m00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOOC operation cost: $1,463m</td>
<td>Overall cost: $6.6bn</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New South Wales Invt: $1,220m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sydney 2000 (5 bidders)</td>
<td>Overall cost in 1994: $3,428m</td>
<td>Investment cost: $2,601m00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Investment cost: $2,500m</td>
<td>LOOC operation cost: $2,434m00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOOC operation cost: $1,463m</td>
<td>New South Wales Invt: $1,249m</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New South Wales Invt: $1,220m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event</td>
<td>LOOC operation cost</td>
<td>Overall cost</td>
<td>Investment cost</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Athens 2004 (5 bidders)</td>
<td>$2,162m00</td>
<td>€4.6bn</td>
<td>$1,600m00</td>
</tr>
<tr>
<td>Beijing 2008 (5 bidders)</td>
<td>$2,800m00</td>
<td>$1,600m00</td>
<td>$1,458m00</td>
</tr>
<tr>
<td>Beijing 2008 (5 bidders)</td>
<td>$2,900m00</td>
<td>$1,600m00</td>
<td>$1,500m00</td>
</tr>
</tbody>
</table>

*Note: m: million; bn: billion; Sm00: in 2000 dollars; Australian dollars for Sydney; F: French francs

Table 4.3  Ex ante and ex post cost of Winter Olympics

<table>
<thead>
<tr>
<th>Host city, year (No. of bidders)</th>
<th>$c_{t-1}$: ex ante cost</th>
<th>$C_t$: ex post cost</th>
<th>After $t$ cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Placid 1980 (2 bidders)</td>
<td>Initial operation cost: $47m</td>
<td>LOOC operation cost: $96m</td>
<td>Op. loss: $8.5m</td>
</tr>
<tr>
<td></td>
<td>Investment cost: $129m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarajevo 1984 (3 bidders)</td>
<td>Operation cost: $17.6m</td>
<td>Operaton cost: $20.2m</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Investment cost: $15.1m</td>
<td></td>
</tr>
<tr>
<td>Calgary 1988 (3 bidders)</td>
<td>Initial overall cost: CV500m</td>
<td>Overall cost: CV1,000m</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LOOC operation cost: $636m</td>
<td></td>
</tr>
<tr>
<td>Albertville 1992 (7 bidders)</td>
<td>Initial total cost: F2,933m in 1987: F3,160m; 1991: F11,487m of which operation cost: F3,233m; sports equipment: F714m; infrastructure: F8,630m</td>
<td>LOOC operation cost: F4,200m; operaton cost: F5,755m; infrastructure: F7,800m</td>
<td>Op. loss: $60m (F285m)</td>
</tr>
<tr>
<td></td>
<td>Accommodation cost: F289m</td>
<td>Extra sports equipt cost: F286m</td>
<td></td>
</tr>
<tr>
<td>Lillehammer 1994 (4 bidders)</td>
<td>Overall cost in 1988: $1,511m</td>
<td>Overall cost: $1,700m</td>
<td>Op. loss: $343m</td>
</tr>
<tr>
<td>Nagano 1998 (5 bidders)</td>
<td>Overall cost in 1992: $450m</td>
<td>Overall cost: $875m</td>
<td>Debt: $1bn</td>
</tr>
<tr>
<td>Salt Lake City 2002 (4 bidders)</td>
<td>Operation cost: $400m in 1989; 1996: $1,000m; 1998: $1,300m</td>
<td>Operation cost: $1.9bn</td>
<td>Op. loss: $168m</td>
</tr>
<tr>
<td>Turin 2006 (6 bidders)</td>
<td>Investment cost: €3.5bn</td>
<td>Investment cost: €13bn</td>
<td>Op. loss: $38m</td>
</tr>
<tr>
<td></td>
<td>Operation cost: €660m</td>
<td>Operation cost: €1357m</td>
<td></td>
</tr>
<tr>
<td>Vancouver 2010 (3 bidders)</td>
<td>Operation cost: $846m</td>
<td>Operation cost: $1,269m</td>
<td>Op. loss: $37m</td>
</tr>
</tbody>
</table>

Note:  m: million; bn: billion; $00: in 2000 dollars; F: French francs

The winner’s curse

Table 4.4 Summer Olympics: operational and construction cost increases

<table>
<thead>
<tr>
<th>Olympics</th>
<th>Operational cost</th>
<th>Construction cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st estimation</td>
<td>Last estimation</td>
</tr>
</tbody>
</table>

Source: Solberg and Preuss (2007).

