

On the Financial Advantage of Hosting the Olympics

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Abstract

Mega Sporting Events generally are classified as the Olympics, World Cup, and UEFA (Union of European Football Associations) Championship in Europe. Since the significant positive economic impact of \$2.3 billion realized by Los Angeles after the 1984 Summer Olympic Games, the number of bids by cities for these mega sporting events has increased significantly. Also, this success inspired economic evaluations of the Olympic Games to be conducted to better estimate the financial benefit to the host city. Utilizing improved methodologies, as well as superior data, models have found that, in reality, it is more difficult than anticipated to realize an economic benefit from hosting the Olympic Games. We conduct statistical analyses on the financial data for several of the Olympic cities since 1990. We also discuss data available from the British government which estimates the economic outcome of the 2012 Summer Olympic Games in London.

Introduction

The modern Olympic Games began in 1896 in Athens, Greece, a reincarnation of an ancient Greek tradition that ran from 776 BC to 393 AD. In 1896 there were just 254 competitors from 14 countries. The London 2012 Summer Olympics are projected to have 204 nations and 26 sports. In 1984, Los Angeles held the summer Olympics and realized a significant economic gain of \$2.3 billion (unless otherwise noted, all dollar figures are U.S. dollars). Since this economic boom, the number of cities that have proposed bids to host the Olympics has increased dramatically, in order to provide an opportunity for urban renewal, increased employment, and tourism generation. These effects, along with an expected increase in current and future tourism through the inherent marketing of the host city, are what constitute an induced or legacy effect of the Olympic games. After the reported success of the 1984 Olympics in Los Angeles, there have been 5 cities that have reported economic benefits due to the games: Barcelona (1992), Atlanta (1996), Sydney (2000), Athens (2004), and Beijing (2008).

However, many recent evaluations of ex-ante and ex-post reports on the Olympics have found that several inputs are missing or in error; indeed, some benefits have been double counted, induced multipliers are exaggerated, and the data models used were either flawed or outdated. The UK's department for media, culture, and sport prepared a comprehensive evaluation framework for the 2012 games that appears to better reflect the true economic impact of the Olympic Games. Nonetheless, the question remains: What is to be included in the economic evaluation of the Olympic Games?

We discuss the models used to determine the economic impact on the host cities of the Olympics. We also discuss the inputs and outputs to be included in such evaluations.

We then perform statistical analyses on data from some of the host cities, when appropriate data are available, to shed light on whether the Olympic Games were, indeed, profitable. Finally, we discuss “take-aways” from some other Olympic sites, including London (late summer, 2012), and end with a Conclusions section.

Literature Review

Economic impact evaluations were found for the 1992 Barcelona Summer Olympics, the 1996 Atlanta Summer Olympics, the 2000 Sydney Summer Olympics, the Winter Olympics in Salt Lake City in 2002, and the 2004 Athens Summer Olympics, as well as projections for the 2012 London Summer Olympics and the bids for the 2012 and 2016 games by Baltimore-Washington and Chicago. Independent evaluations of the 2010 Vancouver Winter Olympics were also taken into account. Host city financial data were obtained, where available, from the host nations’ government offices, as well as from the countries’ sporting bureaus.

Mega-Events

There are three consensus global “Mega-Events” in sports: the Olympics, the World Cup, and the UEFA Championship. In the U.S., any of the major championships (e.g., the Super Bowl) would also qualify. A mega or hallmark event is defined as one that promotes a host city as an international tourism destination (Nishio, Lim, & Downward, 2009). The recent rise in bids for these events is due to past successes of urban regeneration and tourism boosts to the host cities of these events. The first of these was seen in Los Angeles for the 1984 Summer Games. Los Angeles reported a net gain of \$2.3 billion, which subsequently set off a furious bidding war for future games, at that point seen as a cure-all for urban ailments. A positive economic impact was not seen again until the 1992 Summer Olympics in Barcelona, a perceived classic example of mega-event success. Barcelona realized a direct, immediate benefit of \$30 million (Duran, 2005). However, although it has not been quantified, the true impact for Barcelona has been in its legacy effects, especially in tourism. Below, in Table 1, are data from 1990 and 2000 on overnight stays in European cities, exemplifying the growth Barcelona realized in tourism, relative to other major European cities. One can see that Barcelona’s percent increase from 1990 to 2000 is the highest among the 10 European cities with the highest level of tourism, more than 35% higher than the second-place city, Prague:

	City	1990	2000	% Increase
1	London	91,300,000	120,400,000	31.9
2	Paris	31,166,172	31,633,273	1.5
3	Dublin	15,359,000	16,898,000	10
4	Rome	12,915,225	14,781,281	14.4
5	Madrid	9,481,728	12,655,413	33.5
6	Berlin	7,243,638	11,412,925	57.6
7	Prague	4,524,000	7,921,953	75.1
8	Barcelona	3,795,522	7,777,580	104.9
9	Amsterdam	5,720,500	7,766,000	35.8
10	Munich	6,923,970	7,756,152	12

Table 1: Overnight Stays, 1990-2000

Evaluation Models

There are three basic models that have been used for evaluating the economic impact of the Olympic Games: Input-Output (I-O), RIMS (a specific input-output model created by the U.S. government with two editions) and CGE (computable general equilibrium). ECMs (error correction models) have also been used but rely too much on past data and at this time are generally disregarded by the economic community. RIMS (regional input modeling system) was originally created by the U.S. bureau for economic analysis for the Los Angeles Olympic Committee (LCOG) to provide context for economically judging the 1984 games. RIMS is a basic input-output modeling system that breaks down the results by region and industry. There is also a value created using past data and reasonable penetration estimates for each of the groups attending (sponsors, broadcasters, athletes, general public, etc.) However, RIMS has been criticized for being overly simplistic and accused of double counting certain revenues.

For example, RIMS counts the direct cost of new construction as a benefit, and counts the employment benefits of these construction projects as well; this is now considered a misappropriation of the true value created (Owen, 2005). RIMS also largely ignores crowding out, other projects not completed due to over demand (opportunity costs), and displacement (other tourists not visiting the host area that would have visited, absent the Olympics). This is justified by saying that the negatives are mitigated by the benefits of the Olympics; however, these were already counted, unless corrected for in the model (Owens, 2005). RIMS II was used to evaluate the LA games ex-post and corrected some of the then-considered outlandish multipliers from the first edition. Input-Output models were used to evaluate the Olympics until 2000 when the CGE model was introduced to evaluate the Summer Olympics in Sydney. Input-output models are simplistic in nature with a corresponding benefit or expenditure associated with a cost. There is a percentage for direct (spending by the Olympic Committee and private investors) and indirect (spending by outside tourists) costs and a multiplier is used from these costs to induce the legacy benefits, the multiplier generally being industry specific. Input-Output models are viewed as providing good estimates of the immediate benefits of the Olympics, but as struggling to identify long-term effects.

CGE models are more dynamic in nature. They correct for many of the mistakes in I-O models, such as treatment of construction expenditures and inflated multipliers. CGE models “reduce multipliers of inputs by including (i) the effects of higher prices ‘crowding-out’ tourism demand, and more significantly (ii) the movement of resources into tourism-related industries from other industries, with consequent falls in output of other industries, particularly in other exporting industries, resulting in much lower ‘multiplier’ effects” (Blake, 2005). Thus, CGE corrects for what are often considered as exaggerations in the I-O models and presents a more reasonable estimate for the economic benefit.

Economists have found that ex-ante evaluations of the Olympics were higher than the true impact of the games, with most of the error attributable to direct and indirect expenditures. CGE models correct for this, by including in its framework displacement, crowding out, and replacement (supply side issues), as well as future raises in prices and wages for employment. ECM models correct for past data error, which the other two do not, but, as noted, is nowadays out of favor (Blake, 2005). CGE is currently considered the best model, but the key issue is the accuracy of the input data. Blake (2005) found that past reports have shown that predicted visitor expenditure tends to be overstated in the reports for LA (1984) and Tokyo (1964). If past data and analysis of international tourist patterns are accurate, then the model should be, as well.

