The Economics of the Olympics

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Abstract

The Olympic Games are one of the world's largest events that draw international attention. It is widely believed that hosting the Olympics is a guaranteed path to economic prosperity. However, this is only the case when host countries are aware of the social and economic conditions in a country before, during and after the Games. Host cities are faced with a decision to build new infrastructure or update existing infrastructure and the potential positive effects of this decision rely largely on their ability to pay attention to the economic and social conditions of the country. If these conditions are ignored, the city may not only lose any potential economic benefits, but might come out in a worse position. In order to see widespread economic benefits host cities need to make planning decisions that will benefit their citizens.

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I. Introduction

A. The History of the Olympic Games

The Olympic Games have been a part of the history of many countries, cultures, and the world for more than 100 years. They have the power to bring people together from all walks of life to watch athletes compete for Olympic glory. From its humble beginnings in Ancient Greece, to the highly commercialized mega-event it is today, the Olympics have had a rich history involving almost every country in the world. This prestigious event allows cities and countries to present themselves in a way they see fit in order to glamorize themselves to the rest of the world. It is a rare honor for a city to host the Olympic Games and a chance that does not come along often, which is why cities want to take advantage of the opportunity to make their city look impressive for the Olympics.

The Olympics Games began in Ancient Greece, but the period of the modern Olympic Games began in 1896 in Athens, Greece. Only 311 athletes from 13 countries competed, showing the humble beginnings of the modern Games. By 1996, 100 years later, the Atlanta Olympic Games had 10,788 athletes from 196 countries competing (Chalkley and Essex 369). This contrast reveals just how much the Olympics has changed and developed during the modern era. They became more important and well-known on an international scale and soon most countries wanted to participate.

The first few modern Olympic Games were not the mega-events they are today. In fact, the Olympic Games in Paris in 1900 and St. Louis in 1904 were not exclusively their own event, but instead were part of a larger event, the World's Fair (Chalkley and Essex 375). In subsequent Games, host cities started to build permanent infrastructure with the

idea that these facilities could be used for many years to come. For example, the Tokyo Games in 1964 generated major improvements to the city. The highway system was completely overhauled, the public railway system was expanded, the water supply system was improved, and the sewage disposal system was renovated, among other necessary improvements. The Games also increased the speed at which these improvements took place (Chalkley and Essex 380). Most of these enhancements were already scheduled to take place, but organizers knew they would need to be completed in time for the Games, thus their completion was expedited. Enhancements to cities brought on by the Olympics fast track urban development because urban development projects, such as fixing the subway, get sped up in order to meet the demand of the Olympics. These projects are also supported with the intent that they will provide benefits many years into the future, after the Olympics are complete.

With examples such as Tokyo, the Olympics started to inspire other cities to bid to host the Games. However, the debt accrued from the Montreal Olympics in 1976 (Chalkley and Essex 383) showed that hosting the Olympics was not a guaranteed path to economic success. This made many cities apprehensive to host the Olympics because they did not want to leave their city in debt and in a worse financial position than before hosting. The 1984 Olympics in Los Angeles turned this fear around for many observers and became a model for future Olympics host cities. Los Angeles was the only city to bid for the 1984 Olympics because all other cities were fearful of the possible harmful effects. When the 1984 Olympics produced a surplus of \$215 million (1984 dollars) (Chalkley and Essex 384) it caused many cities to renew their interest in being a host city. Through their savvy planning and hosting skills, which included using existing resources, such as the Los Angeles Memorial Coliseum, built for the 1932 Olympics, but used again in the 1984 Olympics (Chalkley and Essex 380), Los Angeles showed the world that there are multiple ways to host the Olympics and still produce a successful Games as well as an economic surplus. In today's world, countless cities, many times multiple cities within the same country, bid to host the Olympics and put many resources into the bidding process alone just to secure a chance at reaping the potential benefits of the Games. The Olympics has become a desirable international phenomenon used to boost a country's presence on the international stage and speed along the completion of public infrastructure projects. Throughout its extensive past, the Olympics has weathered some of the toughest periods in international history, but still remains one of the most desired events in the world to host because of its possible economic benefits.

B. Thesis Statement

The success of hosting the Olympics stems from the decisions made and an organizing committee's awareness of current economic and social conditions in the city and country. A host city needs to be aware of issues in the country and use their resources to make decisions for the Olympics that can help the country into the future. Many cities believe that simply by hosting the Olympics they will automatically receive positive economic benefits. History has revealed that is not always true. Hosting the Olympics needs to be meticulously planned and curated in order to reap the highest benefits possible. This paper will analyze several factors and methods of hosting the Olympics through an economic lens and determine which methods have proved beneficial. To focus the scope of this paper, the Olympic Games in Los Angeles (1984), Athens (2004) and London (2012) will provide the bulk of the references.

