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Mega-events and infrastructure improvements

----The Case of the Olympic Games in Beijing 2008

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Abstract

The aim of this thesis was to investigate the Olympic Games' influence on Beijing's infrastructure improvement. The research question is how the Olympic Games make the host city accomplish change. The thesis begins with an introduction of the Olympic Games and Beijing's development. The theory here was that a Mega-event is an opportunity for a host city to improve itself, and the improvements will contribute to the Mega-event and city development. The Olympic Games can be classified as a Mega-event, and it could lead to many changes in the host city. All these improvements would help the host city to develop as a global city in future. Both qualitative and quantitative research was used in the information collection. The research has been collected through questionnaires and interviews, and the research was based on the case of the Beijing Olympic Games in 2008. The discussion was focused on the ties between Mega-events and city improvement. I chose to analyze the infrastructures of traffic and stadiums. As a result, we can see that Mega-event has indeed influenced infrastructural improvements. Mega-events have already become one kind of development policy and they could help host city to be a global city in future.

Key words:

Olympic Games, Mega-event, global city, infrastructure, transportation, sports venues

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1 Introduction

1.1 Background

On 13 July 2001, Beijing was announced as host city for the 2008 Olympic Game. From that moment, Beijing's government put a blueprint into action. The Olympic Games has more than one hundred years of history; its influence covers many aspects of a city. Hosting the Olympic Games has already become one of the most obvious symbols of a global city. Every host city wishes to be known to the world in the period of games. More importantly, the Olympic Game is an opportunity for a host city to improve itself. These improvements can help the city to develop further in the future. These improvements include important changes in infrastructure they have a close relationship with the Olympic Games. From the Beijing official report, we know that "the budget in infrastructure is about fourteen billions dollars. In this budget, about 3.6 billions dollars will be used on traffic improvement and about 3 billions dollars will be used on building sports venues"¹. Why has the Beijing government spent so much on infrastructure improvement? If you have been in Beijing, you know that it is a big city. Beijing's infrastructure is the weakness for holding the Olympic Games and to becoming a global city.

1.2 Objective of the thesis

The objective of the thesis is to discuss the Olympic Game as an opportunity through which Beijing's infrastructure will be largely improved. Nowadays, the Olympic Game is considered as a Mega-event, and Mega-events always play an important role in a city's development process, especially in infrastructure improvement. As the host, one of the aims of a city during the period of a Mega-event is to display itself to the world; every host city hopes to give the world a perfect impression. In order to achieve this purpose, the host city's government always makes a lot of effort to improve infrastructure. The improvement in infrastructure contributes

¹ www.beijing2008.com, finance report

to both Mega-events and city development in the future.

In another aspect, the opinions of the public are not all positive. Some people feel that all these efforts will not largely improve Beijing's infrastructure, while other people are afraid that the improved infrastructure will be useless after the Games. In order to demonstrate that infrastructure would be improved a lot because of the Olympic Games, I chose transportation and sports venues as two main aspects of infrastructure to discuss. Finally, I will go back to the theory that a Mega-event is an opportunity for a host city to improve its infrastructure, and improvements should be done for both future Mega-events and city development.

1.3 Research questions

According to my objective, the main research questions will focus on the improvements to a host city resulting from the Olympic Games as a Mega-event.

In what way do the Olympic Games influence infrastructure development?

What role can the Olympic Games play in making Beijing a global city?

1.4 Methodology

In the methodology part of my thesis, I chose both quantitative and qualitative methods to gather information. The aim of these methods is to find different opinions on reality. "Increase our awareness of the political nature of social phenomena, develop the ability of researchers to reflect critically upon those taken-for-granted realities which they are examining" (Alvesson, M. and K. Sköldbberg 2000:111). We need to gather different ideas from different people. Thus, we could analyse an issue critically.

Quantitatively, I used a questionnaire and sent it through the internet to my respondents. "The reliability relates to the issue of choosing a sample of the respondents. It is argued that in-depth interview technique uses a small number of

samples where it is impossible and not even desirable to have representative material of the population universe” (Devin; 1995). In order to get useful answers related to my research questions, I compiled fifteen questions, with 3-4 possible multiple choice answers for each question. I also asked the respondents to give the reasons why they made their choice. As the number of respondents is important when undertaking a quantitative method, I sent the questionnaire to more than one hundred respondents. They are students and employees in different areas. The reason why I chose to use the internet is that it is the most efficient and effective way to transmit information. The limitation of this method is that all respondents are aged between 20 and 50 years. That is because I asked my friends to help me. They transmitted the questionnaire to their friends and colleagues; therefore these people’s ages are all between 20 and 50. Most of them answered my questions seriously, and finally I chose one hundred respondents’ answers as my original data to complete my analysis.

I used interviews to collect qualitative information and results. In my survey, I needed some professional opinions from experts in that field, thus I regarded interviews is a good method to talk to some experts face to face and get some professional ideas from them. “Interview is literally an inter view, an inter-change of views between two persons conversing about a theme of mutual interests, a specific form of human interaction in which knowledge evolves through a dialogue” (Kvale 1996:13). There are two advantages to conducting interviews. First, as it is a face-to-face conversation, we can discuss about the issue freely. We can also exchange our opinions and find some useful ideas through our discussion. Another is that the people I interviewed were very professional. They are experts in the organization of the Olympic Games, so their opinions would be more important and academic. I interviewed two respondents; the first is Mr. Yang, male, 35 years old, the sport department manager of China Daily, a famous English newspaper in China. He was in charge of sports news for many years. The second interview was with Mr. Chen, male, 48 years old, marketing manager of Beijing Olympic Broadcasting Company. He has taken part in Olympic Games broadcasting work many times

previously. I visited them separately in their offices, and I think both of them were very kind and gave me their professional ideas about my questions. There is also a limitation. Because both of interviews were in their offices, I am afraid that they neglected some obvious points on these issues.

All my research methods were based on the case study of the Beijing Olympic Game in 2008. "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin 1984: 13). According to this theory, the Beijing Olympic Game would be a suitable case. It is a real-life context. Mega-events begin influencing the host city several years before they happen. In recent years, lots of improvements have been implemented and further changes will happen in Beijing. These changes received much attention from the world and lots of people would like to see what will happen in Beijing before 2008. From previous host city experience, there is a problem of how to use new infrastructure after the Olympic Games. Although we could not know the reality in Beijing after 2008, we can see the government's plan in utilization. From the preparation and plan, the later results can be estimated. The Beijing Olympic Games is a very good case to prove the theory of a Mega-event's influence on a host city's infrastructure improvement.

Now let us look at the results of the questionnaire. Traffic problems and congestion are regarded as one of the most serious problems in Beijing. The Olympic Games require that the host city has a good transport system. In this circumstance, the Beijing government has made a great effort in improving transportation conditions and systems. In my questionnaire I focused on the attitudes towards the improvements. I asked the question: do you think the Olympics will solve Beijing's traffic situation completely? About 80% of my respondents regarded that the improvements undertaken for the Olympic Games will change the serious transportation situation to some extent. Other respondents thought these improvements could not change the bad situation. It was strange that no respondent chose the answer that Beijing's traffic

problems would be completely solved. The results tell us that people have noticed the improvements and in reality and they had confidence that the Olympic Games is an opportunity to improve, but it would be very hard to solve traffic problem in Beijing just from the changes for the Olympic Games.

