

# Comprehensive Objectives for PPP Projects: Case of Beijing Olympic Stadium

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## Abstract

This paper is concerned with issues relating to the need for clear and comprehensive objectives by parties to Public- Private Partnership Projects: the case of Beijing Olympic Stadium, which is the first Public-Private Partnership project (PPPs) sporting complex in china. The discussion is illustrated by reference to the numerous risks encountered throughout the development and construction of the project and also revealing the concessional agreement that lead to the use of public private partnerships in building the 2008 Beijing Olympic Stadium. The paper begins by discussing the definition of PPP, nature, development, competitive bidding, total investment and sharing formula of the project partners, structure, operation process of the Beijing Olympic Stadium (Bird's Nest), the disagreement between the Project Company and Beijing Municipal Government (BMG) and also elucidate the three major disputes associated with the project and then give an overview of the disputes resolution process in China.

This case study also highlighted the intricacies seen, both in the implication of cancelling the retractable roof and the critical lessons learnt from the PPP project, as regards to the 2008 Beijing Olympic Stadium. However, even with all the numerous disputes, risks , negotiation and re-negotiation, the project was completed within the stipulated period with a touch of unimaginable structural design at a reasonable cost, which happens to go a long way in assisting the successful hosting of the 2008 Beijing Olympic Games.

The recommendation and lessons learnt from this case study includes that government support and commitment are very vital for any unique project especially in innovative and complex design structure such as the Beijing National Stadium (Bird's Nest). Hence, during the signing of the preliminary agreement any project, a well-defined project scope must be visibly stated, formulated and clearly defined prior before signing the agreement. That the sharing of comprehensive common project aims and objectives must be the ultimate priority of all stakeholders associated in the venture. And also the importance of engaging in a proper and effective risk management strategy because private and public sector interests must work together at all times, for successful completion of the project such as hosting the 2008 Beijing Olympic Games.

**Keywords:** public private partnerships projects, Olympics, construction, case study, disputes, resolution, risks, stakeholders, concession agreement

## 1. Introduction

The term Public-Private Partnerships (PPPs) is defined as a rubric for recounting cooperative business enterprises between the state and private trade and investment; it currently benefit from the endorsement ratings in both government and academic spheres. Many parties ranging from the British government, European Union, United Nations to Canadian Heritage did not just approve the joint venture initiative but strongly strategically utilize it as a strategic apparatus for adjusting to avenue they recognize as modifying requirements and situation (Kinnoek, 1998; Canadian Heritage, 1996). In the United Kingdom the PPP arrangement materialize from the prologue of the Private Finance Initiative (PFI) which also can be tracked down to the implementation of Compulsory Competitive Tendering System (CCTS). Thus, private participation in infrastructure and construction development schemes is the term used by the World Bank, and PFI is the term commonly used for PPP in Japan and Malaysia (Yescombe, 2007; Regan et al., 2011). Indeed, arguments from some quarters reveal that the PPP model in UK is complicated just like the one in China, but with some crucial differences. Especially in terms of duration, the UK system prefers Long-term partnerships agreement typically 25 to 35 years (ACCA,

2004) while in China majority of PPP categories are either short, medium-term with an exception of some long-term agreement. For instance, the Laibin B power generation stations Guangxi and the Beijing National Olympic Stadium. In Australia, PPP procurement policies have also become an indispensable tool of the federal and state government when it comes to construction projects (Allen Consulting Group, 2007; Regan et al, 2011). PPPs in the country now roughly account for around 10% of the state capital expenditure in Victoria, almost 7% in Queensland, and smaller proportions in the other States and the Commonwealth. Different scholars have challenged to develop the progression of PPP construction schemes by clearly categorizing the main characteristic of these schemes (eg. Erridge & Greer, 2002; Grimsey & Lewis, 2002; Li et al., 2005b, Jefferies, 2006; Abdul- Rashid et al, 2006; Corbett and Smith, 2006; Akintoye & Beck 2008) The fundamental perception of PPP have been used for decades and are now commonly applied globally in acquiring economic and social infrastructure development projects.

In the last 29th Olympic Games events which started on the eighth day of the eighth month of 2008 in Beijing. The opening ceremony also started on the eighth minutes past eight in the night. It highlighted the echelon of China's construction, infrastructure development and economic success story of an increasing global player in the realm of world prominence.

On the other hand, as insufficient government funding may hinder the development of large-scale construction projects such the National Olympic Stadium. The People's Republic of China (PRC) acknowledged PPP as a financing initiative and innovative means for financing important large-scale construction projects. (Asia Development Bank 2005, Chan et al, 2010). The Beijing People's Municipal Government (BMG) which is the host city signed an agreement with the International Olympic Committee (IOC), to construct a brand new National Olympic stadium which is known as (Bird's Nest) in the city, which would be used to host the opening and closing ceremony of the games.

The structure of the paper is as follows, it begins with the definition of PPP, discussing the nature, development, Competitive bidding, total investment and sharing formula, structure and the operation processes in building an international standard multi-purpose sporting complex for the 2008 Olympic Games. It then highlights and discusses critical issues related to the development of the project, project partners and location, as well as important government's supports and incentive policies, sources of finance and structural designs. Thus, further sections of the article discusses the vital issues and disputes, which arose during project development such as management disputes, intricate designs and the implication of cancelling the retractable roof. The final section discusses the disadvantages of hasty concession agreement, lessons learnt and on how these management disputes, intricate designs were resolved amicably.

