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Attracting Major Sporting Events: The Role of Local Residents

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ABSTRACT The decision where to host major sports events is the result of a political process, involving local and national politicians as well as national and international sport governing bodies. Politicians and local/national sport governing bodies decide whether to apply for an event, while international sports governing bodies select the host cities (nations). Local and national residents play an important role in this process as their opinion will influence whether the political system supports the application and is willing to fund the event. Many event impacts have characteristics of public goods and externalities. This represents a potential welfare economic rationale for the public sector to fund them.

Empirical data from 117 polls of urban and national residents that either have hosted or applied for events reveal that three out of four residents supported hosting the event. Statistical analyses show the strongest support to be in low-income nations. This raises doubts whether such events should be regarded as luxury goods, which is a typical characteristic for sports goods. The major reason for this can be that people are aware that the events will influence the production of other goods and services in society. In particular people in nations where the public sector has had a financial deficit in the years before the poll were more sceptical than others. This pattern does not occur in heavily populated nations where event-related costs represent only a “drop in the ocean” on a macroeconomic level. The surveys also indicate that economic growth resulted in people voting more positively in favour of the events.

Different opinions exist regarding the economic value of hosting major sports events. Many consultancy reports conducted on behalf of event organizers predict positive impacts for the local economy and its residents—both in the short and long term. This, however, does not correspond with the opinion of many economists who have been sceptical and accused those producing the consultancy reports of exaggerating the benefits and underestimating the costs (Crompton, 1995; Mules, 1998; Porter, 1999; Hultk-

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rantz, 1998; Baade & Matheson, 2002, 2004; Preuss, 2004b; Késenne, 2005).

However, although the ability to create economic impacts has received substantial attention, it should be noted that achieving economic benefits was never the initial reason for staging mega sport events. Events such as the Olympics and international championships have a value of their own—first and foremost for competitors but increasingly, over the years, also for spectators. Local residents are provided with the opportunity to watch high-quality sporting competition and enjoy a festival atmosphere in their city. A successful event can also create “psychological income” such as a feeling of pride and unity among local residents and the national population (Howard & Crompton, 2005, p. 161). Hence, economic analyses alone cannot reflect the true social value of sports events.

Major sports events involve a number of stakeholders, among them are local residents. These stakeholders have different objectives for getting involved and some have conflicting interests. The latter aspect can apply to the distribution of revenues and costs between the local organizing committee and the international sports governing body that owns the event. History also reveals that those financing the event do not automatically expect to earn an equivalent proportion of the revenues.

Hosting mega-events requires substantial investment by the public sector in, for example, upgrading/improving the city's general infrastructure and sports facilities. Such investments need political decisions which allow a great number of individuals, organizations and private companies to benefit from them. For example, private entrepreneurs are hired to upgrade the local infrastructure and to construct new facilities, the tourism industry benefits from improved destination image and the host city benefits from additional national governmental subsidies. These examples illustrate the complexity of the impacts. Hosting events creates both winners and losers (Preuss, 2006), which explains why events seldom are embraced as “windows of opportunities” without opposition (Hiller, 1990, p. 120).

According to welfare economic theory, the public sector becomes involved in economic activities to prevent market failures. In this context, market failures occur if events that would have been beneficial are not hosted due to funding problems. In addition, the related welfare economic gains must exceed the gains from the alternative resource allocations.

The decision to stage a mega-event is the result of a political process involving local and national politicians as well as national and international sport governing bodies. In democracies, politicians need support from the populace. Therefore, this paper focuses on the role that local residents play in this process. After the literature review, the paper provides an overview of the various stakeholders who are directly and indirectly involved in the events. It also presents a theoretical model that helps to analyse the behaviour of these actors. The following section provides an overview of potential impacts from major sports events. On the basis of this, it discusses whether a rationale for public funding of events exists.

The empirical section presents the results from public opinion polls among local and national residents. This data come from 117 polls collected at 84 different locations. While the theoretical section explains the importance and role of local residents in the process of getting the public sector involved in attracting an event, this section analyses which (and how) factors influenced the residents' opinion. The final section discusses the lessons learned from these empirical analyses.

Literature Review

Literature concerning the role and importance of local residents when cities apply to host a major sport event is rare. However, the body of literature investigating impacts has grown considerably over the years. Many of these analyses pay special attention to economic impacts, covering both short- and long-term perspectives (Ritchie & Aitken, 1984; Hall, 1992; Kang & Perdue, 1994; Crompton, 1995; Hultkrantz, 1998; Mules, 1998; Spilling, 1998; Porter, 1999; Jones, 2001; Baade & Matheson, 2002, 2004; Solberg *et al.*, 2002; Chalip, 2002; Chalip *et al.*, 2003; Preuss, 2004a; Cashman, 2005; Késenne, 2005; Lee & Taylor, 2005; Oldenboom, 2006).