II. Large Olympic Infrastructure Expenditures

The Olympic Games are a multimillion dollar investment by a host city. Improvements need to be made throughout a city in order to accommodate an influx of athletes, media crews, spectators and tourists. These improvements can be completely new infrastructure, such as stadiums, or updates of existing facilities, with the intention of using them in the future. No matter how a city chooses to go about hosting the Olympics, it will without a doubt spend a significant amount of money making improvements. The table below quantifies the largest infrastructure expenditures for Los Angeles (1984), Athens (2004) and London (2012).

Table 1: Infrastructure Expenditures for Los Angeles, Athens, and London*			
	Los Angeles (1984)	Athens (2004)	London (2012)
Olympic Village	\$126.62 M ¹	\$379.84 M ²	\$419.57 M ³
Venues	\$57.3 M ⁴	\$5570 M ⁵	\$1,284.04 M ⁶
Transportation**	\$23.42M ⁷	\$1630 M ⁸	\$9090 M ⁹

*The numbers in this chart are adjusted for inflation using 2012 dollars (CPI Inflation Calculator).

**Transportation costs include road, airport, public transit and airport improvements, parking lots facilities, and traffic control.

A. Olympic Villages

The Olympic Village is an important area for the Olympics. It is a special place

for the athletes to come together and be alone with just each other. In order to create such

⁵ Karatassou, 49

¹ LAOOC 308

² Karatassou 53

³ International Olympic Committee 4

⁴ LAOOC 308

⁶ The London Organising Committee of the Olympic Games and Paralympic Games 23

⁷ LAOOC 308

⁸ Kasimati and Dawson 141

⁹ International Olympic Committee 5

a space for the athletes, cities have to put a significant amount of thought and money into planning the Villages.

In a desire to cut the costs of staging the Olympics, the 1984 Games in Los Angeles used already existing infrastructure for the Olympic Village: the student dorms at the University of California Los Angeles (UCLA), the University of Southern California (USC), and the University of California Santa Barbara (UCSB) (Shoval 583). The facilities at USC needed few structural changes, but the challenge for the Los Angeles Olympic Organizing Committee (LAOOC) was to give this urban campus a cohesive Olympic look and feel. Some of the changes to the facilities at USC included adding decorative elements such as banners with Olympic graphics, painted scaffolding, and landscaping to give athletes a constant reminder that they were at the Olympics (LAOOC 162). These simple changes gave the Olympic Village a cohesive feel for the athletes at a fraction of the cost of building entirely new Village facilities. This becomes evident by comparing the costs from Table 1.

At UCLA, more changes were needed to transform the dorms into a proper Olympic Village. In order to make the Olympic athletes feel that they were at the Olympics while on UCLA's campus, the LAOOC created the "'Main Street' concept, which consisted of a disco, coffee shop, barber shop, convenience store, video arcade, a park ranger station and telephone center along the 40-foot wide concourse at the top of Drake Stadium" (LAOOC 171). This temporary facility provided the athletes with many amenities and a place to relax and enjoy themselves when they were not competing. The dining halls at the school were already sufficient to serve large crowds, but other updates had to be made to the campus. The LAOOC added temporary facilities such as group sauna rooms, a javelin throw runway on the already existing track, and added decorative elements, similar to those added at USC, to give the athletes a constant feel of being at the Olympics.

The LAOOC's idea to use already existing infrastructure for the Olympic Villages was beneficial in many respects. It kept the costs down for the LAOOC and provided improvements to the UCLA and USC campuses. Repurposing and reusing what is already available is also a more sustainable way of living. The final LAOOC report (1984 dollars) revealed that for all expenses including construction of all Village facilities, the LAOOC spent \$31,015,000, which is about \$5 million less than initially budgeted (LAOOC 308). This was the first time the Olympics had been approached by repurposing so many existing facilities and demonstrated that the Villages can be completed on an affordable budget. This gave future host cities an alternative way of creating Olympic Villages and improving current infrastructure, which would yield benefits for many years to come.