## **2. Literature Review**

### *2.1 Background and Origin of PPP Projects in China*

During the end of 1980's and beginning 1990's, the Chinese government created an enabling environment to attract, support and encourage private companies, private developers and associates to work together towards investing in the public sector infrastructure. The main reason of this initiative is to assist the government and help them lighten the heavy difficulties on the public's financial plan in building or expanding the critical and essential infrastructural projects. Construction and infrastructural development are needed to support fast, reliable economic growth and thus, improving the quality-of life, which will drastically reduce poverty level and improve the efficiency and living condition of its citizenry.

The construction and infrastructure development witnessed a boom period in the mid-1990 and other period started from 2003 to present. The foreign investors through FDIs actively participated in the first boom period, while in the second period, government state-owned and state- controlled shares enterprises were the active principle actors, thus making the government to retain more influence over these projects. About one quarter of the sports complex, design and constructed for the 2008 Beijing Olympic Games including the National Stadium were constructed using PPPs. This echoed the belief that such facilities could be constructed and operated more effectively in this paradigm.

### *2.2 Location of the Beijing Olympic Stadium (Bird's Nest)*

The Bird's Nest Stadium as it is known in some quarters, is one of the iconic structures in China and a lasting heritage of the Olympic Sprint. It added a magnificent touch and left an indelible mark on the Beijing infrastructure development landscape. This landmark sporting facility is situated in one of sections of the Olympic Green Park in northern part of the City. The 4th North Ring Road is not far from the Olympic Green Park. It is roughly 20 hectares in size and has the singular honor as the biggest multi-purpose international

standard stadium in Beijing China. Thus, the intricate and innovative design of the stadium, made it stand out as one of the most stylish stadiums in the world. Though, the conception and building of the stadium was done with the aid of Public-Private Partnerships. The stadium did encounter some problems resulting from issues such as financing, architectural, structural designs, technical issues and other complex values and interests.

### *2.3 Reasons That Lead Beijing Municipal Government (BMG) to Use PPPs in Building the National Olympic Stadium*

First, the BMG decided to use PPPs in building the National Olympic Stadium so that it could access private finance that would not have been available to them, if it chooses to use public funds.

The Olympic spirit, advanced management concepts, capacity building and high quality personnel from other countries to train its workforce; and the innovative identity concept of Beijing in particular and China in general to the international community. Second, the BMG built the stadium to serve as an attraction structure and project highlight integrating Chinese ability and cultural diversity, which will assess in both increasing modernization of Beijing and in advance in general economic expansion/growth in all over the country (designbuild-network.com).

Hence, the organizers also believe that the edifice success could help in maximizing the optimistic ideals of the Olympic Games, such as social progress and improving the living standard of its citizenry. The project success will change and bring a break through, in improving Beijing's socio-economic growth, urban renewal projects, and communal development. This will play a big part to improving the living standard of population. The Local Organizing Committee (LOC) organizing committee of the Beijing Olympic Games also drew on the experiences of previous host cities, to enable the maximizes the socio-economic, cultural and organizational benefits that such a colossal event would have on the China. This made the LOC to adopt and emphasize on Chinese ingenuity in the organization, advance management and brand marketing of the Beijing Olympics Games.

### *2.4 Reflective Image of the Olympics*

More importantly, the representation of the hosting nation is very important for the Olympic Games and the reflection of the event cannot be overlooked either. Hence, the International Olympic Committee (IOC) has recognized the significance of the Olympic brand and has regularly made more advances to promote the brand and take full advantage of the benefits for the commercial associates (IOC, 1999). Consequently, there is a self-scrutiny and consciousness by the organization about its image. The IOC believe that customers correlate the Olympic brand with the preferred Olympic principles, including harmony, celebration, cultural exchange, fair play, impartiality and justice, custom, honor, and excellence (IOC, 2001, 2002).

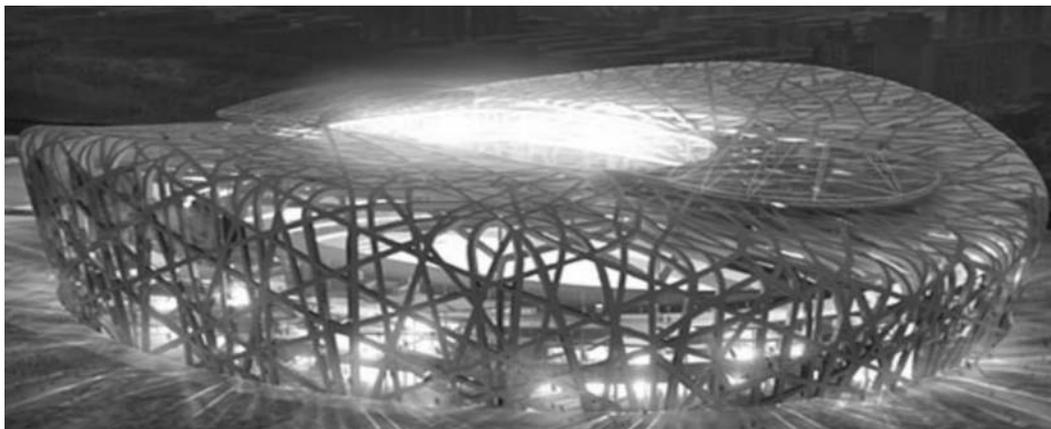


Figure 1. The national Olympic stadium for the 2008 Beijing Olympic games

### *2.5 China and the 2008 Beijing Olympic Games*

#### *2.5.1 Interior and Exterior Views on the Beijing Olympic Games*

One of the inspiration and drive that made China to host the Beijing Olympic Games is believe to be for the improvement of its global image (Good speed, 2008; Preuss, 2008; Heslop et al., 2010).