Adequate sports venues are also important to a successful Olympic Game. Lack of stadiums is a problem which prevents most local people from doing sports in their leisure time. Beautiful stadiums also contribute to the creation of a good image of the city. New stadiums should not be built only for the purpose of the Games, but should be maintained for usage after the Games. Responding to the question, “do you think these stadiums would be open to ordinary people after the Olympics?” 58.6% of respondents to my questionnaire chose the answer that the new stadiums will be open to ordinary people but the price would be high and this would be the obstacle for most people. 41.4% of respondents thought these stadiums would be open to ordinary people and the price would be reasonable for most people. If these new facilities cannot be used adequately after the Games, they are useless for the city’s development.

Now let us see the opinions from a professional person. When I interviewed Mr Yang, the manager of the sports department of China Daily, he offered his own opinion to the transport issue. First he admitted that transport would be the most difficult aspect for Beijing compared to previous host cities. In order to improve the serious situation, the Beijing government made a specific plan to improve transportation from different aspects. He mentioned that all measures we can see nowadays are not just for the Olympic Game. The government realized that the Olympic Game is an opportunity to start to solve the traffic problem. Construction of roads and subways will be continued after the Game. People should be confident for the future because the Beijing government made a long-term development plan on transport. Mr. Yang also mentioned that these improvements could not ensure the traffic system would be unblocked by 2008. In the period of the Olympic Games,

some mechanisms would be taken, for example limitation of private cars and the setting up of a special Olympic traffic line. These temporary policies will be useful to keep good traffic conditions in the duration of the Games, and these measures also need support from the public.

Regarding the issue of venues, Mr. Yang and Mr. Chen gave similar responses. They said these new stadiums could improve Beijing's image to the world. To be a global city, Beijing should have modern stadiums. Modern architecture is one of the marks for most global cities like the World Trade Centre in New York and Sydney Opera House. So construction of modern stadiums in Beijing is essential whether for the Olympic Games or for Beijing's image. They also have confidence in the issue of usage of these stadiums after the Olympic Games. They insisted that these new stadiums are not restricted to the Olympic Games after 2008. From an economic perspective, they stadiums and venues will be utilized in various ways over a long period. Some main stadiums will hold other activities in different fields, for example international exhibitions. Most of these stadiums would be open to the public. However management of the venues is an important problem for the government. The entrance fee should be reasonable and acceptable for public and the government should get profit from managing it. The aim after the games is to allow these stadiums to become sports centres for ordinary people.

1.5 Disposition

In my thesis, the two main characters are the Olympic Games and the host city, Beijing. Some questions and opinions should be approached before delving into the thesis. These questions and opinions emerge from the fieldwork. In the beginning of thesis I gave a brief description of the Olympic Game and Beijing's development. The aim of this part is to prove that the Olympic Games belong to the classification of a Mega-events and Beijing is qualified to be the host city. Then I will discuss the theory that a Mega-event influences the host city's development. The Olympic Games is one

kind of Mega-event and it influences infrastructure improvement. Infrastructure would be the main aspect of improvements in Beijing. In order to prove the theory, I chose transportation and venues as two main aspects to explore. From discussion of the improvement on transportation and venues, my research suggests that as a host city of the Olympic Games, Beijing's infrastructure has improved a lot. How to use this new infrastructure is another problem for host city. From the reality we come to the conclusion that improvement is not just for the Mega-event, it also for future city development.

2 The Olympic Games and Beijing

2.1 The Olympic Games – An Introduction

“Beginning in 1896 in Athens, the story of the modern Olympic Games is the story of human minds, body and spirit breaking barriers, transcending limits and reaching new levels of excellence, achievement and possibility. Paralleling this story has been our attempt to capture in images these breathtaking feathers of human will.”²

These words describe the essence of the Olympic Games in an interesting way. The modern Olympic Games was first held in Athens in 1896 and it has been held every four years since that date, except three times in 1916, 1940 and 1944 because of the first and second world wars. In 1904 in London, athletes from five continents gathered for the first time. As the Olympic Games development, its influence became wider and further. It is not just a sporting event. It is more than merely games. Its influence reaches different aspects all over the world. In the slogan, we know that the most important thing in the Olympic Games is not to win but to participate. Olympic spirit contains mutual understanding, friendship, unity and fair play. The idea of the Olympics has become more and more popular over time and the theme inspires people to strive to create a nice world.

² <http://www.musarium.com/kodak/olympics/olympichistory/>

As the Olympic Games developed, more and more countries and people took part in it. As a result, the Olympic Games became the most important sporting event in the world. People began to realize that hosting the Olympic Games can lead the host city to develop much faster, and the influence could last for many years after completion of the Games. The main tasks comprise of creating a great city image, absorbing thousands of tourists, improving infrastructure and transmitting the traditional culture of the host city. All this effectively contributes to receiving more investment in the future and the city will be famous to the whole world.

As the relationship between the Olympic Games and city development becomes much closer, more and more big cities vie to be the host city. The competition amongst these candidate cities is very strict and every city expresses the advantage they have in order to receive more votes. Under these circumstances, the qualification conditions are much higher than before. This only some developed cities enjoy the right to be the host city. As the Olympic Games original wish, the Olympic Games influence is needed to reach every part of the world to contribute to the construction of a peaceful and great world.

2.2 Beijing: A global city?

In this part, I will discuss whether Beijing is qualified as a global city or not. Before the description of Beijing, we need to mention what requirements a city must meet to be a global city. A global city is different from a big city or a metropolis. “The global city has become a popular term widely accepted in geography, urban studies, and other related disciplines. Global cities are settings for globalization and the global–local interface, basing points of transnational corporations (TNCs), and command centres of the global economy” (Friedmann, 1986:69). Many big cities all over the world pursue global city status.

First, let us see the improvements in Beijing’s development. When reform and

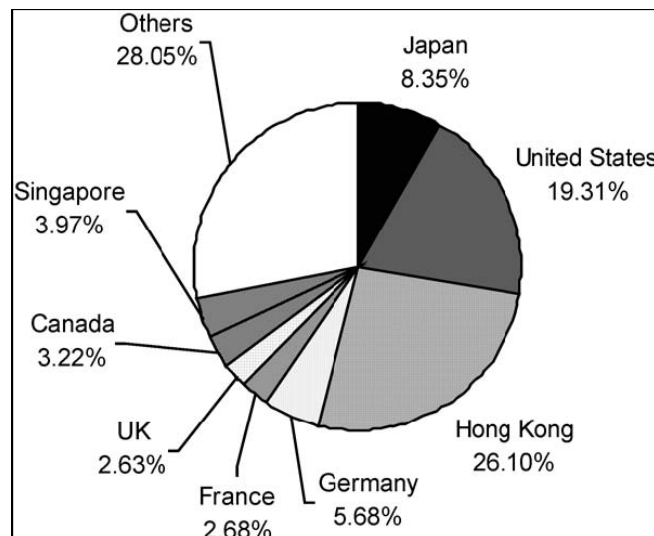
the open door policy were adopted throughout China, Beijing as the capital of China developed very fast in this circumstance. The Beijing government regarded global city status as something to aspire to. “Attracting foreign investment is a major effort of developing countries to integrate with the global economy and capitalize from globalization. For emerging global cities, foreign investment provides the capital needed to finance economic and infrastructure development”(Wei, Yu 2006:383). Below, table 2 reflects the situation of attracting foreign invests in Beijing. Due to the suitable development policies, Beijing’s economy has been growing at a fast pace over the last decade, reaching an average annual increase of 17.5% in its revenue. From table 1, we can also see that Beijing’s fiscal revenues increased year by year, from 74.01 in 1990 to 320.45 in1999.