There is practically no sign of a winner’s curse involved in Los Angeles 1984 (Table 4.2), which is an expected result since the 1984 Olympics was not auctioned, Los Angeles being the only candidate. Nevertheless, it must be recalled that Los Angeles had very little construction expense and the city had agreed to host the Games only on the condition that it took on no financial obligation (Zimbalist, 2011). In the case of Lake Placid 1980, the second bidding city, Vancouver, withdrew a few days before the IOC cast their votes, which may have alleviated the winner’s curse. It has been difficult to find enough information comparing ex ante and ex post costs for Munich 1972, so the conclusion of an existing winner’s curse is still not clear. On the other hand, data are not absolutely reliable for Moscow 1980 and Sarajevo 1984. Nearly all other Olympiads show recurring cost overruns consistent with the winner’s curse hypothesis and it is already crystal clear for London 2012 and Sochi 2014 as shown in Tables 4.2 and 4.3.

With regard to the Summer Olympics, without commenting on each statistic per se, Tables 4.2 and 4.4 show a strong tendency for the Games to end up with a higher ex post actual than ex ante expected cost. It appears that cost underestimation is often, more due to investment and infrastructure costs than to the LOOC operation cost. If the criterion of a 30 per cent cost overrun in current prices is adopted, the winner’s curse is likely to exist for Montreal 1976, Moscow 1980, Seoul 1988, Barcelona 1992, Athens 2004, Beijing 2008, and London 2012. With a 30 per cent extra cost criterion the hypothesis is rejected for Atlanta 1996 and Sydney 2000. In the last two cases, complementary proxies must be meaningful to draw a conclusion.

Turning to the Winter Olympics (Table 4.3), with the same criterion, a winner’s curse is recognized for Lake Placid 1980, Calgary 1988,

The ex post revisions indicator can be witnessed for several Games. The most infamous and costly revision probably is the story of the Montreal Olympic stadium roof (Auf der Maur, 1976) which was eventually completed as late as 1985, nine years after the Games, at an almost sixfold increase. Moreover, transforming the velodrome into a Biodôme had triggered an additional $1.5 billion cost. In Albertville, the cost of the Courchevel ski-jump has been revised from $13 million up to $26 million, and the La Plagne bobsleigh run from $15 million to $50 million. A $1,346 million expenses targeted at public transportation equipment was eliminated from the initial Albertville LOOC budget. In Sydney, two galleries of the Homebush Bay stadium were forgone due to excessive cost. In Beijing, simplifying the ‘Bird’s Nest’ structure of the stadium is a revision that saved 50 per cent of steel costs; the Olympic swimming pool, eventually assessed as too sophisticated, was streamlined. In Vancouver, the security budget multiplied seven times between 2003 and 2010, from $153 to $1,070 million. The cost of the London Olympic stadium has been revised upwards from $406 million to $850 million while the cost of infrastructures is up by $170 million; the Olympic park has inflated by $1,440 million over its initial $5.3 billion bill. The Rosa Khutor ski resort was added, after the bid, to the Sochi project; it is opportunely financed by Interros, a holding company owned by a rich oligarch, Vladimir Potanin.

Next, consider the delayed completion indicator. The Albertville urban project still remains uncompleted. The completion delay of the Centenary Park in Atlanta required additional jobs and overtime work, and thus has generated extra cost. In Athens, a number of building sites lagged behind schedule, in particular the new tramway, a circular motorway and a suburban train to the new airport. In January 2004, only one (the Nikaia gymnasium) of the 33 Olympic sites was ready. Then, there was a final investment rush. The completion of several London Olympic sites, including Wembley stadium, is late and the LOOC is meeting with increasing obstacles to organizing all sports equipment in due time.

As a result, and as usual with the Olympics, extra public finance and subsidies have been obtained by the LOOC. Montreal 1976 received overall $1 billion in public subsidies. Albertville 1992 received extra financial aid from the government in 1987 up to one-quarter of the LOOC budget, and an extra $46 million after the Games, in July 1992. In Sydney, the riding school obtained an operation subsidy of $676,000 per year and the Blacktown Olympic Park $654,000 per year. The city of Athens never stopped raising public loans when preparing to host the Games and this
helps to account for the increase in the Greek public debt. The Italian government provided $223 million to the LOOC in 2005 in order to cope with its budget deficit which was apparent as early as 2004.

An LOOC deficit does not emerge as often as it should because extra expenditures are transferred to (or subsidized by) the host city budget and sometimes the region or national government budget. Nevertheless a loss – an operation deficit – has been registered for Munich 1972, Montreal 1976, Lake Placid 1980, Albertville 1992, Lillehammer 1994, Sydney 2000, Salt Lake City 2002, Athens 2004, Turin 2006, Vancouver 2010, and probably though unofficially for Seoul 1988 (Preuss, 2004) and slightly for Atlanta 1996. Given the heavy subsidies collected by Barcelona 1992 (and a subsequent $6.1 billion debt), the $3 million official financial surplus is practically fictitious. The Lake Placid deficit also was not officially visible since it had immediately been covered by an exceptional aid from New York state.