Several authors focus on the political importance of mega sport events, in particular the Olympic Games (Hill, 1996; Andranovich *et al.*, 2001; Lenskyj, 2000, 2002). Other analyses investigate how and why local residents' opinion towards events is important for politicians in democracies. Hiller (1990) provides several common criticisms that prompt the need to assess residents' reactions and highlights the threat of increased taxes to pay for the event. Haxton (1999) investigates the perceived roles of community involvement in the mega-event hosting process. His study identifies discrepancies between the perceived roles and levels of host community involvement at different stages in the hosting process, from the viewpoint of the host public, community/welfare groups and organizers, and whether the level of perceived involvement influenced support for hosting Olympic Games.

A number of studies focus on residents' attitudes towards the Olympic Games. Ritchie & Lyons (1990) conducted several surveys in connection to the 1988 Calgary Winter Olympics. This work was later followed up by Mihailik (2001) in connection to the 1996 Summer Olympics in Atlanta. Miguélez & Carrasquer (1995) analysed the change in the labour market as a result of the 1992 Barcelona Olympics. Lenskyj (2002, pp. 151–182) discusses the public opinion on the Olympics in Sydney 2000 and De Lange (1998, p. 191) describes the public support for the Cape Town Olympic Bid for 2004. Finally, surveys on public opinion polls were conducted in connection to the 1994 Winter Olympics in Lillehammer (Spilling, 1994) and the 2006 Turin Winter Games (Scamuzzi, 2006).

Andersson *et al.* (2004) assess local residents' monetary valuation of hosting the 1997 World Skiing Championship by using the contingent valuation method, in terms of both willingness to pay (direct demand) and willingness to accept (compensated demand). Atkinson *et al.* (2006) use a

similar approach when measuring the willingness to pay for hosting the 2012 London Olympics among residents in London, Manchester and Glasgow.

Theoretical Background on the Role and Importance of Local Residents in the Bidding Process for Mega Sport Events

An analysis of the role that local and national residents play in the bidding process for a mega sport event also requires an understanding of how the political system functions. Easton's (1965a) system analysis of a political system explains interactions between the various stakeholders involved in the process (Figure 1).

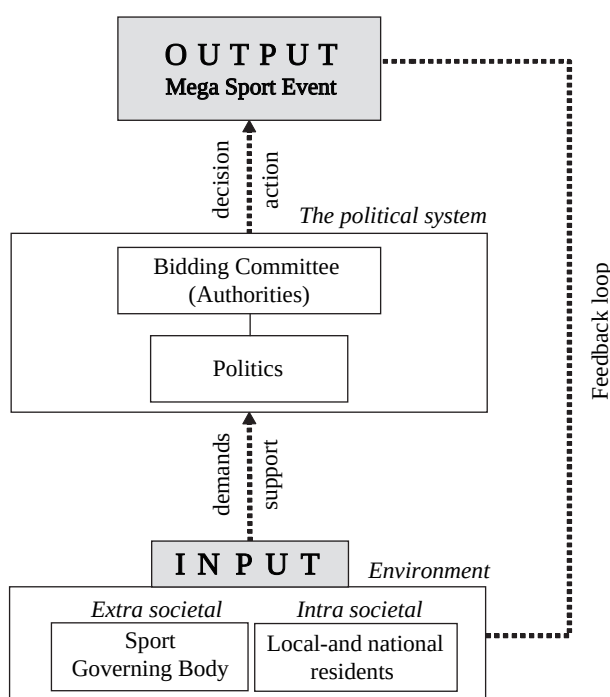


Figure 1. Simplified Dynamic Response Model of a Political System *Source*: Modified from Easton (1965a), p. 112)

In the centre we have the institutions of the political system, which are the “Bidding Committee” and the “Politicians”. The environment can be split in two categories; the extra societal environment and the intra-societal environment. In this context, “local” and “national residents” represent the intra-societal environment, while the “sport governing body” represents the extra-societal environment. The environment concentrates its effects on two inputs: demand and support.