Table 1, Beijing’s Fiscal Revenues and Rate of Growth in the Past Decade, Source: (Zuo tieyong 2004:47)

year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Fiscal revenues	74.01	77.02	80.25	84.10	99.86	115.26	150.90	209.91	265.61	320.45
Growth rate	4.17	4.07	4.19	4.80	18.73	15.43	30.92	39.11	26.54	20.65

Unit: RMB yuan (100 million)

Table 2, Country/regional sources of FDI in Beijing, 2002. Source: BSB (2003).



Global city should take the leading position in some fields. Establishment of CBD and Chinese Silicon Valley are the signs that represent Beijing is already close to the global city benchmark. “CBDs serve as nodes of global flows and concentration places of business activities; a world-class CBD is one of the symbolic landmarks of a global city” (Sassen, 1991). More and more multinational companies establish their offices in Beijing. High-tech industry is the leading industry in the world. Developed IT-related industry is the symbol of global city. Chinese Silicon Valley in ZhongGuanCun reflects high-tech enterprise and IT-related industries play an important part in Beijing’s economy. Development in this area is becoming the new growth sector in the city development process.

Now let us analyse a weakness, which prevents Beijing from further development is infrastructure. Infrastructure is one of the most important factors contributing to a city’s status as a global city. “Domestically, despite different strategies, both world cities and aspiring candidates try to make themselves globally competitive by improving their infrastructure and policy to facilitate the flow of people, services, capital and information, and by providing a wide range of additional services such as better transportation, a comfortable living environment and leisure and entertainment facilities” (Bird, 2005:107). We can see efficient and advanced usage of infrastructure in a global city. But infrastructure in Beijing is terrible, for example serious transportation conditions, air pollution and lack of entertainment. So from a development perspective, improvement on infrastructure is a task deemed very important by Beijing. Global cities like London, Paris or New York, all have convenient infrastructure conditions.

Is Beijing already a global city nowadays? Some scholars’ insist it would be more reasonable to say Beijing is an emerging global city. We can see this from a literature review which comments on Beijing: “A study of the process, often led by the state, might provide insights on global city formation, instead of simply asserting global cities are products of economic globalization” (Olds & Yeung, 2004:489). “They currently serve as regional nodes of global–local interface; their influence and

reputation are regional, and usually situated in the third or fourth tiers of the global urban hierarchy” (Taylor, 2003). Considering that China has some limitations taking part in the global economy, and some industries are still led by the government, Beijing has not yet qualified to be a global city. Weak infrastructure and a market economy which is not fully developed are preventing Beijing from becoming a global city. In order to achieve this, Beijing has a long way to go in the future.

3. Theory

In the previous part, I described the background of the Olympic Games and Beijing’s development as a global city. But what is the connection between the Olympic Games and Beijing? The answer is the theory concerning Mega-events’ effects on a city’s development. So in this part, I will focus on the theory of Mega-events’ effects and city changes.

3.1 Mega-events influence host city

Firstly, let us examine Mega-events’ influence on a city. We need to know what classifies as a Mega-event when we discuss its influence. “Mega-events are short-term high profile events like Olympic and World Fair that are usually thought of in terms of their tourism and economic impacts, expenditures on facility and infrastructure preparation, as well as revenues from visitors spending, event receipts and media exposure, from the baseline of much Mega-event analysis” (Getz, 1997:15). It is easy to see lots of things are related to a mega-event. Mega-events influence infrastructure, tourism and economy in the host city. What kind of city can be the host city for a mega-event? There should be some restrictions. “History has shown that Mega-events have been more or less restricted to cities of the developed world because of costs involved, the infrastructural requirements, and the need for political stability” (Hiller 2000:441). Due to the restrictions, some global cities often become the host city for Mega-events, while it would be very hard for developing cities to get this opportunity. In recent years, Mega-events received much attention and are welcomed by most big cities. More

importantly, hosting Mega-events has already become a strategy for city development, especially for some big cities, which would like to be global cities. Mega-events can play an important role in city changes and development.

The most obvious feature of Mega-event is that it is a short-term event but its influence could last for long time. “In any event, the Mega-event may be of short duration but it has an impact and meaning far beyond the event itself for the host city” (Hall, 1997). For some big cities which are in the process of redevelopment, Mega-events became an opportunity to improve their image. A host city regards creating a world-class image as a strategy, which would help the city to develop and become a global city. Mega-events’ effectiveness in forming this image is regarded as one of the important advantages, attracting many cities. “Image creation provides a rationale for the allocation of scarce resources. Mega-events are a category of events so spectacular that they are recognized around the world as a peak event, worthy of everyone’s attention”(Pagano and Bowman, 1995). Construction of a wonderful image is important to attract investment and tourism. The increase of tourism and investment from foreign countries contribute to the economy growth in the future.

Due to Mega-events, international media pays more attention to the host city. The host city always takes this opportunity to organize some activities to display its assets. Mega-events also attract most of the world’s international media attention and all positive broadcasted information will lead to an increase in tourism in the future. More importantly, many improvements will happen in host city, especially on infrastructure and facilities. Infrastructure has close relations to Mega-events and local people’s lives. A global city is not only defined by its economic situation, it can also be displayed from people’s daily lives. But how to use and manage these new facilities after the Mega-event will be tough work. Successful improvements in infrastructure are also useful in the city’s development. “While there are usually significant conflicts between event requirements and post-event usage, the substantial fiscal demands of these projects have typically included some form of permanent

alternation to the urban environment” (Servant and Ippei, 1996). Making good use of the new facilities would be helpful towards the city’s development in the future. All local residents wish the improvements from Mega-events will contribute to the enhancement of their living conditions.

Although Mega-events can bring lots of changes to the host city, there are also some negative opinions on it. “Opposition to mega-events is often related to perceptions of misplaced priorities cavalier disregard for the powerless who are negatively affected by the preeminent status given to the event” (Hiller, 2000:440). The theme for holding Mega-events should match the city’s situation. For example, “the Toronto 2000 Olympic bid generated considerable opposition based on a ‘bread not circus’ theme that ultimately led to significant modifications to the bid in terms of its urban impact” (Lenskyj, 1996:392). If the impact is opposite to the city development, this city is not suitable as the host city for the Mega-event.

3.2 Olympic Game’s influence as Mega-event

In the above part I introduced the Mega-event’s effects on a city in different aspects. Let us go back to the theme of this thesis: the Olympic Games. The Olympic Games is one kind of Mega-event nowadays. “Today, the Olympic Games are the Mega-event choice for city and national government development agendas”(de Lange, 1998). Although the Olympic Game is a kind of sporting event, its influence is not just confined to the sports field. The reason is clearly that Olympic Games belong to Mega-events and Mega-events could influence the host city in many aspects. “We focus on the Olympics because they have become the urban mega-event in the contemporary period of global economic competition” (Essex & Chalkley, 1998:187). Close to global economy makes the Olympic Games receive more attention from the world.

The Olympic Games is like one kind of catalyst which accelerates the

improvement and development of the host city. The host city always makes improvements in different areas through the opportunity of the Olympic Games. Development in a city means some kind of transformation. The Olympic Games are more like a catalyst to the host city. The transformation within the host city may be carried out without Olympic Games. But Olympic Games make the host city complete these improvements in a short period. “From an urban point of view, the Olympics were also symbolic of urban revitalization in which the deadlines of hosting the world would contribute to accelerating the process of change—even though some of the changes may have been purely cosmetic while other changes were imperative” (Hiller, 2000:454). This influence contains lots of aspect within the host city. All changes contribute to later development. From other scholars’ opinions, we can reach a similar conclusion. “In recent years, there has been increased interest in the idea of promoting urban development and change through the hosting of major events. This approach offers host cities the possibility of ‘fast track’ urban regeneration, a stimulus to economic growth, improved transport and cultural facilities, and enhanced global recognition and prestige” (Essex, Chalkley, 1999:369).