In contrast to the 1984 Los Angeles Games, many host cities choose to build completely new facilities. This approach creates many jobs during the period of construction and the Villages can be repurposed as housing--often low-income housing-after the Games conclude. For the 2004 Olympics in Athens, the Athens Organizing Committee for the Olympic Games (ATHOC) decided to start from scratch and build new infrastructure for the Olympic Village, which was financed by the Worker's Housing Organization (Karatassou 43). This project cost 280 million Euro (2004 Euro). Lowincome families were randomly selected to live in 2,292 new residences after the conclusion of the Olympics. Because of private investment, the Greek government did not pay for the facilities, and Greek citizens, the low-income families, received the benefits (Karatassou 53). By securing private funding for the facilities, the ATHOC was able to save a large amount of money and provide benefit to low-income families.

During the period before much of the Olympic structures were built, Athens faced a long period (1990-1999) of rising unemployment (Karatassou 65). Because Athens was aware of this significant problem they were able to use the Olympics as a gateway for many people to take advantage of the new job opportunities and help with the construction of Olympic structures. Through their awareness of this economic and social condition or rising unemployment, Athens was able to take a disadvantage in their city and turn it into an advantage.

This model also offers a significant social benefit to providing new housing for low-income families. Their quality of living rises and they have a feeling of support. These citizens may also become motivated to seek better employment and improve their personal welfare, which will provide benefits to the economy. When people have higher paying jobs they are able to spend more money on goods and services or potentially save more money to be used at a later point, such as during retirement. The ultimate benefit from programs like this is that low-income families are put in a better position than they were initially. This is just an example of how the benefits can positively flow through an economy.

While Athens took a much different approach than Los Angeles in creating Olympic Villages, both styles can provide economic benefits if done properly. The decision by Athens to hand the residences back over to the Worker's Housing Organization filled a need of the people because this organization knew how to allocate the resources to the people who needed them most. Because Athens was aware of the economic and social conditions in Greece preceding the Olympics, such as the rising unemployment rate in prior years (Karatassou 65), the new infrastructure served three uses: job creation, Olympic housing, and low-income housing. However, in some Olympics in which new housing was built there were losses. For example, "even a year after the [1992 Barcelona] Olympics, 33 percent of the apartments were not sold" (Preuss 70). Although there was a need for housing in Barcelona, the undesirable location of the new housing led to many vacancies in the former Olympic Village. Before the Village was renovated, the site was "separated from the rest of the city and from the coast by two railway lines" (Chalkley and Essex 386). The renovations involved restructuring the railways to fix the isolation problem, but the distance to the rest of the city could not be fixed. Residents were still unwilling to live in these properties. This reveals that the cost of building the new facilities was not worth the end result of having empty residences. Even though the Olympic planners had the right intent of providing benefits to its residents, the final results did not match the intent because the planners did not consider the location of the new facilities with respect to the rest of the city and with respect to where jobs were located. The Barcelona Olympics can be a reminder to future Olympic host cities that merely building new infrastructure does not guarantee benefits. The infrastructure has to fill a void, be properly located in a city, and have a proper plan to implement its repurposing and future use after the Olympics are over, such as happened after the Athens Olympics.

B. Transportation Infrastructure

During the Olympics a city is inundated with more people than it holds on any normal day. There are athletes, media personnel, tourists, spectators, in addition to the citizens of the city that line the streets during the Olympics. Because of this, cities often need to improve their transportation infrastructure to be able to handle the influx of people. They need to make improvements to their railways, airports, roads, and bus routes. These improvements often bring several benefits, such as environmental, transportation efficiency, and expanded access to more parts of the main city and surrounding areas. The Olympics has the power to kick start already planned transportation infrastructure projects, leading to the plans being completed faster. Sometimes even more is accomplished to accommodate the increase in people.

During the 2004 Olympics, Athens knew they would have to update their transportation infrastructure. Plans for these improvements were already in place, but due to the impact of the Olympics, these plans were expedited. In total Greece spent 1.2 billion Euro (2004 Euro) updating their transportation systems including their roads, city railway, suburban railway, and airport (Kasimati and Dawson 141). This helped make transportation of athletes, spectators and media personnel run more smoothly during the Olympics. The goal of this transportation system was not solely for the Olympics, but to make the lives of Athenians easier for years to come. Through these improvements more citizens had access to the city center and the amount of time people wasted in traffic was greatly reduced. The improvements in transportation also gave more people access to jobs in the city center when they would previously not have had access to those employment opportunities. Through this expansion people were able to pursue jobs further away from their homes, but without adding much difficulty or time to the commute.