The International Olympic Committee (IOC) encountered diverse reactions to the pronouncement that the 2008

Olympics would be in Beijing. Notable critics and human right activists reiterated that China's wanton human rights abuse, environmental degradation and lack of health and safety regulation did not justify it to have and host such an esteem sporting event. On the other hand, the more positive voice declared that the Olympic Games would produce a new openness, sincerity and help to promote the average of citizens in China. On August 8, 2007, Jacques Rogge, IOC president, announced during the commemoration of the one-year count down to the 2008 Summer Olympic Games, in Tiananmen Square, that the world would be watching China and Beijing with great prospects: China will welcome the world with an exclusively new reflection when the Olympics open in August(2008). Beijing and China will not only host a successful Game for the world's foremost athletes but will also provide an excellent opportunity to rediscover China, its history, its culture and its people, with China unwrapping itself to the world in new ways (Gov.cn, 2007).

Nevertheless, the image of China among its own citizens was also a significant worry for Chinese government. Many argue the foremost plan of the Chinese Communist Government was to strengthen its power among its own people. That notwithstanding, it is also to advance its international picture, while in some quarters it is reported China acted to have more power over media stories about the country, limit citizen protests and demonstration, fabricate aspects of the opening ceremonies, place tremendous demands on its athletes, "stack" the stands with state-organized "cheerers", and control visas to limit the number of guests to the Games (Bodeen, 2008; Goodspeed, 2008; Foss & Walkosz, 2008; Fram, 2008; Thompson, 2008; Heslop et al., 2010). The last of these strategies presents strong confirmation of the country's inclination that foreigners experience the Beijing Olympic Games through their television and other media where images can be better restricted rather than attend the Games in person (Heslop et al., 2010). Undoubtedly China was more concerned in the significance of the Games to improve the image of China as a full-grown economic player with strong competence in quality production and, as Preuss (2008) argues, transform and modernize the associations surrounding "Made in China".

Consequently, hopes were high that the Beijing Olympic Games being hosted in China would usher in a newer of openness and international accountability on the part of the Chinese Government. Arguments from some quarters suggests that since they had sought the world's focus of attention by hosting the Games, surely this would mean that China wanted to be seen as a fully respectable global citizen. There was a common sentiment of sanguinity that the Beijing Olympics would carry greater liberty for the Chinese populace, the media in China, and may be even Tibet and Xinjiang autonomous regions of the country. China would be putting on its "best appearance" for guests; the Olympic Games would be superlative and perfectly implemented; greenhouse gasses in Beijing would be brought under barest minimum.

Indeed, it appears that all things were possible. Given the superior manner of these expectations, it is entirely possible that even a very tightly run, flawlessly executed Olympic Games would not provide full fulfillment of the promise. The pledge had less to do with the Olympic Games themselves but with extensive concerns around China and its government.

### *2.6 Development and Operation Process of the Beijing National Olympic Stadium*

The government itself was anticipated to hold fast to the philosophy of honesty, justice, efficiency and truthfulness, and to place a good model in being original in systems, instruments and administration. It also researched heavily by drawing references and lessons from international and previous Olympics Games case studies and the benefits of executing large-scale construction projects such as the Beijing Olympics Stadium with innovative private finance. In addition to the drawing lessons from other international case studies as regards to the use of PPP (James et al., 2005, Zhang & Jia 2009), scholars have recommended the merits of different features of PPPs from an international perspective as regards to construction and infrastructure development projects, which are as follows:

- ◆ Improved risk management (for instance; Grimsey & Lewis, 2002; Li et al., 2005a; Shen et al., 2006, Tang, L et al 2009, Chan et al., 2010).
- ◆ Precise and well defined government policies (for instance; Ball & Maginn, 2005; Hart, 2003, Tang, L et al 2009, Chan et al., 2010).
- ◆ Exposed critical success factors (for instance; Akintoye et al., 2001; Qiao et al., 2001; Jamali, 2004; Zhang, 2005; Li et al., 2005b Jefferies, 2006; Abdul-Rashid et al., 2006, Corbett & Smith, 2006, El-Gohary et al., 2006, Tang, L et al 2009, Chan et al., 2010) .
- ◆ Enhanced maturation of contractual agreement (for instance; Ho, 2006; Tranfield et al., 2005, Tang, L et al 2009).

- ◆ Increase and appropriate consistent financial analysis (for instance; Akintoye et al., 2003a,b; Norwood & Mansfield, 1999; Huang & Chou, 2006; Saunders, 1998, Tang, L et al 2009, Chan et al., 2010).
- ◆ Better partnership between the public sector and the organized private sector (for instance; Erridge & Greer, 2002; Tang, L et al 2009, Ysa, 2007; Zhang & Kunaraswamy, 2001a; Zhang et al., 2002; Zhang, 2004 a, b).

In the developing process, high-quality personnel were trained and employed throughout the duration of the construction. This in turn helps to advance the management concepts and knowledge, which will become very useful in the development of other future complex infrastructure projects. All the parties involved thought that the project would finally help to create a new image of Beijing in particular and China in general.