The Olympic Games as a kind of Mega-events have a common effectiveness on the economy and image creation. That is why the Olympic Games are so welcomed by many big cities. “The goals of each city’s bid were couched almost exclusively in the rhetoric of economic growth and image enhancement. The use of large-scale, high profile event like Olympic as the centrepiece for development should be seen within the context of a shifting emphasis toward consumption in urban development. A common feature of three Olympics held in America was the desire to enhance or modify the city’s image, increase short-term tourism revenues build the region’s sports and recreation infrastructure and redevelop the city” (Andranovich, Burbank, Heying, 2001:118). From this point of view, the Olympics can play a great role in creating a good image for the host city and accelerate economic development in a long period. A nice city image can absorb much investment and tourism from all over the world in the long term after the Olympic Games. This kind of influence could last for many years.

Host cities always undertake many improvements in order to make the Olympic Games successful, but from a city development perspective, these changes should be combined with a city development plan. Otherwise, some improvements would be useless after the completion of the Olympic Games. “While Olympics may have had its own objectives, the Olympic proposals were not independent of but closely linked to existing programs, agencies and plans directing change. In particular, the Olympic plan relied heavily on key urban restructuring plans developed around the same time” (Hiller, 2000:445). Let us take an example, “when Atlanta was awarded the game in 1990, the mayor described the challenge as the ‘twin peaks of Mount Olympus’: one peak was to stage a spectacular Olympics, the other was to use the games to revitalize inner-city Atlanta” (Roughton, 1991). These two aims are not contradictory when the host government puts the preparation for the Olympic Games into the city development plan.

The changes resulting from the Olympic Games could accelerate the development of the host city. Also, changes could allow a city to qualify to be a global city. Improvements in infrastructure, a good city image and economic opportunity make the host city well known to the world. But we can only say the Olympic Games would be helpful for the host city to become a global city. Not every host city becomes a global city when it experiences the Olympic Games. “In closing the 1996 Olympics, ICO president Samaranch did not proclaim the games ‘the best ever,’ leading to negative speculation in the media about Atlanta’s performance as host and its status as a world-class city. The media focused a great deal of attention on inconveniences in transportation and accommodation and, later, the bomb explosion in Centennial Olympic Park” (Andranovich, Burbank, Heying, 2001:126). It could be appropriate to say the Olympic Game is just an opportunity to be a host city. The Olympic legacies can make effect in a long period to host city. How to utilise these improvements in people’s daily lives would be the main point for every host city government.

3.3 Olympic Games' influence on infrastructure

Infrastructure is an essential aspect to the Olympic Games and also plays an important role in a city's development. As a host city for the Olympic Games, improvement in infrastructure would be the focus in preparation. Most host cities take this opportunity to reconstruct and build new facilities. "Mega-events, such as the Olympics, have always had implications for the host centre's urban infrastructure by providing opportunities for new investment and tourism. These impacts have become more significant as the scale and profile of the Games has grown"(Essex, Chalkley, 2004:202). Good infrastructure conditions are helpful in creating a city image and can accelerate urban development. More importantly, good infrastructure is an essential condition of a global city.

Why is infrastructure so important? During the Olympic Game, thousands of people will gather in the host city from each part of the world. They are athletes, journalists or tourists. No matter whom they are or what they do, they will live in the host city for a while. So traffic conditions, housing conditions and stadium conditions have close relationships with their standard of living in the host city. Infrastructure faces the biggest challenge and it will give all people their first and last impression of the city.

The influence from the Olympic Games on infrastructure does not emerge at the beginning of the Olympics. "As a means of presenting a historical review of the impact of each Olympic Games on the host city's facilities, environment and infrastructure, four phases have been identified. The first phase from 1896 to 1904 when the event was small-scale, poorly organized and its urban impact was minimal. During the second phase is from 1908 to 1932, the event became larger in scale, better organized and usually involved the construction of some substantial new purpose-built sports facilities. During the third phase from 1936 to 1956, the sports facilities emerged as 'flag-ship' symbols of the host society and consequently began to attract much more attention. Since 1960, the Games have often been used as a trigger for

large-scale urban improvements and it has consequently had a much more substantial impact on the landscape and urban environment of its host cities” (Essex, Chalkley 1999:374). As the scale becomes bigger and its influence becomes larger, the infrastructural criteria of qualification are enhanced. Every host city has to construct new infrastructure to satisfy the needs of the Olympic Games.

In infrastructural, transportation and venues would be the main points of conflict during the Olympic Games. Transportation should be in charge of carrying all people to and around the host city, so it is very important to have a solid, reliable system in place for athletes and tourists. “The goals of the Olympics in relation to these changes were to ensure access to Olympic venues by public transport, to address the image and safety problems currently experienced on the public transport system” (Hiller, 2000:448). Transportation improvements include building new roads and improving existing transport systems. From historic experience it is common that almost every host city puts their efforts in improving public transportation. The governments also encouraged people to use public transport, which could ensure a better traffic situation. This instrument matched the city development policy. Public transport is the main mechanism for most people in global city. So the Olympic Games helped host cities to get turn their transport development in the right direction.

Sports venues become symbolic of the Olympic Games. People can always easily remember the main stadium of a host city and regard it as one of the most important symbols of that city. Recently, people request not just a basic venue, but one with modern architecture and special functions is now the aim for host cities. More importantly, host cities already noticed the venues’ effect on city development over a long period. “The idea was that most of these facilities would serve as multipurpose community facilities both before and after the Games with maximum utilization by different users groups sharing the facility. It was hoped that new and upgraded facilities would not be stand-alone endeavors but would stimulate community revitalization.” (Hiller, 2000:446), therefore building new sports venues

are not only for the Olympic Games but also have influence on city development. It seems some global cities always get the right to host some important competitions and exhibitions. Modern venues are their advantage to be the host city for international events. These big events could accelerate the city development.

Obviously, usage of these improved infrastructures has received much attention, but this is still a problem for every host city. How to use these infrastructures in the future is a sensitive issue. When building these infrastructures, we should consider the future of the city's development and not just confine them to the Olympic Games. Some negative news regarding venue usage in Athens came to light after the Games. "The same situation also emerged in Sydney before 2004. The situation was improved by the government effort recently. So this is a common problem and it relates to the city development in future."³

As a Mega-event the Olympic Games influence on a host city has been enlarged recently. It forces host cities to improve infrastructure before the Games, and these new facilities are also useful after the Games. Improvements in different aspects can enhance a city's image and absorb much investment to the city in future. All these improvements can contribute to further develop of the city. These improvements in infrastructure are also helpful for the host to be a global city. The host city could improve aspects, which are regarded as its weaknesses. In next chapter, I will take Beijing as a case to describe the changes in infrastructure before the 2008 Olympic Games.