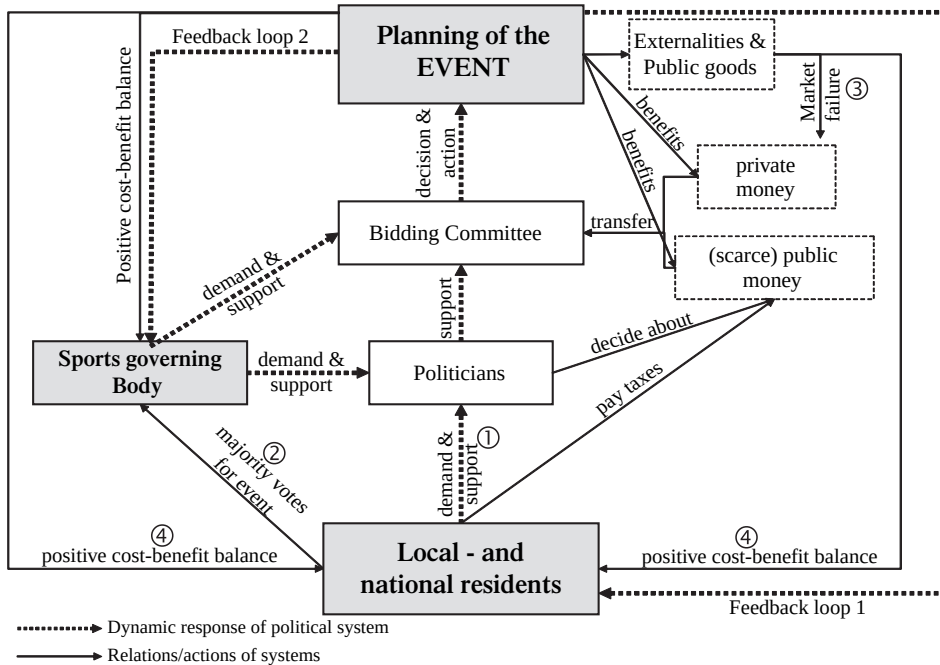


Figure 2. Model of Relations and Responses Based on Easton's System Analysis of Politics

Through them a vast range of changes in the environment may be channelled, reflected, and summarized. For this reason, they can be used as key indicators of how environmental events and conditions modify and affect the operations of the political system. (Easton, 1965a, p. 114)

Demand drives the motor of politics, and politics act on these intakes by converting demand into output through political authorities. The output is noticed by the environment through the feedback loop. If the residents' demand-stimulus leads to a satisfying response-outcome from the political institutions, they will continue supporting the political system, for example by paying taxes, conforming with laws and regulations, and also talk positively about political parties (Easton, 1965b, p. 159). However, Easton's input-throughput-output model has been criticized traditionally as failing to address what happens in the "black box", the core of the policy throughput process. Our use of the model here is reduced to the fact that politicians are turning environmental pressures or inputs from voters, into outputs. In reality this procedure is much more complex.

The model in Figure 1 can be implemented in a complex system where bidding for a major sport event is the issue (Figure 2). This converted model shows the main interrelations within the political system, and also how the extra and intra societal environment are involved in a bidding process. It visualises how the residents "desire" to host a sports event can be converted into demands in the political system (Easton, 1965a).

The residents (who are also voters) support politics as long as the outputs, which are the decisions and actions of the political system, “satisfy” their demand. In most democracies, politicians are elected for periods of three to five years. Following rational considerations (see Friedman & Hechter, 1988) politicians basically aim at being re-elected, which in turn influences their policy between elections (Downs, 1957).

Sport governing bodies (usually international sport federations) are autonomous extra-societal environments that want the residents and politicians to support the event for three reasons:

1. Politicians need the support of their constituents to be elected, which can work in their favour. To win bids, applicant cities (or nations) must convince the sport governing body that they can stage the event more successfully than their rivals. Due to this competition a successful event can be extremely expensive as it requires facilities as well as local infrastructure of high quality. Hence, it needs financial support from both the private and public sector. Politicians are more willing to fund event-related investments if local residents welcome the event.
2. Local residents create a positive atmosphere by attending the event as spectators which makes it a more enjoyable experience. The better the atmosphere the more welcome are the members of the sport governing body and politicians. All will feel good during the event and can use the opportunity to “bask in reflected glory” of the successfully staged event (Snyder *et al.*, 1986).
3. Events also serve to legitimate the continuing existence of sport governing bodies. The governing bodies support the political system by selecting host cities (nations) they believe can supply output—in this case an event—that is of sufficient quality (feedback loop). Successful events also tempt other cities to bid for future events. A fierce competition between many potential host cities provides the international sport governing body with bargaining power when negotiating with the local bidding committee on how to distribute the event-related revenues and costs. It is well known that mega-events generate enormous revenues but also are highly expensive to host. The distribution of these revenues and costs depends on the level of competition at the demand and supply side. In recent years, many cities have bid for the Olympics and similar events. This situation has enabled international sport governing bodies to keep a large proportion of the revenues for themselves, while a high quality of sport arenas and other facilities is also required. Many cities were sceptical of hosting such events in the 1980s due to the negative financial results of the 1976 and 1972 Olympic Games in Montreal and Munich. As an illustration, the 1976 Winter Olympics was originally awarded to Denver, Colorado but was later moved to Innsbruck, Austria due to growing opposition among local residents in Colorado. Another example was when Los Angeles was the only candidate to host the 1984 Olympics. However, the bidding committee was private due to a public opinion poll which demanded not using public money for the Games. That put the

bidding committee under pressure to demand changes in the Olympic Charter. The fact that no other city was bidding forced the IOC into accepting many changes and allowed the organizing committee to commercialize the Games as well as keeping a greater proportion of revenues from sponsors and TV contracts for itself (Preuss, 2004a). As a consequence, the 1984 Los Angeles Games became very profitable for the organising committee.

With these three arguments in mind, it is surprising that the International Olympic Committee (IOC) weights “public opinion” as a sub-criterion out of 11 main topics by only 0.83% in regards to all criterion of the “Candidature Acceptance Procedure” which was adopted for the Olympic host city selection 2012 (IOC, 2006).