The project aims and objectives of the bird's nest were to acquire greatest earnings, in addition to meeting all the rigorous stress/burden of holding the Games. The drawing, investment, building, process and safeguarding of the project had to be carried out in agreement with these objectives. Hence, the National stadium required to meet all the stringent technological necessities, health and safety standard and other international standards for the Olympic Games, which must be built with state-of-art technology. Organization precision will be a top priority. Since all the contests held within the National Stadium must be top class in terms of organizing, with excellent services provided to all athletes participating in the Games. During the Games period, the National Stadium would be able to provide 100,000 thousand capacity spectators all seating, even though 20,000 temporary seats would be dismantled after the Olympic Games. But the initial 100,000 thousand capacity seats would be use during opening ceremony, track and field events, the football's semi and final match and closing ceremony of the Games.

### *2.7 Use of the Stadium after the Games*

In the conception of building the National Olympic Stadium, BMG had the idea that after the Olympic Games, the stadium would be put into reasonable usage such as hosting World Cup qualifying matches, World Cup/FIFA International friendly matches, World Track and Field Championships, World Athletics Tours, IAAF Grand prix, Athletics Golden/Diamond Leagues, Intercontinental Integrated Competitions, and perennial or biennial sports competitions (For instance, the National Sports Games, Asian Games, Asian Track and Field Championships and National Football League Matches, etc.) as well as non-competitive events (such as arts and cultural performances, corporate group activities and commercial exhibitions, etc.).

### **3. Research Methodology**

Although in recent years studies that centered on PPP in construction and infrastructure development have been on a steady rise, but to date there seems to be lack of interest or is it phobia in researching colossal and large scale PPP stand-alone construction projects or sporting venues such as the underground Metro line, Speed train railroad infrastructure development, and the Beijing National Olympic Stadium just to mention a few.

In this article we used empirical and non-empirical data information. This is done by collecting information, documentary analysis from the development planning commission. It also entails appraising earlier PPP case studies, scholarly and non-academic literatures of global and Chinese perspectives, examining related literatures, visiting the official and authoritative website addresses of the Beijing Municipal Development Planning Commission, State Administration of Taxation, Project Company, XinHua News Agency, China's CCTV News Network, listening and watching to documentary reports, News reports, programs and video archives of the subject matter. Furthermore, we also had official and informal discussion with appropriate bodies on issues that relates to the PPP arrangement structure of the Beijing National Olympic Stadium. From our previous case studies research experiences, we avoided using questionnaires because of the low response rate, defective variables, unpredictability and the target population a pathetic approach towards scholarly investigative case studies, especially when such consists of a massive renowned construction and infrastructure development project like the Beijing National Olympic Stadium.

Furthermore, in other to remove and eliminate prejudice, predetermined concept and be more purposeful to have a complete critical understanding of the case of Beijing National Olympic Stadium. We had brief sessions with engineering analysts and experts from government and the organized private sector that have got built-up, scholarly investigation and large-scale infrastructural development management experiences. Put succinctly, approximately half of them had two decades or more knowledge in their respective area.

Hence, those industry experts and players that we had dialogue with came from the government/organized private sector, private and public financing, highly knowledgeable infrastructure and construction development experts, and other institutional organizations (notably academia and PPP researchers). This is how we gathered and collected the substantial materials used for this work.

The rationale of this study is primarily to: review the concerns and issues which led to use of PPP in building the National Olympic stadium; elucidate the need for clear and comprehensive objectives by parties to PPP Projects and bring out the project contractual structure, tendering timeline and then the three major disputes associated with the project and give an overview of the disputes resolution process in China. Especially, the implication of cancelling the stadium retractable roof of which also resulted in the post-Games budgetary problems. Finally, to proffer suggestion to the critical lessons learnt from the first PPP sporting complex in China.

#### **4. The PPP Model and the Construction of the 2008 Beijing Olympic Stadium**

Different types of PPP have been found to be in existence notably Design-Build Finance-Transfer (DBOT), Build-Own-Operate (BOO), Build-Own-Operate and Transfer (BOOT), Build-Operate-Transfer (BOT) and Operation and Maintenance (O & M) just to mention a few.

The Build-Operate-Transfer (BOT) is the PPP model used in the construction of the 2008 Beijing Olympic stadium (Bird's Nest). This type of PPP model had a great impact on the design, financing, construction and the entire operation of the project. The BMG thought that the project company would bear the loss and profit of the project on its own. Let us mention some of the examples of PPPs (BOT) cases in the world. A typical illustration of a BOT agreement is the third Dartford Crossing of the River Thames connecting two elongated areas of the M25 motorway circling London, which will be operated (with virtually guaranteed toll income) by the vehicle company for up to 20 years, after which the facility will belong to the UK government. In Australia, projects such as the Sydney Harbour Tunnel and the City Link (Linked Motorways) projects in Melbourne are also BOT arrangements (Grimsey & Lewis 2002).

##### *4.1 Construction Period*

During the construction period, the project company had to bargain with ventures prospectively concerned in operating and utilizing the National Stadium after the Games. For example, some suggestions came up that after the Games, the National Stadium would be converted into the main stadium for the Beijing Guo'an Football Club. If this had worked, it would have been a brilliant assurance for the Project Company's cash-stream.

##### *4.2 Competitive Bidding, Total Investment and Sharing Formula*

Competitive bidding, total investment package and sharing formula also played a significant part in building the National Stadium. This is because; it is believed in some quarters that using BOT model will in turn save and reduce excessive government's budget expenditure. For this initiative to work, BMG employed the services of professional specialists to perform detailed evaluations and fiscal scrutiny for the project. It also allowed and use open competitive tendering system to choose the private associate, which will facilitate reducing the enormous financial assistance that BMG would have provided for the project. In furtherance of the public interest, BMG endorsed the Beijing State-Owned Assets Management Corporation (BSAMC) as the chief shareholder in the Project Company whenever such is established. With BSAMC as the major shareholder, they will give the project more impetus; improve effectiveness and efficiency of the entire project management and development.