4. Case study on Beijing infrastructure improvement for 2008

From the theory, the Olympic Games as a kind of Mega-event could lead to

³ <http://www.bjoe.gov.cn/index.htm>

infrastructure improvements in host city. let us take Beijing's preparations for the 2008 Olympic Games as an example to see how these improvements in transportation and venues happens in host cities. Infrastructure is the main weakness, which stops Beijing developing much further and becoming a global city. As a host city for the Olympic Games this is a good opportunity to make great changes in infrastructure. But do you think Beijing infrastructure could be improved a lot just through this opportunity? Not everyone is convinced. I will describe and analyse the improvements in transportation and venues in Beijing and the reasons for the existing situation before we focus on the changes. How to use these improved infrastructures is another important issue. It relates to the Beijing's development in the long-run.

4.1 Improvements on transportation

4.1.1 Beijing traffic problem and the reasons

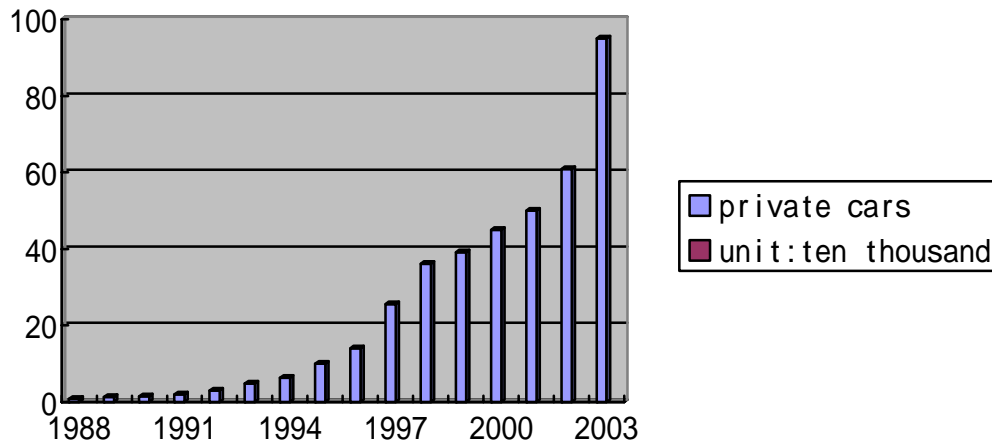
Traffic jams are very common and can happen at any time in Beijing. Traffic problem is one of the most serious problems that have influenced people's daily lives. Compared to other global cities, transportation is Beijing's absolute weakness. From the answer of questionnaire in my fieldwork, about 75% of respondents spend more than half an hour on their way to work everyday. Other respondents spend less than half an hour on the way. Traffic jam is the most important reason why they have to spend lots of time on the way. There are many reasons which led to this situation. In my questionnaire, 37.9% of the respondents chose the structure of the city is the main reason. 31% of respondents think the increase of private cars would be the main reason. For other two answers, the respondents chose public transport is not good enough and traffic lines are unreasonable took 20% and 6.8% respectively. Below is the analysis about the reasons for traffic problem in Beijing.

First, "One of the problems is the disharmony between city development and traffic construct. Some central district's functions excess their ability." (Zuo TieYong 2004:45) In districts like Dongcheng and Xicheng in Beijing, there are lots of

government departments, schools, hospitals, business centres and entertainment places. No matter what you need to do, you have many opportunities to come to these districts. In recent years, there are more and more residential areas located far from the centre of the city. This should contribute to the dispersal of many people from the city centre area. But there are very few public transport lines that reach the living districts. This makes people’s living conditions very inconvenient. Compared to this, most of the public lines reach business districts and the city centre.

Second, the rapid growth of private cars is another difficult problem. “The use and demand for private cars can first be viewed from an anthropological perspective, in that it is seen as a symbol of power and status” (René and Martin 1997:147). As the economy developed quickly in China, more and more Chinese people are rich enough to have their own private cars. The growth of private cars is astonishing. Let us see the graph below, which shows the vast increase in the number of private cars in Beijing over the last fifteen years.

Graph 1 data source: Zuo tieyong (2004:46)



From the graph 1 we can see that the number of private cars has increased ten times between 1995 and 2003. The number reaches nearly one million in 2003. This fast growth becomes big trouble for traffic conditions. Compared to the growth of private cars, public transport is the weakness in Beijing’s transportation system. “Public transport only takes 26.5 percent in all transportation in Beijing, but in New

York and Tokyo public transport takes more than 60 percent. There are many problems around public transportation development, and public transport has not shown its advantage in Beijing”⁴ Public transportation should be the first choice and it should be the main source of transportation for most people. But while public transportation is weak, people prefer to buy private cars.

Third, as a big city with such a large population, Beijing has a big difference from other global cities in the world. Land resources limit the development of the roads. “The area of road only takes 10 percent of the whole area in Beijing, which is far less than the international standard that the area of road should take 20 percent of the city area”⁵. The percentage is much less than other cities like New York and London. So there is not too much space for building new roads in Beijing. As the number of vehicles increases rapidly, the Beijing government has to find other methods to solve traffic problems.

We have examined the transportation situation in Beijing and the reasons for it. Will the Olympic Games improve it? If the answer is positive, most people just care about how. In the big city’s development, traffic schemes are usually delayed just because of a shortage of funds. Mega-events would challenge the traffic conditions. So before the Mega-event, the host city always raises funds to improve their traffic conditions. Next let us examine the improvements in traffic for Olympic Game.

4.1.2 Measure of improvement on transportation

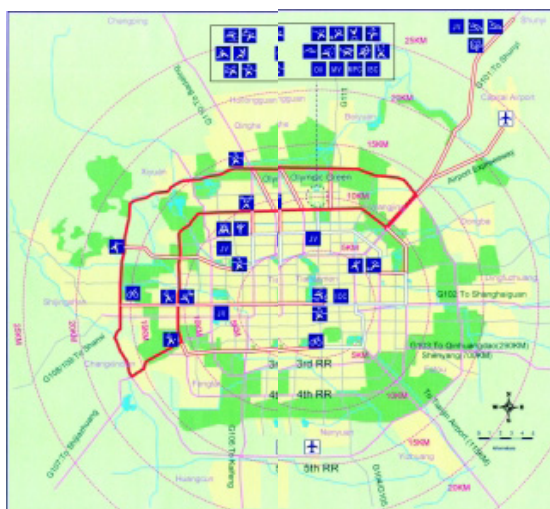
Obviously, the traffic condition in Beijing is far from qualified for holding Olympic Game. In the period of Olympic Game, host city would face serious challenge on transport system. As Mega-event theory, as host city, Olympic Game should be an opportunity to improve infrastructure. Traffic condition is very important

⁴ <http://news.xinhuanet.com/>

⁵ <http://beijing.qianlong.com>

in all infrastructures. It is great if Beijing government could put the improvements for Olympic Game in the city development plan. If the improvements are only for the game, there will be problem after the game. Several years before the game, the government had already made some plans on improving traffic condition. Let us see some specific instruments in this part.

In the process of a cities development, the construction of an efficient traffic system always lags behind the building of business centres and living district. Hence traffic lines are not sufficient. Building and improvement of some main roads is essential. “To maintain the operations of Beijing’s rapidly expanding road transport system, an extensive program of infrastructure works has been planned for completion prior to 2008. This includes construction of a 93-kilometre fifth ring road, a further 35- kilometres of connecting roads which connect the ring roads and expressways, and extending main roads and streets in the city by 105 kilometres.”⁶These improvements were planned not only for the Olympic Games but also aimed for long term development. Besides the construction of roads, some special improvements for the Olympic Games are also needed. Let us see the map below: The red line is called the “Olympic Traffic Line”. It connects most stadiums and the Olympic Park. The Olympic Traffic Line will be the most important road during the Games.