Impacts From Major Sporting Events

Figure 2 shows the interrelations between the different systems. To successfully bid for an event, the political system must agree to spend scarce public resources on it. Two sorts of rationale can justify this spending. One is the public “demand” (see arrow 4 in Figure 2), while the second is the risk for a market failure due to a free-rider mentality among those within the private sector who can benefit from the event (see arrow 3 in Figure 2). These aspects will be discussed in detail later.

Table 1 provides an overview of the main impacts from major sports events, and clearly illustrates the great complexity of these impacts.

Many of the impacts in Table 1 are public goods and externalities. Samuelson defines public goods as:

... goods which all enjoy in common in the sense that each individual's consumption of such a good leads to no subtractions from any other individual's consumption of that good. (Samuelson, 1954, p. 387)

This characteristic has become known as the non-rivalling criterion, meaning it is impossible for any individual to use up the good. Once a public good has been produced and offered to the customers, everybody can consume it free of charge—even simultaneously. In addition, pure public goods are also characterized by the non-excluding criterion. This means that it is impossible (or extremely expensive) to exclude any individual from consuming them—one example is public security (when one individual feels safe this does not prevent others from feeling safe). Impure public goods satisfy the non-rivalling criterion but not the non-excluding criterion. Visiting a sporting event in an indoor arena is an example of an impure public good as long as there are spare seats. The non-rivalling criterion is satisfied, while it is quite easy to prevent people from attending the event. Private goods, the opposite of public goods, do not possess any of these two properties. See Stiglitz (2000) for more details on the difference between private goods and public goods.

Table 1 Potential Impacts From Hosting Major Sports Events on Host Communities

Type of impact	Positive	Negative
Economic	• Increased economic activity • Creation of employment • Increase in labour supply • Increase in standard of living	• Price increase during event • Real estate speculation • Failure to attract tourists • Better alternative investments • Inadequate capital; and inadequate estimation of costs of event • Expensive security • Over indebtedness • Increased taxes
Tourism/ commercial	• Increased awareness of the region as a travel/tourism destination • Increased knowledge concerning the potential for investment and commercial activity in the region • Creation of new accommodation and tourist attractions; and	• Acquisition of poor reputation as a result of inadequate facilities, crime, improper practices or inflated prices • Negative reactions from existing enterprises due to the possibility of new competition for local manpower and government assistance
Physical/ environmental	• Construction of new facilities • Improvement of local infrastructure • Preservation of heritage • Environmental promotion • Impacts on sport	• Ecological damage • Changes in natural processes • Architectural pollution • Destruction of heritage • Overcrowding • Unused facilities
Social/cultural	• Increase in permanent level of local interest and participation in types of activity associated with event • Strengthening of regional values and traditions	• Commercialization of activities which may be of a personal or private nature • Modification of nature of event or activity to accommodate tourism • Potential increase in crime • Changes in community structure • Social dislocation
Psychological	• Increased local pride and community spirit • Increased awareness of non-local perceptions • Festival atmosphere during event	• Tendency toward defensive attitudes concerning host region • Culture shock • Misunderstandings leading to varying degrees of host/visitor hostility

Table 1 (Continued)

Type of impact	Positive	Negative
Political/ administrative	• Enhanced international recognition of region and values • Development of skills among planners • International understanding	• Economic exploitation of local population to satisfy ambitions of political elite • Distortion of true nature of event to reflect elite values • Failure to cope • Inability to achieve aims • Increase in administrative costs • Use of event to legitimate unpopular decisions • Legitimizing of ideology and sociocultural reality • Corruption

Sources: Hall (1992); Voeth & Liehr (2003); Scamuzzi (2006); Hiller (1990); Preuss (1998); Cashman (2005)

Externalities refer to the impact on others as a result of an activity that causes incidental benefits or damages with no corresponding compensation provided or paid by those who generate them. Hence, neither the costs nor the benefits will be included in the market price. Noise from a stadium is an example of a negative externality, while improved estate value from the upgrading of an area around a stadium is an example of a positive externality.

Most externalities can also be regarded as public goods. Upgrading an area around a stadium improves the view for all neighbours. Those living in the area do not reduce the ability for one another to enjoy the improved view. Furthermore, it is impossible to exclude the neighbourhood from enjoying the view unless you put up a fence around the upgraded area. There can also be negative externalities that have public goods characteristics. Too many crowds in the city during an event are examples of negative public goods that have both the non-excluding and non-rivalling characteristics.

Many of the impacts in Table 1 both satisfy the criteria of public goods and externalities. As an example, increased attention of the host destination is an externality since it mainly will benefit the local tourism industry, not the event organizing committee. In principle, this will benefit all firms within the tourism industry, not only one hotel. Hence, it can be regarded both as a public good and an externality (see Figure 2).

If the event creates a festival atmosphere within the city, it will be impossible to exclude local residents and visitors from enjoying it. Furthermore, that one person enjoys it, does not reduce the ability of others to do the same. Indeed, it is the joint participation in the event and city life from many people that creates the festival atmosphere. Hence, peoples' involvement in the event can be regarded as an input in the production of the

atmosphere. Another example is that the construction of new and better sports facilities for the event can motivate more local residents to practice sport after the event is over. It is well documented that sporting activities improve people's health conditions or at least participation in sports (Gratton & Taylor, 2000). This in turn can reduce absenteeism from work so that the production (and consumption) of goods and services in society increases. Hence, such impacts are examples of externalities. Price increases of other goods and services, in the literature known as pecuniary externalities, or corruption are examples of negative public goods which are also displayed in Table 1.