Inputs

In addition to the true value of multipliers and the correct model to use, the inputs are the other largely contested aspect of an evaluation framework for the Olympics. There are three groups of inputs that contribute to the economic benefit of Olympics: those from the Olympic Committee (comprised of government spending and private investors), tourists (only from outside the region, as within the region is viewed as only a redistribution of money), and vendors or suppliers (only exports). The correct data for costs are specific to the host location and cannot be standardized. When considering past data, projections should be conservative so as to not anger local taxpayers expecting greater benefits. This occurred in Atlanta (1996) when vendors sued the city for overstating business opportunities relating to the Olympics (Owen, 2005). A basic rule for what to include in inputs is to include every debit to the Olympic Committee ledger first, and then add inputs if they are outside the realm of the Olympic Committee and are not the direct beneficiaries of the debit. Tourism costs are Olympic-based additional infrastructure costs, additional hospitality costs (broadly defined), and additional security and health costs.

Outputs

The outputs in an input-output model are a multiplier of the direct costs. The outputs of the CGE are also a direct multiplier, except that the CGE corrects for the misappropriation of benefits, by discounting some expenditures due to displacement and crowding out. This is significant only for direct expenditures in ex-post studies, as the indirect expenditures or benefits are realized at that point and then quantified. Indirect expenditures are simply the spending by tourists during the timeline of the Olympics. Timeline, in fact, is one of the most significant factors in considering inputs and outputs, as all Olympic-related activity must be included from the onset of construction (Blake, 2005).

Induced Benefits

Induced expenditures for input-output models such as RIMS are found using a multiplier, plus an industry margin, times the immediate expenditures of the Olympics. For the Atlanta Olympics, the average multiplier was 2.2, meaning that every dollar spent by visitors earned an additional \$1.20. “RIMS II multipliers measure the regional impacts of expenditures on output (sales), earnings, and employment.” (Humphreys & Plummer, 1995).

The multipliers involved in CGE models are more modest in nature, by accounting for the crowding out of such things as social program expenditures and postponed infrastructure improvements. The specific crowding out of other industries by influxes to certain tourist-related industries is significant, as it is completely ignored by input-output models. Construction is also better accounted for in CGE models, as the financing is included for long-term appropriation; input-output models assume an equal benefit to cost thus ignoring the future costs of the construction. A prime example of this is Montreal (1976 Summer Olympics), which just finished off paying their construction debt in November 2011, about 35 years later!

As of now, there has been little criticism of the induced benefits calculated for CGE models. For the most part, they have aligned with ex-post studies of economic benefits.

Past Evaluations of the Olympic Economic Impact

Many studies have been done both ex-ante and ex-post for the Olympics since 1984. Every ex-ante projection concluded an economic benefit, a predictable fact, in that they would not have bid for the games without such a projection. Ex-post evaluations are not as consistent. Below, in Table 2, are the ex-ante benefits for host cities:

Year	Location	Monetary Benefit	No. of New Jobs
1996	Atlanta	5.1 Billion	77,026
2000	Sydney	5.1 Billion	156,198
2000	Sydney	4.5 Billion	90,000
2000	Sydney	4.5 Billion	98,700
2004	Athens	10.2 Billion	300,400
2004	Athens	15.9 Billion	445,000
2012	London	1.9 Billion Pounds	Unspecified
2012	Washington-Baltimore*	5.3 Billion	69,758
2012	Houston*	4.3 Billion	64,216
2012	San Francisco Bay Area*	7.5 Billion	Unspecified
2016	Chicago*	4.447 Billion	Unspecified
	*Did not win the bid		
Note: All values are in U.S. dollars unless noted			

Table 2: Ex-Ante Olympic Benefits

The specific breakdowns of Chicago’s 2016 (losing) bid’s analysis, with the most up-to-date methodology can be seen below in Table 3:

Summary of Economic Impact Estimates

Net New Visitor Expenditures	\$409,369,075
Indirect Benefits from Visitor Expenditures	\$286,558,353
Subtotal: Visitor Impacts	<u>\$695,927,428</u>
Net New Local Operating Expenditures by OCOG	\$1,970,526,427
Net New Local Infrastructure Expenditures, Non-OCOG	\$788,850,000
Assumed Costs to City for Revenue Shortfalls, Non-financed Projects	\$(500,000,000)
Assumed Opportunity Costs	\$(52,590,000)
Indirect Benefits from Operating and Infrastructure Expenditures	\$1,544,750,499
Subtotal: Operating and Infrastructure Impacts	<u>\$3,751,536,926</u>
<i>Total Likely Economic Impact</i>	<u>\$4,447,464,354</u>