The total investment package and sharing formula are as follows; the BSAMC held 58% of the whole investment, the remaining 42% financed by a mixed public-private syndicate that is known as the CITIC Syndicate. The public and private partners jointly set up the a Project Company that would be given the duty for funding, building, managing the day to day operation and maintenance of the National Stadium for 30 years after the end of the 2008 Olympic Games. In order to make the Olympic Games appeal more to the local and international circles, the government set the main themes and mottos of the Games to be known as; 'People's Olympics', Hi-tech Olympics and 'Green Olympics'. This is thought to be a technique by which the government has showed its desire to develop the project as a model for environment protection, more energy efficiency and sustainable development. The BMG stipulated that all construction must be done with a high degree of health and safety standard. The completion of the stadium must also be on time, within the budget and the highest-quality standards so as to converge the public interest indicated by these mottos.

#### **5. A Case Study: Beijing Olympic Stadium (Bird's Nest)**

##### *5.1 Development Process*

In reality the Olympic Games are seldom hosted by developing economics, with a small number of countries having the privilege to play host to the Olympic Games notably are South Korea in 1988, Yugoslavia in 1984 and Mexico in 1968 (Heslop et al., 2010). Just like any mega-sporting events, the 2008 Olympic Games, presented the host nation with several prospects, direct and indirect economic and technical collision (Kasmati, 2003).

In October 2002, the BMG delegated the Beijing Development and Planning Commission (BDPC 2002) to ask all concerned stakeholders to submit an application for pre-qualification for the financing, design, construction, operation and maintenance of the project. The main steps of the tendering procedure are summarized in Table 1.

Table 1. The tendering time line process of the national stadium for the 2008 Beijing

| Date                     | Step   | Participants  | Activities   | Remarks   |
|--------------------------|--|---|--|---|
| 28 October 2002          | Invitation to bidders  | BDPC  | Invitation of bidders to apply for pre-qualification and submit bids                   | Seven Consortia apply for pre-qualification, of which five are qualified                                |
| 30 April 2003            | Field inspection and pre-bid meeting                                   | BDPC and Potential bidders  | Q & A after bidders have finished field inspection and review of the bidding documents |   |
| Deadline on 30 June 2003 | Bidding  | The CITIC, CSCEC and BCEG Consortia   | Submitting response to the bidding documents and competitive bids                      | One bidder quits due to substantial failure to respond to the bidding documents                         |
| 30 June 2003             | Bid opening  | Supervisory personnel of BOCOG, representatives of bidders, tendering agent | Opening of bids and announcement as to the successful bidder                           | Top two successful bidders, named as the BCEG Consortium and the CITIC Consortium                       |
| Before 5 July 2003       | Initialing of Concession Agreement and National Stadium Agreement      | BDPC and the BCEG Consortium, the CITIC Consortium                          | The bid being given to the CITIC Consortium  | The BCEG Consortium dropped out due to failure of its projected members to reach a Consortium Agreement |
| 9 August 2003            | Signing of the concession agreement and the national stadium agreement | The CITIC consortium with BMG and BOCOG                                     | Signing agreements and preparing for the registration of the project company           | Top two successful bidders, named as the BCEG Consortium and the CITIC CONSORTIUM                       |
| September 2003           | Establishment of the project company                                   | The CITIC Consortium, BSAMC, GSHGC and BUCGU                                | Registration of Project Company  | Site acquisition before the registration  |

BDPC-Beijing Development and Planning Commission.

CITIC-China International Trust and Investment Corporation.

BUCGC-Beijing Urban Construction Group Corporation.

GSHGC-Golden State Holding Group Corporation.

BSAMC-Beijing State-Owned Assets Management Corporation.

BOCOG- Beijing Organizing Committee for the Games of XXIX Olympic.

BCEG-Beijing Construction Engineering Group.

CSCEC-China State Construction Engineering Corporation.

Different companies and syndicates attended the opening bids for the project and at the end of the tendering procedure. The Beijing Construction Engineering Group (BCEG) syndicate came out tops of the process and as a result was most probably to be awarded the concession. But due to the large number of companies (14 stakeholders in all) with diverse interests, mission statements and background that made up the BCEG syndicate. However, instead of working together, each syndicate continue to project and promote its individual interests,

which made it very complicated for all to arrive at a general agreement with the BMG. After the reconcilable differences could not be resolved amicably, the BCEG syndicate finally withdrew its bid. Since the project is already in tight schedule, the BMG quickly negotiated with the second highest bidder, the CITIC Syndicate and awarded them the concession. The hasty manner by which the negotiation with the CITIC syndicate were done necessitated in a hurried and unsatisfactory accord, which left numerous critical concerns unsolved and these issues resulted to various serious problems in the project.

### *5.2 Project Partners and Structure*

As we have pointed out above, The Beijing Municipal Government is the sole Tendering Administrative Authority for the project. But they devolved the responsibilities for the concession tendering procedure to the BDPC. Thus, BDPC then hired Guoxin Tendering Corporation as the Tendering Agent and charged them with the responsibility of organizing the Invitation to Bidders (ITB) and for executing all ITB actions.