Hosting mega sport events can be extremely expensive, but this is not in itself a rationale for publicly funding them. On the other hand, the existence of public goods and externalities leading to market failure can represent such a rationale. The reason for this is that free-rider motives among the beneficiaries of the impacts can prevent events that are a socioeconomic benefit for the destination (nation) as a unit from being hosted. The risk of free-riding behaviour is rooted in the non-excluding criteria that characterises many of the potential impacts that are created by the event. This is a well known phenomenon in the welfare economic literature (Olson, 1971). According to welfare economic theory, governments should only be involved in hosting events in order to prevent the market failure of attracting an event if the value of the aggregated benefits would exceed the value of the costs and also that it exceed the gains from the alternative resource allocations.

The local tourism industry profits will increase with additional tourists. Private companies will benefit from improvements in public transportation, new roads, highways or airports, and also from higher security level that can last for years. An upgrading of the city's infrastructure and new sports facilities can make the city more attractive as a place in which to locate businesses. This can create jobs and income for local companies, local residents and the local public sector. As already mentioned, new sport facilities can stimulate improvement in people's health, which in turn can increase society's productivity.

Nevertheless, those who reap the economic fruits from these (and other) event-related benefits will maximize their benefits (profit and/or utility) from adopting a free-rider strategy. If so, the result can be that the city (nation) as a unit spends a sub-optimal level of resources—also during the application process for the event. The fierce competition among bid cities reduces the chances for sub-optimally planned events to be elected as host (see feedback loop 2 in Figure 2; Preuss, 2004b). To win the bid, the city (nation) must convince the sport governing body of its attractiveness and also that its infrastructure and facilities will be of a high standard.

The localization of a sports event is not distributed by market mechanism but is the result of political processes. The initiative to bid for events usually comes from private groups or local politicians. Their intentions can be different from those of the residents (Preuss, 2006). For example, the initiative to bid for the Olympics in Atlanta 1996 came from the private construction industry seeking new contracts. Another example is that the

Barcelona local politicians wanted the Games to redevelop the city, the Catalan government wanted to promote Catalonia as a rival to Madrid, and the central government wanted to control the Games as Spanish Games (Botella, 1995, p. 143). These objectives were used to justify the substantial public investment during the Olympiad and to create within the city and the province of Catalonia the desired impetus to make good the long term under-investment in leisure, culture, sport and transportation during previous decades (Millet, 1995, 191).

Residents will base their opinions on the expected impacts from the events. In a rational world, they will make up their mind on the basis of individual cost–benefit considerations. If they expect the costs to exceed the perceived benefits, then following Homans' (1961), pp. 317–318) exchange theory, they will vote against it. In practice, however, Simon's (1982) theory on bounded rationality is relevant to describe the residents' behaviour. Residents will base their opinion about the event on sources such as:

- Information from the bidding committee, local politicians, the media and lobby groups—also including people opposing the events.
- Information from previous host cities, for example through the media.
- Personal experiences from other sport events, inside or outside the destination.

(Preuss, 2004a, p. 49)

However, most people will not have a complete overview of all the event-related impacts, neither for themselves nor for the destination (nation). Therefore, they will not know the real cost–benefit balance of a future mega sport event in their own city.

Facing demand from the residents (in the political system), the politicians may be willing to fund the infrastructure necessary for the event. This, in turn, can prevent market failures given that the aggregated benefits from the event exceed the costs of staging it. Those who want the city/nation to apply for the event will channel their demand towards the “political system”. Figure 2 illustrates how the residents' opinion can influence the chance of being awarded the event. The fact that residents play a role in the process makes it important for the political system to uphold the demand, once the decision to support it has been taken. A massive support from the residents will make it easier to grant public funding.

Public opinion polls are often used to measure whether residents support hosting an event. The empirical section in this paper shows that approximately 76% of the residents felt a positive cost–benefit balance and therefore would have voted in favour of hosting. This “want” to host events can be translated into “demand” directed as “input” towards the “political system”.

The next section will present the results from opinion polls among residents, covering both locals and the rest of the nation. The data come from both previous and future host cities (nations), as well as applicants for future events.

Data Set and Methodology

In this section we analyse the secondary data from 117 opinion polls that were collected at 84 different locations (cities and nations) representing 54 events. The variable *POLL* describes the average support of residents in favour of hosting an event. In cases of more than one poll from one period, we used the arithmetic mean from all these polls, both in the descriptive analyses and the regression analyses.