The London 2012 Olympics also needed to improve and expand their transportation system because they knew the public would rely on it greatly. Six and a half billion (2012 GBP) Great British Pounds (GBP) was invested in the various transportation systems. Similar to Athens, these improvements were made to benefit the city for years to come by connecting even more communities within London. Thirty new bridges and ten new railway lines were added throughout the city to enhance public transportation for citizens, spectators, athletes, and media personnel (International Olympic Committee 5). London also invested in improving communication cables in their underground railways (International Olympic Committee 5) to enhance communication in case of an emergency. The majority of people that visited the Olympic Park traveled by rail, thus it was essential to have a state of the art railway system. With these drastic improvements, more parts of the city became accessible. Higher accessibility can allow for people to have easier access to jobs in different London boroughs, which can potentially lead to job growth. If currently unemployed people are able to access a previously inaccessible neighborhood that can benefit from their skillset, then the unemployment rate could be positively affected.

While Athens and London both improved their transportation infrastructure to accommodate the Olympics, Los Angeles took a different approach. The LAOOC focused more on traffic control, temporary transportation solutions for the Games, and the existing and already expansive transportation system in Los Angeles. Los Angeles is known for their lack of public transportation and focus on roadways. Most individuals do not take the train to work, but drive instead. Unlike Athens and London, whose workers rely on the train to get to and from work, Los Angeles knew their workers relied on the roads. This is why their strategy comprised of traffic management rather than making specific improvements. The LAOOC's awareness to this social condition allowed them to make the proper decision in how to manage for the increase in traffic in an already congested city. For instance, during the Olympics, businesses were encouraged to give their employees alternate working hours in order to eliminate the number of people on the already busy roads during the peak of Olympic rush hour (Murphy 1). This simple, yet efficient plan worked in favor of the LAOOC and traffic was very light during this time. This method allowed the LAOOC to save money, especially in comparison to Athens and London (see Table 1), but unlike the other two cities, the changes to transportation were not for the long-term and did not provide any benefits for the future.

The Olympics can bring outdated transportation systems into the present day and usually accelerate and expand already existing plans, as seen by the improvements in Athens and London. It is important to note that while these transportation enhancements would inevitably have been achieved in the future, the Olympics speeds up the process and helps the projects get completed earlier. Furthermore, the plans often get expanded to include even more communities. While these improvements are costly, they greatly help the ease of transportation throughout host cities and provide benefits in the form of improved access to jobs, declines in transportation costs for citizens and firms, and possible job growth in newly connected communities.

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C. Olympic Venues

Similar to the construction of new Olympic Villages and transportation infrastructure, a host city can choose to build new Olympic venues, such as stadiums, practice arenas, and other athletic facilities or use already existing facilities. Constructing new stadiums can possibly provide a short-term reduction in unemployment, the future use of brand new stadiums, and the lasting legacy of a prominent structure. Making adjustments to existing infrastructure saves cities money in the short term, which can be the difference between financial success and failure of the Olympics. In order to find out whether building new or refurbishing existing infrastructure is the most beneficial route for a host city, the Olympic Organizing Committee needs to be aware of current economic and social conditions in the host and surrounding cities.

The LAOOC made it a goal from the start to use as many existing venues as possible. The most noted example is "The Olympic Stadium used in 1984 was the same venue built for the 1932 Olympic Games" (583 Shoval). This stadium is still in use today as the home field for USC's football team and was recently used as the main venue for the Special Olympic Games. The benefit of using an existing facility as the main stadium was the money, time and resources saved. The only new facilities built for the 1984 Olympics were a new Swim Stadium, the Velodrome and new Tennis Stadium (Preuss 75).

The Athens Olympic Games used some existing facilities, but mostly had to build new permanent or temporary structures. The costs associated with the construction of just sporting venues were about 3 billion Euro (2004 Euro) (Kasimati and Dawson 140). The Games' facilities consisted of "32 venues, of which 18 were newly constructed, 12 were renovated and 2 were temporary facilities" (Karatassou 28). The aim of the new facilities was to have them for future use. The hope was that a one-time upfront cost of building the new facilities would provide benefits to future generations. Similar to Los Angeles, updating the existing facilities was meant to provide needed refurbishments to older facilities and to save time and money. Most of the new facilities fulfilled their goal of being used in the future, but unfortunately not all of the new venues were used to their full potential. For example, "The Helliniko Olympic Complex is a typical example of not making the most out of the Olympic legacy, as many venues [in the complex] have been abandoned" (Karatassou 38). This problem is due in part to the difficulty of negotiating leases with potential clients. Having so many expensive venues unused after the Olympics can be seen as an error by the planning committee. They clearly did not properly investigate to ensure that the venues would have interested clients after the Olympics. Before any construction broke ground, the committee should have been positive that these venues would be useful for future generations and not solely during the Olympics. The committee should have had clients already secured and contracts in place to put the venues to use after the Olympics. This shortcoming on behalf of the ATHOC shows that they were only partially aware of the economic and social conditions and needs of the citizens in the years before, during and after the Olympics. They built too many venues for what the city needed, which did not provide the desired economic benefits. Future demand for entertainment and sports need to be considered when deciding to build new sports venues. Alternatively plans for re-purposing the facilities need to be included in the design of the structures. The venues that are still in use, such as the Goudi Olympic Hall, which is used as an entertainment center (Karatassou 36), bring