The Project Company set up is quite unique, in the sense that, it is made up of both public and private stakeholders. But the Beijing State-Owned Assets Management Corporation (BSAMC) is the primary public partner, selected by the BMG to actively represent the government side which put in 58% of the whole investment (see Figure 1).

Established in April 2001, it possesses rich and valuable knowledge in construction finance, investment management and money operations, which could be seen in its registered assets of 1.5 billion Renminbi (RMB). Another distinctive characteristic of the organization includes recruiting administrative staff that have in-depth knowledge and familiarity of Beijing city in particular and China in general.

The second stakeholder is a mixed syndicate which consists of three companies namely:

- a.) China International Trust and Investment Corporation (CITIC) state-owned.
- b.) Beijing Urban Construction Group Corporation (BUCEC) state-owned.
- c.) Golden State Holding Group Corporation (GSHGC) privately owned.

The percentage equity stakes in the syndicate is 65%, 30%, and 5% in that order. Jointly they have much experience in the construction financing, infrastructural development and large-scale building facilities.

On the 4 October 1979, the former Vice president of the People's Republic of China formally launched CITIC. Though, the company's philosophy, initiative was structured on the endorsement of Mr. Deng Xiao Ping, the chief designer of China's opening-up and market led economic transformation. The investment corporation has since leapfrogged and grown into a very strong global multinational. Its companies and 44 subsidiaries (mainly banks) can be seen in Hong Kong and countries such as the New Zealand, Australia, Canada and United States. CITIC's presence is seen with their delegate branches in Frankfurt, New York and Tokyo were its main dealing varies from the services industries, through to financial industry and manufacturing and infrastructure investments etc. The Syndicate partners unanimously choose CITIC as their leader. CITIC were saddled with the responsibilities of harmonizing the bid procedures, submitting the official bidding papers and other associated materials together with other two shareholders. The syndicate also appointed CITIC to legal face of the National Stadium project, which entails standing for the syndicate during the negotiations process with the BSAMC.

BUCGC is the second syndicate partner in the group and the biggest construction group in Beijing and possess the critical local know-how and expertise needed by the syndicate. They are comprehensive in nature. And as a large group that engages in the building of manufacturing, engineering and civil buildings, urban and local council works, high-speed metros, expressways and airports. BUCGC also plies its trade in real estate projects, regeneration and urban renewal infrastructure development. However, the State Council of China have selected BUCGC as one of the '120 companies of State-Owned Large ventures for Pilot Reform', it presently consists of a few private investors. In the Top 500 Enterprises of China, it is ranked seventieth, which could also be attributed to its reliable, dynamic, youthful management staff and strong adherence to technological development enhancement. In the last 43 years, it has amassed, acquired and gained invaluable experiences in metals works and complex steel structure construction. With the kind of modern equipment in their stock, it has the capacity to work on the ground and underground with no impediments. Their construction capability ranges from large scale infrastructure, airports terminals, sports stadiums, bridges, subways, and other civil building construction

GSHGC is the third proportional equity company in the syndicate partnership. This is an international private establishment, which specializes in various aspects of urban regeneration and public and urban infrastructure construction, ecological safeguarding, sustainable and renewable energy development. It has global offices and subsidiaries companies in Canada, Spain, France, China and the United States.

Vinci Construction Grands Projects (VCGP) and Bouygues Batiment (BYB) were the two other establishments that rendered project supervision and administrative suggestion to the Project Company.

VCGP is division of the French Vinci Group and is believed to be the largest infrastructural builders and allied services company on earth. Their business interest's range from civil, building construction and other large infrastructure development projects such as (modern bridge construction, toll roads and express ways, multi-purpose car parks, airport terminals and international standard stadiums). On the other hand, BYB is a member of the Bouygues Group, an established French multinational with business interests in a wide range of activities such as in construction, infrastructure development, services, telecommunication and media. Vinci Group and Bouygues Group are also serious investors in the Consortium Stade de France (CSDF). The coming together of these heavy weight companies, for this project is the first of its kind as regards to PPP for a sports complex. The skill, knowledge and technological know-how of VCGP and BYB played a crucial role in the designing and redesigning, funding and building of the cultural and sport complex. The management and operation of such a colossal stadium (Stade de France) enable VCGP and BYB to bring in significant worth and aggressiveness to the Project Company. Figure 1 demonstrates the Beijing Olympic Stadium (Bird's Nest) project structure.