The data for the independent variables come from the CIA World Fact books (www.cia.gov) 2006 (www.theodora.com/wfb/abc_world_fact_book.html) and OECD's Factbook from 2006 (www.oecd.org/dataoecd/32/21/36029941.html). The distribution of events was as follows:

- Olympic Games ($n=45$)
- EURO (football) ($n=6$)
- Rugby World Championship ($n=1$)
- World Championship skiing, Nordic Games ($n=1$)
- FIFA football World Cup finals ($n=1$).

The polls were conducted between 1990 and 2006, with the exception of those in connection with the 1988 Calgary Winter Olympics. The sample includes both events that have been hosted as well as future events, as illustrated by the distribution below:

- Events already hosted ($n=12$)
- Cities (nations) that lost the bid competition ($n=34$)
- Cities that have won bids—but where the event has not yet been hosted ($n=3$)
- Applicant for future events where a decision not has been made ($n=5$).

The first section of the data analyses present descriptive statistics, while the second presents the results from Ordinary Least “Square” regressions. Here, *POLL* was the dependent variable, while we had a set of potentially seven independent variables (see Table 5). This included two dummy variables; *POLSYS* (the political system) and *EVEXP* (event experience). Both dummies may have an influence on the opinion polls (*POLL*), but do not depend on the other predictors.

Results and Discussions

The support from the residents has a different importance in the process of bidding and preparing a major sporting event. Therefore, we checked if the opinion polls changed over time. The data were grouped in the following four periods:

1. The “pre-bid period” (21 polls) covers the period before an official bid campaign starts. In this period, the first media announcements of a potential bid are launched and results of feasibility studies are presented. For the Olympic Games this period covers all public opinion polls nine to

- 12 years before the Games. During this period politicians are open to look at the population's opinion, which so far is not influenced by campaigns.
2. "Bid" is the period after the declaration of intent of the city towards the sport governing body to bid for an event ($n=52$). For Olympic Games this period covers a little more than two years and is split into an "applicant city" phase and a "candidate city" phase. During this period the bidding committee runs campaigns to market the idea of staging the event. Politicians often back the bidding committee, especially when public resources are used to run the bidding campaign, which can be several million euros in the case of the Olympics.
 3. "Preparation" is the period which starts right after winning the bid and ends on the eve of the event ($n=37$). For Olympic Games this covers seven years. During this period public opinion is not as important to the organizing committee as it is to the politicians. Each democratic nation has an election during the period of preparation. Campaigns are launched to keep positive opinion towards the event high, in order to avoid negative public opinions caused by the intensive spending of public resources and the occurrence of (small and large) scandals.
 4. "Post-event" is the period that covers all data from polls after the event ($n=7$). During this period the population has memories of the event.

The mean value in Table 2 displays the proportion that was in favour of hosting the particular event during the four periods. Although the mean opinion varies across the periods, there are no statistical differences between the periods at a 5% level.

Table 3 displays the differences in mean values between different categories of events and also between groups. The data in Table 3 revealed some differences, but these differences were not statistically significant according to *t*-tests. It is worth noting that there was no difference in opinions between local residents and "the rest of the nation"—either for one-city events, or for events that were hosted in several cities. Another result was that people living in cities that had previously hosted such events were not more positive than those living in cities without such an experience.

Table 2 Percentage of Residents in Favour of Hosting the Event by Period

Period	N*	N**	N***	Min.	Max.	Mean	Std deviation
Pre-bid period	21	14	—	39.0**	88.5**	69.7**	15.75**
Bid period	52	39	—	32.0**	96.2**	77.6**	14.49**
Preparation period	37	10	—	53.0**	96.0**	82.4**	12.41**
Post-event period	7	5	—	47.0**	95.0**	77.2**	18.09**
Average all periods	117		54	32.0***	96.0***	75.7***	15.36***

Notes:

* Number of opinion polls.

** Number of average polls per period per event.

*** Number of average polls per event.

Table 3 Statistics of Differences by Location Asked, Bids Won and Type of Event and Event Experience

	N	Local residents/population in favour of an event%		
		mean	Std deviation	t-value (sig.)
All events				
Local residents	47	77.27	14.90	0.004 (ns)
National population	31	77.28	12.50	
One-city event				
Local residents	45	76.84	15.07	0.120 (ns)
National population	23	77.27	12.14	
Event hosted in several cities				
Local residents	2	87.00	4.24	0.907 (ns)
National population	8	77.31	14.35	
Winning the bid				
Won a bid	24	79.34	12.61	0.83 (ns)
Lost a bid	48	76.46	14.41	
Experience with mega-events				
No experience	39	77.73	15.74	0.345 (ns)
Previous host	38	76.63	12.10	

The same pattern of no significant difference applied to cities that had been awarded events and cities that failed to win the bid competition. Note that in Table 3, N refers to the number of polls, which is different from the other tables where N refers to the number of events.

The econometric analysis tested seven potential explanatory variables. These were selected via correlation analysis from originally 15 potential influencing variables we identified. The lack of statistical significant differences displayed in Table 3 gave us reason for rejecting several potential dummy variables, such as distinguishing between locals and nationals, winning a bid or not, events in one or several cities. The selection of variables used for the regression was based on the findings in Table 4. It presents the correlation between the dependent variable POLL and the predictors we expected could influence peoples' opinion towards the events. That we not had access to individual data files reduced the ability to select other explanatory variables.