Source:(www.beijing2008.com, transportation part)

⁶www.Beijing2008.com, transportation part

Later, we need to focus public transport here because it should take the main position in transportation system. “All spectator movements were planned to be served exclusively by mass transportations. Therefore, special attention was given to public transport. Furthermore, normal city traffic during the game was urged to use public transport”(John Frantzeskakis & Micheal Frantzeskakis, 2006:30). Public transport includes construction of railway and improvement of buses lines.

Railway (subway/elevated train) is regarded as the most efficient and convenient method of transportation for most of the world’s biggest cities. Railway maps in New York, Paris and London look like complicated networks. Compared to these global cities, Beijing’s railway line is far from developed. There are only three lines in Beijing and that is not enough. Construction of the railway/subway is the most important task in improving the transportation network. “Consistent with Beijing’s existing development plan, by 2008, the subway will have been expanded to seven lines with a capacity of 1.74 billion passengers per year providing extensive service to the central and suburban areas of Beijing. During the Games about 80% of the competition venues will be accessible by the subway”⁷. The Olympics is not the terminal of the construction of the railway. It will be continued after 2008. It is also reported that Beijing could have 561 kilometres of subway and railroad by 2010 and would have the world’s longest transit system at that time. Below is the subway map in 2008 in Beijing.

⁷ www.Beijing2008.com, transportation report



2008 Beijing Subway Map (from <http://www.uzai.com/viewNote/683.html>)

Improving public transport should also be focused on increasing bus capacity and bus lines. Buses are the main form of public transport for most ordinary people in Beijing. Buses also should be the main transportation during the Olympic Games. “The city is adding 133,000 buses and 50 more routes to create an integrated transport system to carry 4.5 billion passengers a year”(Tony Illia, 2002). Besides increasing buses and routes, new buses have replaced old-style ones, and their condition is much better than before. Some of them have been installed with air conditioners, making them more comfortable.

From the government’s report we know that Beijing’s government has made a great transportation plan. But the problem is whether these improvements could solve the traffic problem or not. If we think about the factors contributing to the serious traffic situation, we can easily find that there is not a suitable plan for the limitation of private cars, and the increasing number of private cars is one of the main causes. The car industry is becoming one of the most important industries which made a great contribution to the economy growth. Any policy for limitation of private cars will influence the stable of economy foundation of the country. From traffic perspective, development of private cars should be limited. Some experts reckon that facing the

rapid growth of private cars encourages people to use public transport and the development of a car industry in a proper way should be the policy priority in the future. A limitation on the use of private cars during the Olympic Games is necessary. The Olympic Games leads the Beijing government to conduct a lot of change, but it cannot solve the traffic problem considering the number of private cars will continue to increase.

In some global cities, private cars grow at a proper rate and public transportation is the first choice for public people. But in Beijing, public transport did not develop well and most people regard private cars as their first choice when making a journey. If Beijing wants to become a global city, the government has to make suitable policies on the development of public transport and private cars. At the same time, changing people's mindsets is also needed. The government should encourage more and more people to use public transportation.

Improvements of transportation show the effectiveness from Olympic Game. Olympic Games as one kind of Mega-event could lead the host city to make a great improvement. These improvements would be contributed to the good traffic condition in the period of Olympic Game. The reality tells us the improvement on transportation will be continued after the game. That is very good for further development of Beijing. From the fact, it needs to be noticed that holding Olympic Game could not solve all problems in traffic. Beijing government needs to do more change in future if they want to solve traffic problem thoroughly.

4.2 Improvements on sports venues

4.2.1 Existing stadiums in Beijing

Venues play an important role in the Olympic Games. As the Olympic Games developed and its influence became broader, the request for venues is not solely for a basic function. People want venues to be more modern, beautiful and convenient. As

the host city, before the Olympics, the sport setting was far from sufficient from both a quantity and quality perspective. Cities always invest lots of money and hope these stadiums would give people a lasting special impression. "People would like to enjoy the games and care more about the quality of the stadium. A stadium usually has an entertainment room, rest room and dining room" (Zoltak, 2001). In the long run, the stadiums built for the Olympic Games can be used in different ways in the future and they can become a kind of beautiful view of the city.

In Beijing nowadays, there are only about ten stadiums. More important is that most of these stadiums cannot be used for the Olympics as their conditions do not meet requirements. From my fieldwork, nearly 90% of respondents said they would like to do some sports if possible. Only 10% of respondents do not have this wish. As the reasons why they do not often do sports. 55.1% of respondents chose lack of time is the main reason. 24.1% of respondents regarded lack of stadiums is the reason. And the people chose the location and price of the stadiums are 13.8% and 6.8% respectively. Beside the reason of time, lack of stadiums is the reason which most respondents chose.

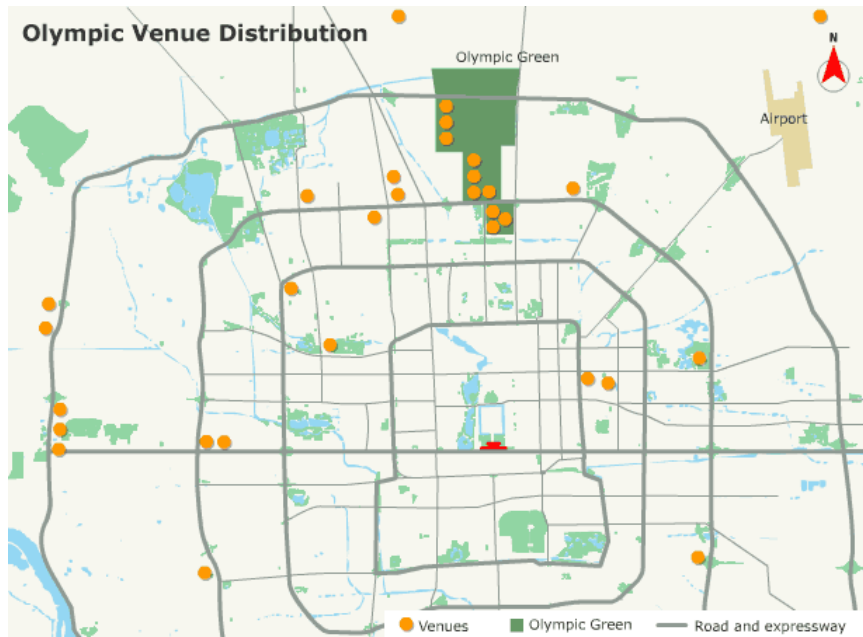
These stadiums can be divided into three groups. The first kind of stadiums is big stadiums, like worker stadiums and capital stadiums. They are only used for big games like the Asian football cup or some important performances. Ordinary people have no right to use them. But these stadiums were built about twenty years ago, thus they have to be improved to take part in the Olympic Games. The second kinds of stadiums are those located in universities in Beijing. But these university stadiums only open for school teams when they partake in competitions. The universities' explanation is that they want to retain the upkeep of the stadium for a long time, and wear and tear and depreciation would set in after a short period if they allowed all students to use it. It is reported that some of these university stadiums will be improved and be ready for the Olympics in 2008. The third kinds of stadium are those open to the ordinary people. These stadiums are small and have poor conditions;

hence they are not qualified to host the Olympic Games. Even for the public, these stadiums are far from sufficient. Therefore lack of stadiums is another problem in Beijing. As more and more people would like to do sports in their leisure time, building more high quality stadiums is essential for improving people's standard of living.