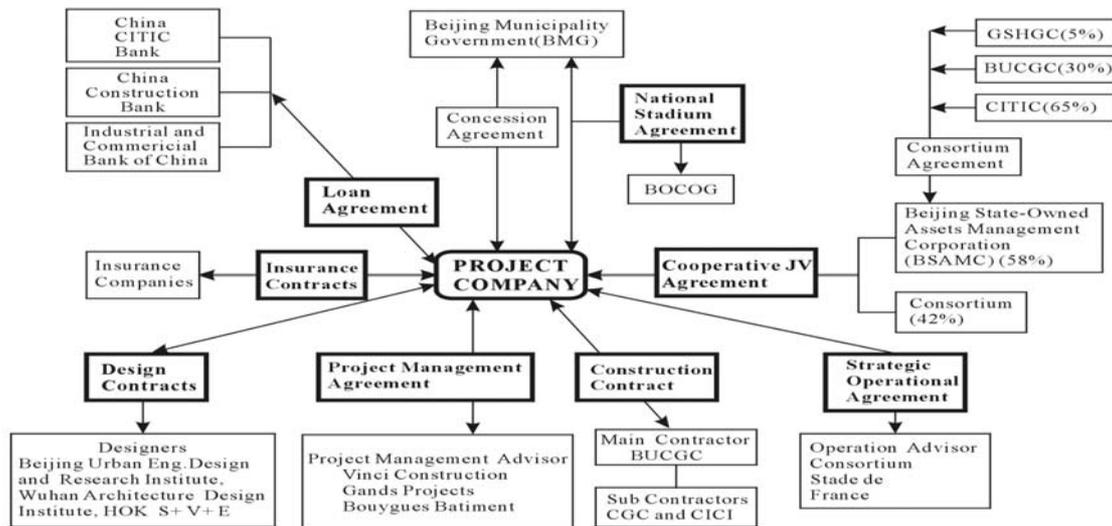


Figure 2. The Beijing Olympic stadium (Bird's Nest) project structure

Notes:

BDPC-Beijing Development and Planning Commission.

CITIC-China International Trust and Investment Corporation.

BUCGC-Beijing Urban Construction Group Corporation.

GSHGC-Golden State Holding Group Corporation.

BSAMC-Beijing State-Owned Assets Management Corporation.

BOCOG- Beijing Organizing Committee for the Games of XXIX Olympic.

CICI-CITIC International Contracting Inc.

CGC-CITIC Guoan Group.

BCEG-Beijing Construction Engineering Group.

CSCEC-China State Construction Engineering Corporation.

Consequently, the project company was formed by reputable domestic and international collaborators with posses' balancing strengths, innovation and expertise.

The domestic and international partners brought in great expectation, that with this agreement the project's mission and goals could be effortlessly achieved and the public good adequately sheltered. Since BSAMC and BUCGC are fully state-owned while CITIC is partly state-owned company, the populace thought that they

would be on behalf of both the government and the society. The other shareholders are mixture of public, private and uniquely combined public-private ownership, with the private side bringing in international best practice / world-class experience, innovation, precise knowledge and efficiency. Looking at it from the analytical angle, these arrangements tend to increase complexity and uncertainty, because the so-called private side comprises different organizations that are themselves either public organizations or a mixture of public-private entities.

### 5.3 Location of the Beijing Olympic Stadium

Just as we have explained earlier, that one of the objectives of building the national stadium in Beijing is not only for the Olympic Games, but after the Games, to serve the immediate Beijing environs and the entire country in general.

However, as a huge stadium it also requires some convenient and quick public transportation system around it for easy commuting of fans and spectators. For this reason, there is a subway station which is 500 meters away on the northwest side of the stadium, two bus stops that are 500 meters away on the west side and 300 meters away on the east side of the stadium respectively.

#### 5.3.1 Government's Supports and Incentives Policies

Since there is no BOT or PPP law in China. Hence, in order to build the national stadium and other construction projects associated with the Olympic Games. The Chinese central government and the BMG adopted several policies and incentives to meet up their responsibilities in building the National Stadium. They are as follows.

##### a) Taxation

On the 23 January 2003 the Ministry of Finance, the State Administration of Taxation and the General Administration of Customs together issued 'Statements on Taxation pertinent to the 29th Olympic Games' (State Administration of Taxation 2003). These statements granted numerous tax stimulus packages that included allowing imported tools and supplies for the stadium complex free of customs and value-added tax. Most sales-taxes related to the stadium complex were also waived away.

Furthermore, the BMG also went ahead to adopt other policies which are required for the coordination of its department. For instance, the 'Tendering Regulations for Concession of Urban Infrastructure Projects in Beijing' (BDPC 2005), that stipulates the comprehensive requirements of the tendering procedure. And the 'Concession Regulations for Urban Infrastructure Projects in Beijing' (BDPC 2006), that stipulates the project methods that should be acceptable for concession and associated key regulations. It was initiated on the 1st October 2003, amended on 1st March 2006 and implemented by BMG on the 1st September 2006 accordingly. The document 'Some Suggestions (36 clauses) on Developing Private Economy' issued by the State Council on the 24th February 2005 is the document that encourage private venture infrastructure using project funding (e.g., BOT, PFI and PPP, etc.) methods. This piece of document stipulates that private enterprises are allowed to spend in all public and infrastructure developments, which were previously executed by central/state government or state-owned enterprises. These includes projects such as power plants, roads, airports terminals and runways, harbors, railways and metro system, gas, water, waste treatment and management etc. BMG also approved the Project Company the right to invest in finance, design, construct, operate, maintain and repair the stadium complex on the terms and conditions of the Concession Agreement. This contractual agreement also stipulated that the Project Company, BMG and Beijing Organizing Committee for the Olympic Games (BOCOG) would go into another specific contract known as Stadium Agreement. This Stadium Agreement stipulates that the stadium should be made accessible to BOCOG, so that they would use it for holding Test competitions, Test Events, in addition to the Olympic Games and Paralympics Games. The Stadium Agreement also detailed each shareholder's rights and responsibilities according to those events in detail.

According to the Concession Agreement, CITIC partners (as the Bidder) was obligated to adhere strictly and comply with all the international standard requirement, relevant construction rules and regulations of the IOC and BOCOG, both for the duration of the bidding process and the investment, design, building, operation and handover phases of the project. Some of the rules also includes, if there happens to be any disagreement that may arise amid the International Sports Federations and the BOCOG, then, IOC would be responsible in settling the disputes and have the final decision to any differences.