The fact that Table 2 only revealed a few significant differences between the periods allowed us to use arithmetic means without weighting any of them when constructing the regression analysis. Hence, the dependent variable POLL describes the average percentage in favour of the event of all polls executed.

Table 4 Correlations Between Support Proportion and Potential Independent Variables

	Average support (POLL)	Sig. (2-tailed)	N
GDPCAP	-.443(**)	.001	53
PUBDEBT	-.369(*)	.032	34
GROWTH	.357(*)	.010	51
GINI	.338(*)	.014	52
UNEMPL	.228	.100	53

Notes:

** Correlation (Pearson) is significant at the 0.01 level (2-tailed).

* Correlation (Pearson) is significant at the 0.05 level (2-tailed).

Results of the Regression Analysis and Discussions

The regression analysis included all the potential independent variables displayed in Table 5.

$$POLL = \beta_0 + \beta_1 GDPCAP + \beta_2 PUBDEBT + \beta_3 GROWTH + \beta_4 GINI \\ + \beta_5 UNEMPL + \beta_6 POLSYS + \beta_7 EVEEXP + \varepsilon$$

Several alternatives were tested in order to find the best-fitting model—experimenting both with the number of variables and function forms. The restricted number of data, 34 (OECD members) and 54 (all countries), reduced the number of explanatory variables in the regression. The following equation turned out as the best alternative.

$$POLL = \beta_0 + \beta_1 GDPCAP^2 + \beta_2 PUBDEBT + \beta_3 PUBDEBT^3 \\ + \beta_4 GROWTH + \varepsilon$$

The Durbin–Watson variable (1.889) indicates no autocorrelation, while the VIF-indexes indicate that multicollinearity did not occur. Furthermore the Cook–Weisenberg test was insignificant ($\chi^2 = 0.37$, $p > 0.05$), which indicated no heteroskedasticity in the sample. In addition, its results correspond with our expectations based on economic theory.

GDP per capita (GDPCAP) had a negative effect on residents' "want" to host major events. This does not correspond with the idea of sport as a luxury good. An explanation is that major sports events should not be regarded as a typical sports product. A reasonable explanation for this can be that people are aware that the hosting of such events can be extremely expensive. This can reduce the production of other goods and services in society—particularly if they are funded by the public sector. Those who oppose the events often use such arguments in discussions about the events' socioeconomic value. On the other hand, the events can also produce a legacy, for example by upgrading the local infrastructure, also including new sport facilities.

Expectations that the events will influence other goods and services within the host destination (nation) makes it difficult to separate the "event-consumption effect" (sport as a luxury good) in demand analyses. For

Table 5 Overview and Description of Potential Explanatory Variable

GDP CAP = Gross domestic product per capita adjusted by the purchasing power parities during the year of the poll. This measure is sufficient to compare welfare and living conditions across countries. Sport is often assumed to be a luxury good, and this and the former variable will indicate whether this applies to sport event.

PUBDEBT = Public sector debt as percentage of GDP per capita. The data are the average public sector (national government) deficit from the three years before the poll was conducted. A negative sign means a deficit, while a positive sign means a surplus. The hypothesis is that the higher the public debts of a state the less people want an event, because they are aware that no public resources can be additionally spent for a mega-event and there is a general fear of over-indebtedness of the state (Preuss, 1998). However, such concerns are more likely in less-populated nations, than in heavy populated nations, e.g. in China and the US, where the costs of hosting a mega-event will be a drop in the ocean on a macroeconomic level. We therefore calculated the variable in per-capita term.

GROWTH = Percentage growth in GDP. The hypothesis is that countries which have a high growth of their GDP do support the idea to host a mega sport event more than those with low growth.

GINI = Gini-coefficient. This coefficient is a measure of inequality of income in a country. The coefficient is between 0 and 1, where 0 corresponds to perfect equality of income. The hypothesis is, that the higher the coefficient, the more people want an event, because the poor expect employment and general economic activity and the rich entertainment and a gentrified urban development.

UNEMPL = Unemployment rate. The hypothesis is that the higher the unemployment rate the more people are in favour to stage a mega sport event, because they hope that jobs will be created through the event.

POLSYS. This is a dummy variable that distinguishes between former Western countries and former Eastern bloc countries (plus communism systems, here Cuba and China). The reasoning in our model assumes that nations with a long tradition in democracy—where politicians aim at being re-elected—motivates politicians to adopt a strategy that can make them popular among the residents (voters)—for example by applying for popular sports events. We wanted to test whether any differences between democracies and former and actual dictatorships could be found.

EVEXP = Experience with hosting major sporting events. This is a dummy variable that distinguishes between locations that have hosted major sports events in the past 30 years before the bid and those that have not hosted them. One reason for this could be that people with positive experiences from previous events—and therefore would be more positive towards hosting them again (see Homans' stimulus proposition 1961). A negative result would indicate the opposite—that people were dissatisfied with the event and its impacts.

example, when London hosts the 2012 Olympics, people outside the UK will not worry whether it influences the production of other goods and services within London or the UK. They only see the consumption of the sport event. This is different for Londoners who may worry about negative legacy on production or have hopes of a positive long-term legacy. Hence, people's opinions towards such events are not only a matter of consumption but also of production.