Source: Anderson Economic Group, LLC

Table 3: Chicago's 2016 Analysis of Olympic Economic Impact

Ex-post studies are often more critical and more accurate due to advantage of hindsight of the games. Most importantly, they can evaluate the trend of tourism after the Olympics and the usage of the construction outlays for new facilities and improved infrastructure. Baade and Matheson (2002) reviewed the approaches used in the Los Angeles and Atlanta games and performed regression analyses on population, real per capita personal income, wages, and taxes with a dummy variable for the Olympics. They found that the coefficient for the Olympics was insignificant and the employment growth was highly divergent from the projections (Kasimati, 2002). The economic influx was only short lived according to their report.

A review by Sanahuja (2002) found that Barcelona had a near 100% increase in hotel capacity, tourists, and overnight stays from 1990 to 2000. Only 31% of this increase was attributable to Spanish tourists. Barcelona also rose in the cities-monitor- rankings, an assessment by the top 500 European companies of the best European cities to conduct business in, rising to 6th in 2002 from 11th in 1990 (Gratton, Shibli, & Coleman, 2005). Duran points out that Barcelona made a decision to become a tourist destination: "We often forget an important and qualitatively decisive factor: the process of critical reflection on the city. The Games were the excuse, perhaps the incentive, for a general process of analysis of the city in general and in particular of its role as a tourist center." Duran (2005), Sands (2008) and Birkendorf (2009) both agreed in separate reports that Beijing realized an immediate economic benefit from the near \$40 billion invested in infrastructure from 2002 to 2006. Beijing not only improved its technology and relations to sport and media, but it also increased outside investment in production. The improvements made in the infrastructure also improved the operational efficiency of the companies who produce there (Matthewman, Karima, & Bearne, 2009). Sydney and its surrounding area, New South Wales, earned one of the greatest impacts to date with \$600 million in new business, over \$6 billion in tourism spending in 2001, and greatly enhanced business profile for Sydney, NSW and Australia through the equivalent of up to \$6.1 billion worth of international exposure (Matthewman, Karima, & Bearne, 2009). On the other hand, just as with Beijing, the report is only one-year after the games. One would expect that trend to continue, albeit with slower growth.

On the negative side, the Athens 2004 Summer Olympics realized an immediate benefit from the Olympics, but now its facilities have required an estimated £500 million to maintain its facilities since their construction (Kasimati & Dawson, 2009). One of the consistently argued points by opponents to Olympic economic benefits is that these facilities, paid for by taxpayers, are unpredictable in terms of future value. Even though Sydney was largely regarded as a success, their facilities now cost an estimated \$46 million per year to maintain (Owen, 2005). Owen cites Salt Lake City's Winter Olympics (2006) report as considering job growth, but ignoring the associated population growth resulting from the improved perception of the city, which would lead to most of the job increases.

Vancouver was projected to see an increase of 5,600 jobs due to direct spending by the Vancouver Olympic Committee; however, with one of the lowest unemployment rates in the country, most of those jobs would be filled by already employed people moving to another position (Gladish & Gable, 2007). Ultimately, both ex-ante reports and ex-post reports have not found an exact method to evaluating the economic impact of the Olympics on host cities. As noted, the CGE model is considered the best to date and has best mimicked what has occurred in real life. The true issue is that the macro and micro economic factors relating to the Olympics are constantly changing with time, technology and location, among other factors. A model that includes past data, but mirrors the current economic landscape in the host city is, perhaps, the ideal scenario.