economic benefits to Athens. The venues that have long-term contracts will continue to do so if the facilities are kept to high standards and remain in usable conditions.

The 1976 Montreal Olympics provide an interesting example of a complete infrastructure failure on behalf of an Olympic Organizing Committee. The Montreal Olympics used completely new venues, except for a few smaller stadiums (Preuss 75). The goal of this approach was "justified, in part, on the idea that the facilities could be used after the Games for other sports" (Patel, Bosela and Delatte 362). The Organizing Committee also hoped that the new infrastructure projects would provide short-term employment to those out of work. While the intent was good, the costs grossly exceeded the benefits. The original cost estimate for the Montreal Olympic Complex was 120 million dollars, but by the end it cost 1.5 billion dollars (1976 dollars). Montreal faced many obstacles in making the Olympic complex work such as weather, a narrow-sighted mayor, and shortages of labor, materials and equipment. There were clearly many issues that kept the Montreal Olympics from being a success, which is why the debt was not paid off until December 19, 2006 (Patel, Bosela and Delatte 369).

The Montreal Olympic Organizing Committee was not sensitive to the needs of its citizens and was short-sighted in the goals of this project. Because the Organizing Committee was not aware of the economic and social conditions in Montreal and neighboring cities, they did not realize how a shortage of labor would affect the progress of the Montreal Olympic Complex project. The labor shortage during the 1970s was due to the rise of labor unions in Canada leading up to this period. Union labor was mostly used for the construction of the Olympic Complex (Patel, Bosela and Delatte 368). The 1970s was the period of time that Canada saw the greatest number of labor strikes by union workers (Palmer et al. 4), which caused a labor shortage and greatly slowed the completion of the Olympic Complex. In fact, because of the heavy reliance on union labor, "approximately 80 days were lost due to strikes [by union workers]" (Patel, Bosela and Delatte 368) when trying to complete the Olympic Complex. The Organizing Committee clearly miscalculated the social conditions in Canada by not giving enough weight these labor union issues. They neglected the fact that there were numerous strikes during this period, but they still took on a project that would need mostly union labor. Although the Organizing Committee wanted to help short-term employment, it ended up only hurting the progress of the Olympic Complex. Building so many new venues that needed significant amounts of construction labor was not something that was beneficial for Montreal to boost its economy. The new construction instead caused it to have to spend even more money on acquiring labor in order to try and finish the projects on time. The city focused too much on what it thought would help its people, without paying attention to the social and economic conditions in the city. The Montreal Olympics serve as an example and a reminder to future hosts that building new venues does not necessarily provide economic benefits and can leave a city in financial distress.

III. Economic Impact from Games

A. Olympic Village

The economic benefit of the Olympic Village for Los Angeles was the use of the existing facilities and the present value of the updates to the facilities. The explicit cost of this project was the money spent to update the facilities, but it was lower than it would have been if new facilities were built (as seen in Table 1). Through this method, Los

Angeles was able to save money on Olympic housing and had money available for other aspects of the Games or to simply save the money and create a bigger surplus.

The benefits of the Olympic Village in Athens include its usefulness during the Olympics and the subsequent benefit to low-income residents. By providing help to families in need, Athens was able to improve the living situations of 2,292 families (Karatassou 53). These kinds of benefits can have a multiplier effect in a person's life. Although only select families were helped, the benefits to those families have the potential to create a change in the local and national economy. Athens' repurposing of the Olympic Village gave the housing two uses and ensured that the housing would be put to use for years to come. Building the Village from scratch was a large upfront cost, but ultimately worth the benefit. Both of these cities can be an example to future Olympic host cities on how to approach the need for athlete housing through Olympic Villages.