4.2.2 Construction of New stadiums for Olympic Game

From the existing stadiums' condition, Beijing has to build new stadiums in order to hold a successful Olympic Game. As host cities of Olympic Game, they always do their best to improve infrastructure to be qualified. In sports field, the most important infrastructure is sports venue. Sports venues have close relationship with a success Olympic Game. Let us see the construction of new stadiums in Beijing.

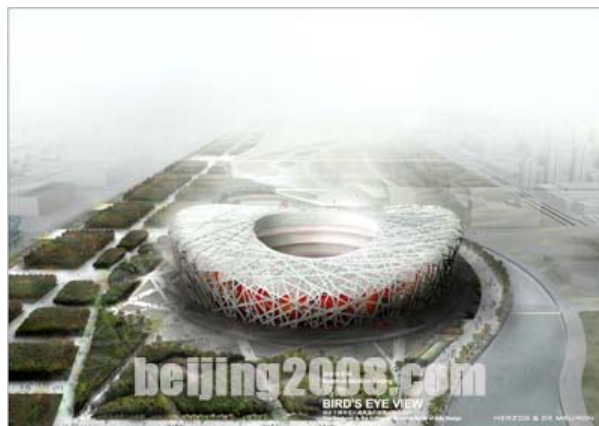
“Games to Beijing have subsided as Chinese officials step into the massive job of planning and building what may be the world's largest construction program. About \$3.2 billion earmarked for construction of Olympic venues. In all, 32 sporting venues will be built or renovated in Beijing. Most of the main stadiums will be brand new” (Kosowatz, 2002:15). As the Olympic Game developed, the need for stadiums is not just for the competition. Olympic stadiums become one of the symbols of the city. As the host city for the Olympics, the Beijing government wants to build the best stadiums in Olympic history. Most of the main stadiums, the Olympic Village and others will be located in the outskirts of the centre of the city. These stadiums would be connected through the Olympic Traffic Line. Let us see the distribution of venues as illustrated in the map below:



Picture source: <http://www.beijing2008.cn/05/17/column211671705.shtml>

Let us view these buildings from a technical perspective. In order to satisfy different demands, there are strict principles regarding structure, material and usage. High technology and environmentally friendly materials will be used in the construction of venues. Modern stadiums are judged in accordance to various aspects and not just the shape. Let us examine the example of main stadium below:

National stadiums are also called nest stadiums according to their form. In Beijing the central stadium is located in Olympic Green, has 9100 seats and construction began in December 2003. The budget is about 247 millions dollars.



The architectural design received much praise from the moment the picture was first shown to the public. From the frame and outside, it looks very modern and beautiful. It will be the main stadium for the Olympic Games and some international level activities in the future. From the Hansen's appraisal, we know that high technology

makes it look amazing. “Some see a giant steel bird's nest; to others it is evocative of ancient Chinese pottery. The structure can be summed up in a single word: amazing. Its steel facade is a mass of steel beams and trusses that twist, turn, and overlap each other in a stunning form. The 220 by 330 m stadium will comprise the stand-alone three-dimensional space frame and a saddle-shaped bowl structure, the latter encompassing the seating area, field, walkways, and interior facilities” (Hansen, 2005:12).

Without the Olympic Games, Beijing has no opportunity to build these new stadiums. These beautiful venues would be helpful in construction of a nice image of Beijing. All tourists will remember them after the Games. In order to be a global city, Beijing needs to have high quality venues. At this time, more and more scholars and ordinary people began to care about the usage issue of these stadiums after the Olympics. From a city's development perspective, usage and maintenance after the game is an important issue.

4.2.3 Sports venues usage after Olympic Game

Construction of these new stadiums is not only for the Olympics, but also for the future development of the city. How to use the stadiums after the Olympic Games is a tough issue for every host city. From previous experience, most cities faced lots of difficulties on this issue. Let us take Athens as example to observe this problem. “After more than one year after the Athens Olympics, utilization of stadiums was negative. Until 2006, most stadiums have not been used well”⁸. Similar situations occurred in Sydney and Barcelona. In Athens, lack of big events becomes the main obstacle stopping these stadiums fulfilling their roles. The Athens government did not employ a suitable management policy on how to utilize these stadiums. So these new stadiums did not contribute to the development of Athens after the Olympics.

Is there any plan on using the venues after the Games in Beijing? Beijing government should create policy on utilization of stadiums early on. Some experts

⁸ <http://www.bjoe.gov.cn>

were invented to discuss the stratagem on how to use stadiums after the Olympics, in order to avoid the burden from high maintenance cost and low utilization. They have already noticed this issue and there should be specific strategies in preparation for this scenario. From previous experience, there are some suggestions: build other establishments around the stadiums and transform them into whole entities or entire complexes, e.g. building hotels, restaurants and business districts. Commercialization is a good solution for managing stadiums. There are lots of ways for the government and enterprises to cooperate in the management of these stadiums. “The Los Angeles Olympic Games is a perfect example of cooperation between government and folk”(Catherwood and Van Kirk, 1992). Permitting some folk organizations to manage the stadiums after the Olympics would be a more optimal solution. From an economic perspective, venues should not belong to the government.

From the construction of new venues, the Olympic Game indeed changes the face of Beijing’s sport facilities a lot. These modern venues will leave a great impression in people’s minds. Improved infrastructure will help Beijing to be a global city. But now we cannot reach any conclusion about it. If these stadiums are only utilised during the Olympics, we cannot say the improvements are successful. Venues should play an important role in Beijing’s development. They can be used to hold other competitions or exhibitions. Also, they should be open for ordinary people. The long term aim is to let these improvements influence public people’s lives. In order to make it true, a lot of work will be done for Beijing government.

5. Conclusion

Now it is time to wrap it up. Beijing, as a large developing city, has received much attention the world over. Rapid development trends have allowed it to be the host city for the Olympic Game in 2008. Olympic Games have more than one hundred year history. Its influence became wider and further. So I chose Beijing Olympic Game as a case study to discuss in my thesis. The theory there is that

Olympic Games belong to Mega-events, and Mega-events could lead to lots of improvements in host city. These improvements would not just contribute to Mega-events and also contribute to the further development of the host city after the events. Improvements would be helpful for the host city to be a global city in future. As the host city for 2008 Olympic Game, the improvements which are happening in Beijing before the game are just match the theory. So I chose Beijing as a case study to prove the theory. Infrastructure in Beijing is not good enough compared to other global cities. Through the opportunity of Olympic Game, infrastructure will be improved a lot.

Quantitative and qualitative methods were used in my thesis. As a quantitative method, questionnaires were essential to get sufficient original data. The internet is the most convenient and efficient means to send my questionnaire. As I asked my friends to help me to transmit my questionnaire to their friends and colleagues, I am confident about the credibility of the answers. However there is a limitation at the same time, as all respondents are aged between 20-50 years, therefore the feedback does not reflect a representative sample of the public. Interviews allowed me the opportunity to talk to professionals face-to-face. From a qualitative point of view, I could obtain real expert and professional opinions. There is also a limitation considering the interviews were held in their offices, leading to a shift in power relations. I fear that they neglected some obvious points on these issues. However I feel I received a sufficiently deep insight into their ideas to be useful in my discussion.

Transportation was regarded as the most serious impediment to Beijing's development. The transportation improvement plan is focused on construction of new roads, extending subway and railway lines and enlarging the bus capacity. Developing public transportation is the best way to solve traffic problems. There are also measures specifically aimed at targeting the needs of the Olympic Games, e.g. the Olympic Traffic Line will play an important role during the Games. Venues are a

symbol of the Olympic Game and the host city. Beijing's government has invested huge sums of capital on construction of these new venues. The new stadiums are different from traditional ones; high technology and green materials are used throughout the building process. These venues will supply perfect conditions for athletes and leave good impressions in people's minds. All these improvements reflect the effects of the Olympic Game as a Mega-event.