Data Analysis

A t-test was performed on Olympic data from Seoul (1988), Barcelona (1992), Salt Lake City (2002), and Vancouver (2010), comparing pre-Olympic games tourism data to post-Olympic games tourism data; insufficient data were available to perform this analysis for Beijing (2008). The associated one-sided hypotheses were H_0 : The Olympics had a negative or no effect on the tourism in the Host City (i.e., the difference, [post –pre], ≤ 0) and H_1 : The Olympics had a positive effect on tourism (i.e., the difference, [post –pre], > 0). The significance level used was $\alpha = .05$ for each test (although p-values are provided). When data were available, individual tests on hotel stays and tourist receipts (incoming cash) were also performed with the same basic hypotheses. These are intended to show some of the more specific characteristics of how tourism is impacted.

Seoul

Here, we used inbound tourism data (i.e., number of tourists) for the previous nine years before the 1988 Summer Olympics compared with the eight years post-Olympics as our measure of Olympics success. A t-test for difference in means was run. Values were adjusted for world-wide population growth. The resulting statistics found that H_0 is rejected and a positive economic impact from the Olympics is concluded. The p-value is 0 (to 3 digits). The following, Table 4, displays the results of the test:

SEOUL

Mean – pre:	1,310,351
Mean – post:	3,258,457
t –statistic	12.4
df:	15
(one-tailed)	
p-value:	.000

Table 4: Analysis of Number of Tourists, [Post vs. Pre] 1988 Summer Olympics

Barcelona

Due to information being unavailable before 1992, a paired t-test was conducted comparing Barcelona's (and its surrounding region of Catalonia's) post-1992 Olympics number of inbound tourists against those for the rest of Spain and separately for Europe. (I.e., this was done instead of comparing pre and post). The metric utilized was *yearly growth* (since, obviously, the absolute magnitudes of the number of inbound tourists differ greatly.) We used a time period of 1993-2004, and find in Table 5 that H_0 was not rejected when comparing Barcelona and the rest of Spain:

Barcelona vs. Rest of Spain

Mean – Spain:	6.04%
Mean – Barc'na:	7.07%
t –statistic	.28
df:	10
(one-tailed)	
p-value:	.393

Table 5: Analysis of Tourist Growth, post 1988 Summer Olympics; Barcelona vs. Rest of Spain

When comparing Barcelona with all of the rest of Europe, results did not change materially; see Table 6:

Barcelona vs. Rest of Europe

Mean – Rest of Europe:	5.74%
Mean – Barcelona:	7.07%
t –statistic	.89
df:	10
(one-tailed) p-value:	.197

Table 6: of Tourist Growth, post 1988 Summer Olympics; Barcelona vs. Rest of Europe

Salt Lake City

We performed t-tests on data for hotel spending, hotel occupancy rate, and travelers to Salt Lake City International Airport, to determine the economic effect of the 2002 Winter Olympics, an effect that has repeatedly been characterized as grossly negative by independent evaluators. The t-test (for difference in means) for hotel spending in current dollars (i.e., adjusted for inflation) was conducted for a pre and post 8-year period surrounding the Olympics. The results, portrayed in Table 7, indicated a rejection of H_0 (indicating a significant increase in hotel spending after the Olympics were held.)

Salt Lake City

Mean – pre:	\$504,461,383
Mean – post:	\$778,389,723
t –statistic	4.96
df:	14
(one-tailed) p-value:	.000

Table 7: Analysis of Yearly Hotel Spending, [Post vs. Pre] 2002 Winter Olympics

The t-test for passengers at Salt Lake City International Airport yielded a different outcome as H_0 was accepted; however, the p-value was “nearly significant” at .083. See Table 8:

Salt Lake City

Mean – pre:	19,586,450
Mean – post:	20,612,334
t –statistic	1.46
df:	14
(one-tailed) p-value:	.083

Table 8: Analysis of Number Airport Passengers, [Post vs. Pre] 1988 Summer Olympics

Hotel occupancy rates resulted in accepting H_0 . In fact, the mean rate actually dropped after the Olympics; see Table 9:

Salt Lake City

Mean – pre:	66.8%
Mean – post:	62.7%
t –statistic	-1.57
df:	14
(one-tailed) p-value:	.930

Table 9: Analysis of Hotel Occupancy Rate, [Post vs. Pre] 1988 Summer Olympics

Therefore, the results are inconclusive regarding the economic impact of the 2002 Winter Olympics in Salt Lake City. The universal measure of (inflation-adjusted) dollars tells a story of success; on the other hand, the metric of airport passengers is on the border, and the metric of hotel occupancy suggests that the Olympics possibly had a negative effect (testing directly for a *negative* effect would yield a p-value = .07).