B. Infrastructure

The LAOOC's tactics for hosting the Games paid off because they were attentive to the economic and social conditions of Los Angeles at the time. They were aware that they had already existing world class facilities that would easily host Olympic crowds with minor improvements and used this existing infrastructure to their benefit. If they had chosen to build new infrastructure just for the sake of the prestige that new facilities are thought to have, then Los Angeles would have more facilities than the city needs, which would be a waste of financial resources. As Noam Shoval states, "The financial success of the [Los Angeles] Olympics inspired cities to host the Games as tools for economic and physical regeneration and not just for visibility, prestige, or symbolism" (590). The benefit of mostly using existing facilities and only building what was absolutely necessary allowed the LAOOC to focus its resources on making the required adjustments to the existing infrastructure and ensuring that the new infrastructure was up to Olympic standards.

The partial success and partial failure of the new venues and additions made to old venues for the 2004 Olympics meant that the economic impact from the Games was smaller than it could have been otherwise. The ATHOC miscalculated the social and economic needs of Athens at the time, and therefore did not allocate their resources in the best possible way. Evidenced by the abandoned stadiums after the Olympics, Athens did not need the amount of new sports complexes that were built. Before new Olympic stadiums and other venues are built, there should be a specific planned use for them after the conclusion of the Games. Building any large infrastructure costs millions of dollars and is something that should only be done if there is a clear need for this addition in the host city. The Olympics lasts less than a month, therefore building giant stadiums and other venues cannot be justified unless there is a plan for use after the Olympics that extends several decades into the future. Even though the ATHOC ended with a 131 million Euro (2004 Euro) surplus (Karatassou 52), the surplus could have been even larger if the ATHOC had been more attentive to economic factors such as demand for entertainment and the projected growth of sports teams and used that knowledge to their advantage when planning the Olympics.

As noted above, the shortage of labor during the Montreal Olympics slowed the progress and increased the costs of the Montreal Olympic Complex. The excessive venue building in Montreal caused a negative economic impact throughout the city. The Organizing Committee was not cognizant enough of the labor market conditions in Montreal at the time, which caused it to make costly infrastructure decisions that did not benefit the city. For instance, "The mayor rejected cuts that could have saved up to \$146 million [1976 dollars]" (Patel, Bosela and Delatte 363). Montreal was not prepared to handle these costly infrastructure projects and should probably not have hosted the Olympics. While infrastructure projects have the ability to give a city a positive economic impact, the 1976 Montreal Olympics is not one of those examples.

C. Employment

The Olympics clearly requires more infrastructure additions and improvements to a city. Many host cities see this as a benefit because they forecast that it will reduce unemployment, at least in the short-term. This is considered such an influential factor that many cities use it as selling point in compiling their Olympic bids. More tourists, who can visit during the Olympics, can mean more jobs in the service sector, such as at hotels, restaurants, bars, tourist attractions. Even though it is only short-term improvements in unemployment, these changes are still better than having no improvements at all. People would not take these jobs if it did not increase their individual benefits. The Olympics has the potential to increase employment prospects for many, even if it is only in the shortterm.

The Athens 2004 Olympics saw a reduction in unemployment during the preparation stages of the Games. The most notable impact on employment came in 2002-2003 because of the need to accelerate construction projects (Karatassou 65). The unemployment rate rose in 2004, probably due to the completion of Games related infrastructure products, but saw a downward trend for the next four years, until the economic crisis in 2008 (Karatassou 66). The Athens Olympics are responsible for

creating between 300,400 and 445,000 new jobs throughout Greece from 1998-2011 (Kasimati 441).

The Los Angeles Olympics also had a positive impact on employment, but the effects were not as widespread, mostly due to the fact that infrastructure improvements were much smaller. The impact from the Los Angeles Games was restricted to Southern California, but it did add 73,375 new jobs (Blake 13). The Los Angeles Olympics also used 27,700 volunteers (LAOOC 312) in order to cut costs. Obviously these workers were not paid, therefore not adding to the efforts of decreasing unemployment.

As seen by Athens and Los Angeles, the reduction in short-term unemployment is a common pattern for Olympic host cities and countries and there are many implications that can come from it. One possible scenario is that these new jobs that need to be completed so the city can be ready to host the Olympics on time take workers away from their other jobs, which creates a crowding out effect in certain sectors. Instead of necessarily creating new jobs, this shifts employed people from one job to another, leaving the employment rate the same. If this occurs, the economic impact on unemployment will be greatly reduced. This analysis does not include workers that are already unemployed because they do not have an opportunity cost of leaving one job to work another (Preuss 247).