Improvement is not just for the Mega-event but it should effect the city's long-term development. Can we say that after Olympic Game Beijing will be a global city because of these improvements? I think the answer is negative. The Olympic Games is just an opportunity to carry out improvements in the host city. There are still some problems, which have not been solved. Private cars will continue to be a tough problem in Beijing after the Games, leading to further air pollution and traffic jams. Encouraging the public to avail of public transportation and allowing the increase in private cars to develop properly are both essential. New venues make us have confidence in Olympic Game, but the usage of venues after the game is also important. Making good use of these infrastructure resources will contribute to the rapid development of the city. These modern stadiums could be used for other sports games or exhibitions. Allowing these venues to become sports centres for ordinary people can also reflect the Olympic theme.

Mega-events force the host city to improve some aspects to be qualified for the event. As the Olympic Game is a sporting event, venues and transportation have become the main aspects in improvement in Beijing. All these changes are the legacy for Beijing in the future. Through these improvements Beijing's infrastructure could be much better than previously and they can make people's lives more comfortable and easy. Improved infrastructure is helpful for the construction of Beijing's image. In order to be a global city, Beijing needs more improvements in different fields. The improvements should be continued after the Olympic Game. The close of the game is not the terminal of the improvements and it should be the beginning of change.

Besides of this, Beijing also needs to make good use of the improved infrastructure after the game. Make these infrastructures do their contribution to economy growth and city development. Thus, Beijing will be on the right way to be a global city and all these improvements would be valuable.

References:

- Alvesson, M. and K. Sköldbberg. (2000) *Reflexive Methodology: New vistas for qualitative research*. London: Sage 2000.
- Beijing Statistical Bureau (BSB). (2003). *Beijing statistical yearbook, 2003*. Beijing: China Statistics Press (in Chinese).
- Catherwood, D.W and Van Kirk, R. L(1992) *The complete guide to special event management: Business insight, financial advice, and successful strategies from Ernst & Young, advisors to the Olympic, the Academy and the PGA tour*. New York: John Wiley & Sons.
- Devin; Fiona (1995), "Qualitative Analysis" in Marsh; David and Stoker; Gerry (Eds.) *Theory and Methods in Political Sciences*, Palgrave, New York.
- De Lange, P. (1998) *The games cities play*. C.P. de Lange, Monument Park, SA
- Getz, D (1997) *Event management and event tourism*. Cognizant, Elmsford, NY
- John J. Kosowatz. (2002) *China starting to crank up work for 2008 Olympics in Beijing*. New York: Oct 28, 2002. Vol.249, Iss. 18; pg. 15
- Kvale, S. (1996). *Interviews: Introduction to qualitative research interviewing*, London: Sage
- Pagano, M.& Bowman, A. O'M. (1995) *Cityscapes and capital: The politics of urban development*. Baltimore: Johns Hopkins University Press
- Sassen, S. (1991). *The global city: New York, London, Tokyo*. Princeton, NJ:

Princeton University Press.

Servant, C. and I. Ippei (1996) *Study on the Impact of International Expositions*. Paris: Bureau Of International Expositions.

Taylor, P. J. (2003). *World city network*. London: Routledge.

Tony Illia (2002) *Beijing's construction plans need international firms* New York
2002 July 8

Yin, R.J. (1984). *Case study research: Design and methods*. Chapter 1-2, London: Sage

Zuo tieyong (2004) *Beijing transportation and the Olympics*. China Communications Press. In Chinese

Journal:

Bird, R.M., (2005). Getting it right: Financing urban development in China.
Asia-Pacific Tax Bulletin

Diekstra, René and Kroon, Martin (1997), Cars and Behaviour: Psychological Barriers to Car Restraint and Sustainable Urban Transport in Tolley, Rodney (ed) (1997) *The Greening of Urban Transport*, John Wiley & Sons; London

Friedmann, J. (1986). The world city hypothesis. *Development and Change*,

Greg. Andranovich, Matthew J. Burbank, Charles H. Heying (2001) Olympic Cities: Lessons Learned from Mega-event Politics. *Journal of Urban Affairs*, Volume 23, page 113-131

Hall, C.M.(1997) Mega-event and their legacies. In P.E. Murphy, *Quality management in urban tourism*, John Wiley, New York

Hansen Brett (2005) 'Bird's Nest' to Be Centerpiece of 2008 Olympics in Beijing. *Journal: Civil Engineering* Volume: 75 Issue: 4 Pages: 12-13

Harry H. Hiller (2000) Mega-Events, Urban Boosterism and Growth Strategies: An analysis of the objectives and legitimations of Cape Town 2004 Olympic bid. *International Journal of Urban and Regional Research* Volume 24.2 June 2000

John M Frantzeskakis & Micheal. J Frantzeskakis (2006) Athens 2004 Olympic Games: transportation planning, simulation and traffic management. *Institute of transportation engineers ITE journal* 2006 October

Lenskyj, H.J.(1996) When winners are losers: Toronto and Sydney bids for the summer Olympics. *Journal of sports and social Issues* 24,

Olds, H., & Yeung, H. W. (2004). Pathways to global city formation: a view from the developmental city-state of Singapore. *Review of International Political Economy*, 11(3),

Roughton, B. Jr. (1991) Atlanta Olympics update'91. *Atlanta Journal Constitution*,

S. Essex and B. Chalkley, (1998) Olympic Games: catalyst of urban change. *Leisure Studies* 17 (1998)

Stephen. Essex, Brian. Chalkley (1999) Urban development through hosting international events: a history of the Olympic Games. Department of Geographical Sciences, University of Plymouth, Plymouth PL4 8AA, UK. *Planning Perspectives*, 14 (1999)

Stephen. Essex, Brian. Chalkley (2004) Mega-sporting events in urban and regional policy: a history of the Winter Olympics. *Planning Perspectives*, 19 (April 2004)

Yehua Dennis Wei, Danlin Yu (2006) State policy and the globalization of Beijing: emerging themes. *Habitat International* 30 (2006) Department of Geography, University of Wisconsin—Milwaukee, Milwaukee, Wisconsin 53201, USA

Zoltak, J (2001) Buildings now designed to maximize revenue. *Amusement Business*.113(21)

Websites resource:

Finance report

<http://en.beijing2008.cn/65/68/column211716865.shtml>

Olympic Game introduction

<http://www.musarium.com/kodak/olympics/olympichistory/>

Venues usage examples;

<http://www.bjoe.gov.cn/index.htm>

http://www.bjoe.gov.cn/zt/hayjj/wz/200611/t142546_1.htm

Public transportation percentage

http://news.xinhuanet.com/auto/2006-12/28/content_5540331.htm

Road area percentage

<http://beijing.qianlong.com/3825/2003/11/17/83@1713632.htm>

Transportation report

<http://www.beijing2008.cn/07/19/column211671907.shtml>

Beijing subway map in 2008

<http://www.uzai.com/viewNote/683.html>

Venues distribution map Olympic and Nest stadium picture source

<http://www.beijing2008.cn/05/17/column211671705.shtml>

Interviews:

Yilei Yang, male, 35 years old, the sport department manager of China Daily.

Jian Chen, male, 48 years old, marketing manager of Beijing Olympic Broadcasting Company.