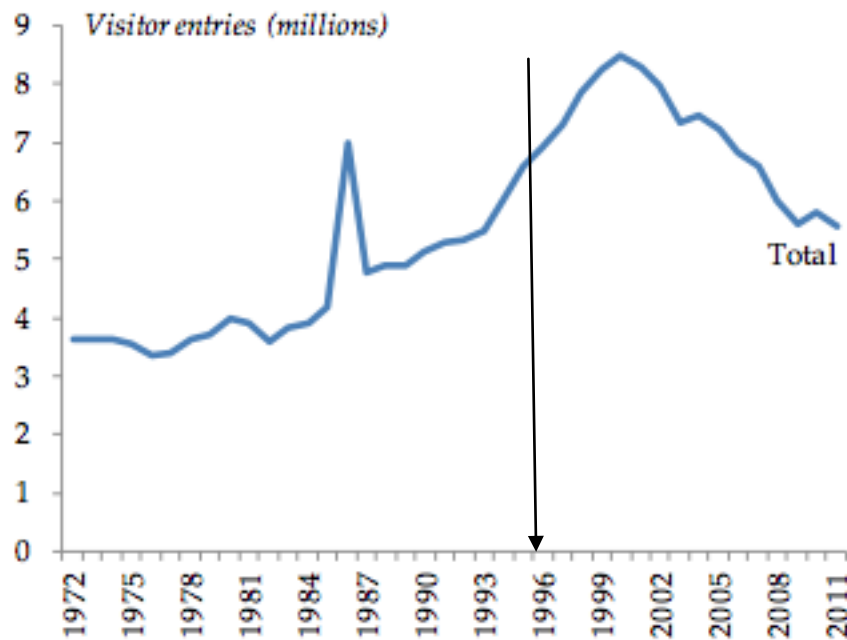
Vancouver

The final formal statistical analysis was performed on the 2010 Vancouver Winter Olympics. Due to the Vancouver Olympics being the most recent, data were available only through 2010 on a quarterly basis. We tested the previous 11 quarters (2007-2009, omitting the last quarter of 2009) against the last 3 quarters of 2010, using values of incoming tourism dollars as our metric; we actually used the entire British Columbia, which was viewed as including the “surrounding area.” The two quarters (4th of 2009, 1st of 2010) were omitted, since the Olympic timeline began in December 2009, and continued in the first quarter of 2010. The results indicated a very slight *decline* in revenue and an acceptance of H₀. Table 10 displays the results:

Vancouver	
Mean – pre:	86,038,363
Mean – post:	86,037,000
t –statistic	-.024
df:	12
(one-tailed) p-value:	.501

Table 10: Analysis of Tourist Dollars, [Post vs. Pre] 2010 Summer Olympics

Actually, Vancouver’s (British Columbia’s) tourism has been declining since 2001, a time when all travel, especially from the U.S., dipped dramatically. Figure 1 below has its high point in 2000/2001, and can be seen to be fairly steadily declining from there through 2011. Thus, it is possible that the slight decrease from pre to post 2010 Olympics evidenced in Table 10 was *smaller* than it would have been without the Olympics, which could change the conclusion about the Olympics’ “success,” at least using the aforementioned metric.



Data Source: Statistics Canada

Figure 1: British Columbia Inbound Tourism, 1972-2011

Takeaways from other Olympic games

Many ex-ante reports have claimed an economic benefit from the Olympic games. Varying metrics such as tourist expenditure, hotel nights, and number of inbound tourists have been used to determine economic impact. A Georgia State study found that employment and wages increased 17% more in Olympic Venue areas than non-Olympic-Venue areas after the 1996 Summer Olympics in Atlanta. The report does not account for crowding out effects that may have caused the differential in employment and wages (Hotchkiss, Moore, & Zobay, 2001). Sydney (2000) has been widely regarded as a success in many circles due to its restructuring of public transportation and newly constructed facilities. However, the numbers appear to tell a different story about the impact on tourism. See Table 11:

Items	Pre-Games				Games-Year	Post-Games	
	1996	1997	1998	1999	2000	2001	2002
Number of Visitors (1000's)	7,122	7,475	7,579	7,976	8,672	8,662	8,598
Growth rate (%)		5	1.4	5.2	8.7	-0.1	-0.9
Average growth rate of visitors (%)	3.9				8.7	-0.5	

Source: Australian Bureau of Statistics, National Statistics, <http://www.abs.gov.au/>

Table 11: Yearly Growth Rate of Tourism in Sydney, 1996-2002

Prior to the games, tourism increased in Sydney, as it did the actual year of the games; however, Sydney could not sustain the growth even as an already-established tourist destination. Growth in tourism was better in both the rest of Australia and the world overall, following the 2000 games. Perhaps, Olympic officials had a lack of understanding how to obtain the potential value of legacy benefits. Athens used the Olympics to improve their subway system and their airport, but never realized a boost in tourism. In fact, the 2004 Olympic games were funded primarily by government debt and this may be one of the factors that contributed to Greece's recent economic collapse.

London

London has experienced an average of just over 2 percent yearly growth in the number of tourist visits for the past ten years. The Olympics will very likely boost that number in the second half of 2012. Tourist *expenditure*, on the other hand, has increased over the last decade with 3.6 percent average yearly growth, higher than London's inflation rate of 2.6 percent over the same period. A recent trip-advisor survey found that London is the number one tourist destination in the world followed by New York and Paris (World News, 2012). A report by Visa expects London to realize a positive economic benefit of £5.1 billion pounds with a corresponding consumer expenditure of £750 million during the games (World News, 2012). The numbers have certain assumptions that may be aggressive, but the £5.1 billion value appears to be within reach, given proper management. (N.B., As the Olympics in London have just ended, initial reports indicate that the Olympics brought in less tourist money to Britain than officials had expected; an initial survey of 250 tourism-oriented businesses indicated that 88% reported less profit during the Olympics when compared to the same time period in 2011 (New York Post, 2012). Further examination of the economic impact will emerge with more details over the next few months.)

Conclusion

Despite the optimism of every ex-ante report on the impact of the Olympics on the host cities, some of the actual numbers have dictated a different result. In general, every location has used the Olympics to better the public transportation and improve facilities. Each host city has also seen a boost in tourism during the Olympics. The true test, however, is consistently drawing tourists by leveraging the improvements made through hosting the Olympics. Barcelona has done this and Seoul has done this. The failure to realize a benefit in some other locations may be partially due to vanity and partially due to mismanagement. Barcelona was perfectly primed, as a coastal warm-weather city, to become a tourism hot spot. Sydney is in a similar mold, as is Rio de Janeiro for 2016. London may not be a warm-weather location, but is already a tourist destination with easy access. It would seem that the qualities of a city that auger best for (summer) Olympic success are that they be warm-weather cities, with easy access, and tourism already makes up a significant portion of their GDP. We noted earlier that the European cities-monitor-rankings show the improvement that Barcelona has made as a business center since its 1992 games.

The rankings are based on 500 leading European companies' perceptions of the top cities in which to do business. London, as expected, comes in at number one and has been for some time. In 1990, Barcelona was ranked 11th out of nearly 100 cities; in 2011, it is ranked 6th, behind only (in order): London, Paris, Frankfurt, Amsterdam, and Berlin. All of the cities Barcelona "passed" in going from 11th to 6th have never hosted the Olympics, at least during the last 50 years. The general trend has been a positive impact of hosting the Olympics, through increased domestic tourism to the host cities and improved transportation and facilities. Depending on capital outlay (which has been rising dramatically), the overall financial impact has been less consistent. Host cities seek to outdo the last city and establish themselves as a global leader. This often tends to sacrifice financial soundness for very lavish venues and events. The data show that, while this may appeal to the Olympic committees, it does not hold the same appeal for inbound tourists - those whose dollars improve the local economy. Evaluation frameworks vary from report to report, with CGE coming out on top as the one considered to be the best model to date. Multipliers for specific industries and percentages applied to crowding out, opportunity costs of construction, and displacement, also have differing ranges depending on those who establish the criterion.