Another implication from hosting the Olympics is that many of these jobs are not intended for the long-term (Preuss 252). They have a specific purpose and a very clear, unavoidable deadline. After the job is completed, the workers will have gained new skills or improved existing ones to help them get another job, but the jobs created by the Olympics themselves are not meant to last forever. If people are expecting these jobs to result in long-term employment, in most cases they would be disappointed. The economic impact for the short-term and time leading up to and during the Olympics can be quite large, but with many of these jobs intended for the short-term the economic impact is also short-lived. While short-term employment is a generally experienced pattern, it is not to say that these jobs cannot lead to something long-term, such as in the tourism sector (Preuss 253). These industries tend to expand during and after the Olympic Games, due to the exposure from the Olympics via television, radio and the Internet, which causes jobs that were initially meant to be short-term to transform into long-term. While they are no longer directly related to the Olympics, they stem from the positive impact that the Olympics have on a city and country.

A commonly cited positive impact from a reduction in unemployment due to the Olympics is that employing the unemployed takes people off of welfare. Not only are these workers producing in the economy, but the government does not have to make welfare payments to these citizens. A country needs to be aware of the social and economic conditions before bidding to host the Olympics to ensure that the jobs created for the Olympics are in sectors where unemployment is the highest. If a country hosts the Olympics and does not pay attention to these factors, then they may have to hire foreign workers, which will do nothing for domestic unemployment rates or welfare payments. There are many factors that go into creating a positive economic impact from the Olympics. Countries need to ensure that they closely monitor the social and economic needs of a country in order to reap the highest possible economic impact.

While the Olympics provide short-term benefits for workers, the long-term benefits arise from improvements in transportation infrastructure. This includes adding

parts of the city to transportation lines that were originally left out. In cities where workers rely on public transportation to get to work, such as Athens and London, these improvements cause transportation costs to drop for workers and firms. Improving transportation makes it easier and cheaper for workers to access a variety of job opportunities that are farther away. This encourages workers to find jobs and for firms to locate in areas with good transportation. The other benefits listed above all provide shortterm benefits, but the investments a city makes in its public transportation system will provide long-term employment benefits.

D. Tourism

With the increased media coverage that comes from hosting the Olympics the world becomes more aware of a country from a tourist perspective. Prospective tourists are exposed to the beauty, culture, food, and activities that a country offers through several media outlets. The goal of this media coverage is to highlight the best parts of a city and make people want to visit it, not only during the Olympics, but for years into the future. This effect can have two outcomes: people flock to the city in anticipation of what they have seen advertised, or a crowding out effect and people avoid the city because they think it will be too busy, and perhaps unsafe. In fact both of these effects likely occur. Some new tourists are attracted to the city while others decide not to come because of the increased congestion.

In order to gain a bid for the Olympics, organizing committees tend to argue that tourism will increase from the Olympics. During the most recent Games in London, it was reported that "visits to London were up 8% during September to December 2012" (International Olympic Committee 9). This figure reveals that London received a positive economic impact from tourism, which extends even after the conclusion of the Olympics. When people vacation they spend money on lodging, airfare, food, museums, and other cultural activities. This will impact the economy in a positive way. In London, "GBP 925 million [2012 GBP] was spent by foreign visitors during the Games, with many of them staying at least part of the time outside of London" (International Olympic Committee 9). Since part of this spending was outside the host city, it reveals another potential positive economic impact. When people come to a host city for the Olympics, they often travel from far distances. Once tourists have made that kind of travel commitment, they often extend their stay by visiting other parts of the country, other than the main Olympic host city. When this occurs the economic impact has the potential to reach far outside the host city.

London experienced tourism benefits from hosting the Olympics, but not all cities are so fortunate. The Los Angeles Olympics experienced some of the lowest tourism numbers in years. The city expected 625,000 tourists, an already low number, but only 400,000 actually attended (Pyo, Cook and Howell 138). One of the reasons for this is a crowding out effect that occurred. Los Angeles was already known for being crowded and having terrible traffic, causing many people to assume it would be too congested, so they just decided to stay away completely. Because of this, Los Angeles saw tourist numbers that were lower than non-Olympic years. Popular Southern California attractions such as "Disneyland, Universal Studios, and Six Flags Magic Mountain[...] reported lower attendance and fewer non-local visitors than usual" (Andranovich, Burbank and Heying 125). Overall the 1984 Olympics had a positive economic impact, but the impact from tourism ended up hurting the Los Angeles area. The organizing committee did not consider the reputation of Los Angeles as a congested city with a reputation for terrible traffic and the implications that the Olympics might have on popular tourist attractions, thus it ended up hurting tourism more than it helped. If the organizing committee had paid more attention to these issues, they may have made other arrangements to ensure that crowding out would not have occurred. For example, the committee could have advertised the new traffic rules, express buses, priority traffic lanes and other things that could have addressed Los Angeles' reputation. With an increased awareness, the tourism industry could have thrived during the Olympics.