As a consequence, money is taken out of the taxpayers’ pocket. The Montreal 1976 debt was reimbursed by taxpayers through an extra local tax ($176 million) and a Quebec provincial special taxation on tobacco ($480 million). Moreover, running Montreal Olympic sporting facilities has created a $13 million annual deficit over 35 years. The city of Barcelona budget had to charge $1.7 billion repayment to taxpayers. The Albertville LOOC deficit reached $60 million and the city’s debt was $2,400 per inhabitant; it has been financed by a 4 per cent increase of the local housing tax. Several municipalities of the Tarentaise valley, which hosted the Albertville Games, such as Pralognan, Brides-les-Bains, Macôt, Les Saisies and Courchevel also ended up in debit. The Sydney Games eventually generated a $168 million debt. New South Wales pays $37.3 million per year to operate former Olympic sites. The Australia stadium had not been financed by issuing shares on the stock exchange and is in financial disarray, and the Superdome and the water sports centre are running at a loss. It is estimated that Greek taxpayers will pay for the Games deficit until 2030.

On the Olympics revenue side there are fewer determinants of the winner’s curse than on the cost side. One is *ex ante* overestimation of the number of visitors attracted by the Games, in particular foreign visitors. For instance, in Albertville, a substantial share of the printed 800,000 tickets went unsold. One-quarter of Atlanta tickets were left unsold. The number of visitors at the Sydney Games was lower than predicted (Preuss, 2004). However, one cannot find a major source of the winner’s curse in missing or lost revenues.

If, by chance, it were not possible to find any sign of lobbying and corruption during the Olympic bids, then we would have a good counterfactual to the winner’s curse hypothesis. But lobbying has seemingly
become an almost unavoidable strategy to win the bid. Lobbying has a cost, though often unknown (of course unpublicized). In a few cases, some information has filtered through the press: Sydney lobbied and paid about $0.5 million honoraries to overbid Beijing for the 2000 Games. Just before the votes for allocating the 2008 Games, Beijing committed itself to building 10 stadiums in African countries to win over some IOC members from that continent. London also adopted aggressive marketing and lobbying tactics whose effect is considered by some as a major determinant of its winning bid for 2012. De Rendinger (2006) describes in detail the sequencing of London lobbying ‘technology’: first hunting, then farming, then convincing, then closing, and eventually controlling (some future votes); he mentions that the Paris 2012 candidature did not follow a similar strategy. Moreover, London had opportunistically offered $24 million to aid sports participants of poor countries if it won the bid. Such a strategy of course has been called into question in the French press, which asked whether the IOC has not turned itself into a lobby.

With regard to corruption, the Sheridan report published in 1999 has established that Sydney 2000 bribed VIPs to become the Olympics host city. In September 1993, just before the IOC cast its votes, the Australian Olympic Committee had offered $65,000 to two IOC members, representatives of Kenya and Uganda. A peak in bid corruption was reached with the Salt Lake City Olympics (Maennig, 2002, 2005) and the rules of the Games allocation have subsequently been emended. Unveiling naked corruption has triggered a reform of the IOC (Chappelet and Kübler-Mabbott, 2008) and the exclusion of several IOC members such as Augustin Arroyo (Ecuador), Zein el-Abdin Gadir (Sudan), Sergio Santander Fantini (Chile), Jean-Claude Ganga (Congo), Lamine Keita (Mali), and Paul Wallwork (Samoa) in 1999, while the infamous Kim Un-yong (South Korea), a former IOC deputy president, was censured in 1999 and eventually resigned in 2005, under strong pressure. In fact, illicit embezzlements and bribes had already occurred in 1991 when Nagano won the bid over Salt Lake City for the 1998 Winter Olympics. At nearly the same time, suspicion fell on Robert Helmick, a former president of the International Swimming Federation and the architect of the Atlanta victory for 1996. According to Chappelet and Kübler-Mabbott, Seoul’s win over Nagano for the 1988 Summer Games had also been plagued with special favours granted to some IOC members.

However, to end on a less pessimistic note, it must be noted that in the most recent bids (namely for the 2018 Winter Olympics), the IOC has attempted to fight the cost underestimation. Each and every investment has to be mentioned and financing has to be secured. Calculations are both in US dollars and local currency and the IOC asks bidding cities for
a realistic estimation of miscellaneous and unexpected costs. The outcome of such IOC effort in terms of alleviating the winner’s curse remains to be seen in the future.

7 CONCLUSION

It is not feasible to verify the winner’s curse as an outcome of all Summer and Winter Olympics bids. However, cost overruns, project revisions, delayed completion, financial deficit and debt are so widespread that it is enough to conclude that the winner’s curse is more the rule than the exception. In particular, cost overruns are observed in most Games sampled in this chapter. The only host city which at first sight was not cursed, Los Angeles 1984, is the only one which did not have to overbid rival cities, because it was the only candidate following the financial mess of Montreal 1976.