The results in this paper lead to the conclusion that most evaluations of the economic impact of the Olympics overestimate not only the expenditures by tourists, but also the volume of tourists. These evaluations assume consistent management of Olympic assets, which has not been seen in many cases. They also do not account for macro-environmental impacts such as global economic crises or events that impact tourism, such as the September 11, 2001 incident in New York. The ultimate "bottom-line" is that tourism must be increased during the games and managed carefully afterwards, so that all the improvements are being put to good use. *The Olympics should not be a one-time marketing tool, but, rather, an opportunity for prolonged economic growth.*

References

- Baade, Robert A. "Cost-Benefit Analysis and Sports (2002). " *Transatlantic Sport: The Comparative Economics of North American and European Sports*. Ed.: Victor Matheson, Northampton, Ma: Edward Elger Publishers.
- Blake, Adam (2005). "The Economic Impact of the London 2012 Olympics." *Welcome to UTS Scholarship - a UTS:Library Initiative | UTS Scholarship*. Christel DeHaan Tourism and Travel Research Institute Nottingham University Business School, May.
- Birkendorf, Tobias (2009). "The Economic Growth Effects of the 2008 Olympic Games in Beijing." *Research News: Growth Effects of Mega Events*. Ruhr Universitat Bochum, 2 Feb. 2009.
- Duran, Pere (2005). *The impact of the Games on tourism: Barcelona: the legacy of the Games, 1992-2002* [online article]. Barcelona: Centre d'Estudis Olímpics UAB.
- Gable, Adam, and Jay Gladish (2007) *The Effect of the 2010 Olympics on the Greater Vancouver Area*. University of British Columbia.
- Gratton, Chris, Simon Shibli, and Richard Coleman (2005). "Sport and Economic Regeneration in Cities." *Sage Journals*. Sage Publications, 1, May.
- Hotchkiss, Julie L., Robert E. Moore, and Stephanie M. Zobay (2001). *Impact of the 1996 Summer Olympic Games on Employment and Wages in Georgia*. Rep. no. 53. Georgia State Fiscal Research Program, January.
- Humphreys, Jeffery M., and Michael K. Plummer (1995). "The Economic Impact on the State of Georgia of Hosting the 1996 Summer Olympics." *Terry.uga.edu*. University of Georgia, June.
- Kasimati, Evangelia (2002). "Economic Aspects and the Summer Olympics: A Review of Related Research." *People.bath.ac.uk*. International Journal of Tourism, October.
- Kasimati, Evangelia and Dawson (2009), Peter. *Assessing the impact of the 2004 Olympic Games on the Greek economy: A small macroeconomic model*. *Economic Modelling* **26**: 139-146.
- Matthewman, Richard, Karima Kamel, and Mandy Bearne (2009). "Economic Impact of the Olympics." *Locateinkent.com*. (Locate in Kent), July.
- New York Post (2012), "Olympic Lo\$\$es," August 14, p.3.
- Nishio, T., C. Lim, and P. Downward (2009). "Analyzing the Impact of the Olympics Using Stock Market Indices of Host Countries." *MSSanz.org*. Department of Tourism and Hospitality Management, University of Waikato, New Zealand, July.
- Owen, Jeffery G. (2005). "Estimating the Cost and Benefit of Hosting Olympic Games: What Can Beijing Expect from Its 2008 Games?" *The Industrial Geographer*. Indiana State University Economics Department.
- Sanahuja, José Antonio (2002). "Cumbre Unión Europea-América Latina» en Paloma Escudero (coord.): *La responsabilidad de la Unión Europea en la lucha contra la pobreza. Claves de la Presidencia española 2002. Una evaluación de Intermón Oxfam*, Intermón Oxfam, Informe N° 22, pp.47-72.
- Sands, Lee M (2008). "The 2008 Olympics' Impact on China," *China Business Review*, 2008.
- "World News." *London 'No 1 Tourist Destination'* Web. 13 May 2012. <<http://www.independent.ie/breaking-news/world-news/london-no-1-tourist-destination-3096784.html>>.