E. Environmental Effects

1. Transportation

The improvements in Athens in transportation infrastructure not only made it easier to travel throughout the city, but also helped reduce pollution. By expanding the roads, the city was able to reduce the amount of time citizens were sitting in traffic and the amount of time cars were idling, thus reducing pollution. Tziralis et. al. reported that the new roadways, "resulted in 2 less hours of stationary traffic per day on average" (28). The benefits of spending less time sitting in traffic are not just environmental. The economic benefits are also quite substantial because people are able to spend less money on gas due to the fact that they are spending less time driving on the roads. This impact is felt drastically by individuals, but can also be seen throughout an entire economy. When people are spending less money on gas, this means that they are able to spend more on other goods, such as shopping and restaurants, which boosts other sectors of the economy. The principle of opportunity cost is also important when analyzing a reduction in travel time. Citizens are essentially giving up sitting in traffic to gain more control over their free time. When citizens are spending less time in traffic they have more time to do other tasks, both for leisure and work. If citizens choose to spend their extra time working, they will be producing more benefits toward the economy. Additionally, new railway lines gave more people the option of using public transportation, which also meant a significant reduction in pollution. These types of environmental benefits can have many positive health and quality of life effects on a community.

2. Existing Infrastructure

While the Los Angeles Olympics did not substantially change the urban infrastructure of the city, it did show other potential host cities a more sustainable way of hosting the Olympics. By updating venues that were already in acceptable condition the LAOOC was able to reduce the use of harmful products used in construction. Not only did they save money, but they reduced their carbon footprint as well.

IV. Analysis of Results

A. Changes to an Urban Landscape

The Olympics can potentially change the urban landscape of a host city. If a city builds a new Olympic Village, new stadiums and updates the transportation system, then the urban landscape will change dramatically because of this one mega-event. However, some cities, such as Los Angeles, use old infrastructure and do not make any updates to the transportation system, thus their urban landscape remains mostly unchanged. Whether cities decide to use existing infrastructure or build completely new structures will determine the scope of the changes to the urban landscape.

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B. Should Countries Host the Olympics?

This thesis has analyzed some of the main costs and benefits of hosting the Olympics. While there is no clear answer to whether a country should host the Olympics, countries that are considering a bid need to look at the social and economic conditions in a city and country at the time. For example, if a country has a high unemployment rate in the construction sector, then it might be beneficial for it to host an Olympics where it builds mostly new infrastructure. This will provide short-term jobs to many unemployed construction workers and provide benefits at least for the short-term. Another instance for potential benefit is if there is a need for housing in a potential host city. If the organizing committee is aware of this condition, then it can plan an Olympics to build new Olympic Villages that can be sold to residents after the Olympics. This analysis shows that cities should host the Olympics only if they have completely analyzed the social and economic conditions in their city and surrounding country.

V. Conclusion

A. Future Use of Findings

The main finding of this thesis is that in order for the Olympics to have a positive economic impact on a host city, the organizing committee must be aware of current social and economic conditions in the city and surrounding cities. In the future, when cities are deciding whether or not to make an Olympic bid they must make sure that the Olympics would provide benefits in the current economic and social environment. The worst outcome of the Olympics would be to leave a city in a worse economic state than before the Olympics.

B. Limitations of This Paper and Further Research

This paper could have been taken in several more directions, but faced a few limitations. To further develop the impacts of the Olympics on the urban landscape two other important factors should be noted: the change in land rents and crime levels. There was not much research on either of these aspects, but these would help show how an urban landscape was shaped because of the Olympics. For instance, the Olympics tend to take place in low-income neighborhoods in order to revitalize those neighborhoods. However, this has the potential effect to increase land rents, which ends up hurting the very people it set out to help. The property prices increase so much in these low-income areas that wealthier people move in and the lowincome residents can no longer afford to live there. There was also no research on whether crime levels are impacted during the Olympics. Some data show that cities take precautions against large planned crime, such as terrorist attacks, but there was no research on the effects of petty crimes, such as theft. One would assume that with the influx of tourists during the Olympics, petty crimes would increase because tourists tend to be an easy target. These factors should be researched further in the future so the effects on the urban landscape can be analyzed through an even wider scope.

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