Another reason for the negative sign on the GDP-coefficient can be that countries with low per capita income hope the event will stimulate economic activity, and hence increase their own income. However, here it is worth bearing in mind that many economists have serious doubts whether major events really have such effects. Hence, such hopes may well be based on unrealistic expectations.

A third—and different—explanation can be that low-income groups consider the events as a joyful escape from a problematic life. However, we do not have any data that enable us to test this and similar hypotheses. Therefore, further discussions on this topic will be speculative—but nevertheless an interesting topic for future research.

We used GDPCAP as a squared value, because that increases the values of rich nations more and fits better in describing the opinion polls.

Our model reveals that high per capita public debt (PUBDEBT) increased scepticism towards the events. The higher the per capita public deficit during the three years before the poll, the less supportive people were. Such attitudes correspond with previous research which has documented that people fear that mega-events can lead to over-indebtedness (Preuss, 1998).

Nonlinear tests of this variable showed that a function of power three best expressed the relationship between the dependent variable (POLL) and “the public debt variable” (PUBDEBT). Arguments for using a variable twice in the same regression model are given in Frick (2001). The equation and signs on the coefficients revealed most scepticism towards the events in low-populated nations with high public sector deficit. People in heavy populated nations, such as the USA and China, will know that the event related costs are only a “drop in the ocean” on a macroeconomic level. Unfortunately, we only had data from 34 nations (OECD members) on this variable.

As expected, economic growth (GROWTH) had a positive effect on people’s desire to host the events. The population is used to changes in their environment and values the positive economic changes coming along with growth. Major events are perceived as a catalyst to develop. We do not regard this result as a contradiction with the negative sign on the GDP-

Model 1:

	B	Std error	t	Sig.	Collinearity (tolerance)	Collinearity (VIF)
(Constant)	83.03	3.72	22.33	.000		
GDPCAP ²	-.030	.01	-4.00	.000	.649	1.541
PUBDEBT	4.17	9.69	4.30	.000	.167	5.077
PUBDEBT ³	-1.17	2.35	-7.864	.000	.208	4.809
GROWTH	3.44	.73	6.635	.000	.841	1.190

Notes:

Dependent variable: POLL

Durbin–Watson: 1.842

Std error of the estimate: 9.706

Adjusted R square: 0.600

coefficient. While GDP is an indication of the nation's wealth, the growth variable only indicates whether the economic development was positive or negative when the polls were conducted. Many examples illustrate that nations with low per capita income, nevertheless, can have high economic growth and vice versa.

In addition, we also tested a large number of alternative regressions, altering the seven variables explained in Table 5 as well as the functions. Some tests indicated that the income distribution (Gini-coefficient) had some effect on the dependent variable, with people in nations with unequal income distribution (low coefficient) being the most positive towards staging an event. One reason for this can be that many impacts (see Table 1) have characteristics of public goods and externalities. This means that everybody is able to benefit from them free of charge. As an example, if the event leaves behind improved local transportation, everybody within the region can benefit from it. However, we do not emphasize this result as much for the other variables in our model, which has a higher adjusted r^2 .

The variable UNEMPL (unemployment rate) did not show any significant results in any of our models. The two dummy variables (POLSYS and EVEXP) which filter the group by their political system and previous event experience did not show any significant influences. For EVEXP, this confirmed the results that were uncovered by the t -test (see Table 3).

Concluding Remarks

Many groups with different objectives are directly or indirectly involved in the bidding of major sports event. Local and national residents play an important role in this process, although the decisions to apply and host the event are in the hands of other groups. International sport governing bodies select the hosts—but want support from residents as well as politicians. To be elected as a host, applicant cities and nations must convince them that they are able to produce high-quality events. This can make the events extremely expensive, and therefore the bidding and later organizing committees need financial funding from the public sector.

Many impacts from a major sport event (see Table 1) have characteristics of public goods and externalities. This can represent a potential rationale for public funding of events according to welfare economic theory. Without public funding, a free-rider mentality among the potential beneficiaries (especially private industry) can prevent events that would have been beneficial for the destination as a unit from being hosted. Politicians, however, need backing from voters and will find it easier to support events that are popular among the residents.

In regards to the question of what influences the positive opinions on hosting a major sport event we analysed data from 117 opinion polls collected in connection to 54 events. The analysis revealed that approximately three of four were positive towards hosting major sports events. Surprisingly, support was strongest in low-income nations. This indicates that the hosting of a major sporting event cannot be regarded as a luxury

good, which is a common assumption for sports goods. People are aware the events can influence the production of other goods and services in society. Hence, their opinions are not only a matter of consumption, but also of production. This reasoning was supported by the tendency of extra scepticism in nations with high public sector debt. The regression analysis revealed that economic growth had a positive influence towards the events.

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