From this derives a policy recommendation: to avoid cost overruns and other bad consequences of the winner’s curse, there should no longer be an allocation of the Olympics through auctioning. If such recommendations were to materialize, the suggested practical reform is to fix a site for the Olympics once and for all (from time to time the Greek city of Olympia is mentioned as the proper site), which will avoid any auctioning, overbidding and winner’s curse. However, it is not in the interest of the IOC to have just one candidate or always the same (Olympia) since the bid winner – host city – being cursed, and paying the bill for providing magnificent but expensive Games, is the easiest means for the IOC not to pay the actual price for having its mega sporting event hosted.

NOTES

1. To the best of our knowledge, the Albertville Games were the only instance in which an ex ante economic impact study had dared to predict that they would end up in the red (Andreff, 1991). Such ex ante warning is somewhat rare in the literature. Let us imagine what might have happened if a consultant had delivered a pre-2005 study to the mayor of London that concluded: ‘give up your candidature to the 2012 Games, it is much too expensive’?

2. Allmers and Maennig (2009) have already shown that no significant net economic benefits can be identified for the FIFA World Cup in France 1998 or in Germany 2006. More in tune with the winner’s curse hypothesis, total investment of $1.35 billion in stadiums for the 2010 World Cup in South Africa was much higher than the $105 million initially budgeted at the time of the tournament bid in 2004 (du Plessis and Maennig, 2009).

3. Around $1 million, but the overall cost of the bid can reach up to $100 million, not to speak of under-the-table expenses, also neglected here.
4. Except for $t$ to $t + 1$ which lasts two weeks, and a $t + 1$ to $t + 2$ sequence which rarely lasts longer than one full year, all other sequences occur over several years.

5. See also Feddersen and Maennig (ch. 5 in this volume).

6. In fact, Chappellet and Kübler-Mabbott rely on this empirical evidence for introducing an analysis of lobbying, influenced votes, and corruption in the process of allocating the Games. Such misdoings are connected with the winner's curse issue even though they are not the most significant proof of it.

7. If there were just one single bidding city for each Olympics, the situation would be one of a bilateral monopoly. Economic theory has demonstrated since the Edgeworth Box that, in this case, the outcome of negotiations and the precise terms of the transaction will depend on the respective bargaining power (or simply the naked power) of the two bilateral monopolists (the IOC and the single bidding city).

8. The selection process of the host city has evolved in two steps, first across potential bidders in the same country, and then across ‘qualified’ bidding cities of different countries. This does not change the likelihood of the winner’s curse emerging and probably increases the pressure on cities to bid even more aggressively.

9. This assumption is dropped below when we introduce non-economic factors that influence the IOC votes.

10. If $R_{kt}$ were to include social indirect and non-pecuniary benefits while $C_{kt}$ were to include social indirect and non-pecuniary costs, the investment choice would have relied on standard cost–benefit analysis. Soviet enterprises and planners were not concerned about such indirect and non-pecuniary effects.

11. The verb ‘to cheat’ is used to mean what is seen, in academic terms, as information bias, distorted information and/or information manipulation in the communication between enterprises and the authorities (industrial ministries).

12. This third variant of the winner’s curse fits with a public choice approach since the winner is cursed after deliberately underestimating/overestimating public investment decisions while in the first one the winner is cursed simply due to his/her wrong estimation of the magnitude of, say, oil and gas leases and the interest of exploiting them.

13. For a modelling of this iterative process, see Andreff (1993).

14. Olympics cost overruns may have various origins – including some exogenous (bad weather, overall skyrocketing inflation in the host country and so on.) – not to speak of poor local management of the Olympics project. But if cost overruns recur so regularly that they appear to be the rule in every Olympics rather than the exception, one can conclude that cost overruns are an embedded outcome of a winner’s curse (as they were in the process of allocating investment funds in CPEs).

15. A related issue is that some Olympic facilities are no longer used (in particular ski jumps and bobsleigh runs) after the Games. However, it is not a proof of the winner’s curse per se since the non-use is due to a short (or non-existing) local demand for such facilities though they are required by the IOC.

16. S. Cypel, ‘Londres l’a emporté grâce à un lobbying efficace auprès du CIO, sensible à ses promesses’, Le Monde, 8 July 2005 (London has won thanks to an efficient lobbying by the IOC which is sensitive to its promises).

17. Bribing an IOC member may pertain to other sporting mega events than the Olympics. It was recently alleged in the press that Issa Hayatou, Cameroon’s IOC member, took a $1.5 million bribe to vote for Qatar to host the 2022 FIFA World Cup.

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