However, these important regulations were not made-up to limit the Olympic Games Organizing Committee from suggesting additional sections or enforcing superior prerequisites if needed. In order to smooth the progress of work on the Beijing Olympic venues, an extensive range of 'guidelines', 'contracts', 'agreements' and 'charters' were in place to aid construction. These documents were surrounded by numerous government supports and incentives readily available to smooth the progress of implementing the BOT/PPP-style facilities in

general, with more specific attention given to the Beijing Olympic Stadium.

## **6. Facilities for the 2008 Beijing Olympic Stadium**

Some of the facilities made available for the successful implementation of the BOT/PPP for 2008 Beijing Stadium are as follows.

### *6.1 Provision of Land at a Very Low Cost of Rate*

BMG provided landed property at an affordable low cost much more lower than the 12,000 RMB per Square meter that would not be enough to purchase such areas in Beijing.

### *6.2 Huge Investment Contributions with No Dividend to Receive from the Project*

Even though, the BMG contributed 1.8154 billion RMB which the 58% of total investment of 3.13 billion RMB, it would not be given any bonus from the project.

### *6.3 Provision of Necessary Infrastructure*

In making sure that work do not slow down or for the project company to start complaining about lack of infrastructure amenities on site. The BMG provided all the relevant infrastructural facilities such as (water supply, electricity, accessible road etc) and to create enabling environment by rendering help and assistance in the building and operation of the stadium. For instance, BMG issued some kind of unique passport to the Project Company that allowed them easy movement of the huge steel structure sections needed for the stadium.

### *6.4 Payment of Fees to Project Company to Make Use of the Stadium*

To ensure that the BOT/PPP style concession agreement worked out, the BOCOG reached agreement to make payment charges to the Project Company.

### *6.5 Concession Period*

Both BMG and Project Company agree a 30 year concession period from 2008 to 2038. The terms of the agreement also stipulates that BMG is not allowed to develop new competitive stadium in the northern part of Beijing.

## **7. Basic Contractual Structure of the Beijing National Olympic Stadium**

On the 9th August 2003, the Concession Agreement between BMG and the Project Company were signed. Thus, under this contractual agreement, the Land Administration Authority of BMG presented the Project Company the land use rights of the project facilities venues (collectively, the 'Land Use Rights'), without the demanding that the Project Company should pay a land premium or additional infrastructure development charge. The agreement also stipulates that the Project Company should incur the first-layer land development expenditures (RMB 1,040 per square meter) of the Project Facilities venue. Hence, the responsibilities of the Project Company includes investing, financing, designing and constructing the stadium and thereafter, operating, maintaining and repairing the stadium throughout the duration of the agreed term. The Project Company must also make the stadium accessible to BOCOG for potential test events, test competitions and test running all the facilities to ascertain the level of preparedness of the organizing committee for the Olympic Games.

### *7.1 Terms and Conditions of Usage*

Under the terms and conditions of usage agreement, BOCOG will pay the Project Company a specified amount of money over a stipulated period of time. This payment will be determined by the Actual Operation Fee (AOF) minus the Daily Operation Fee (DOF). The Daily Operation Fee is the project's operation fee when it does not hold any games. At the end of the during of the concession agreement the project company is mandated to hand over the stadium back to the BMG or any other nominated transferee at no extra cost attached to it. This concession agreement is fixed as starting from the actual completion date of 31 December 2006. But the concession agreement is also subject to some provision for earlier termination or the actual ending date of 31st December 2038.

### *7.2 The Stadium Income Generation*

The Project Company is given the option to strategize various initiatives on how to generate income and revenue to repay its stakeholders. Some of the ways available is through the collection of revenue from the project facilities; other options includes selling of the naming right (brand) after the Olympic Games, sports and performance events, gate and ticket sales, hotels and supermarket, restaurants, parking lots and business offices etc. Other stadium income generation includes renting out the commercial spaces, franchising agreements, advertisements, sponsorship, the payments from television, radio and other media organization. The Project

Company would receive and be responsible to all such revenues throughout the duration of the concession agreement except that, during the Olympic Games Period, the project company would only receive the rent fee paid by the BOCOG.

### 7.3 Pre-Olympic and Post-Olympic Market

The Pre-Olympic and Post-Olympic market is contentious, because once the Olympic Games are over, the Post-Olympic market begins and as far as competition for the hosting local and international events are considered, the Project Company must compete such hosting rights status with other existing or yet to be constructed stadiums in China. Since most stadiums in China are obsolete and none as big as the Beijing National Stadium, competition from other large stadiums during the concession period are expected to be minimal.

However, a clause exists in the concession agreement, if there is an urgent need for a new stadium to be built, and then BMG will negotiate with the Project Company, in accordance with the concession agreement, whereby they will be also compensated accordingly.

### 7.4 Sources of Finance

#### 7.4.1 Reduction of Percentage Equity and Bank Doubts

In any construction projects the sources of finance is very important, especially when it is done with PPP.

During the selection process, there were some discrepancies about the sources of finance for the stadium. Just before the selection of the consortium, the government announced that the proposed proportion allocated to government is too high. After much consultation and deliberation, the government reduced its contribution of equity from 65.95% to 58%, which was viewed in some quarters as a good use of public money, reflecting the government's Endeavour to protect the public interest at all times (Table 2). Moreover, the loan money from the banks represented the non-equity financing of the project.

Table 2. Comparison of the original and final proportions of equity

| Shareholder | Original(during bidding process) |                               |                                      | Final                   |                               |                                      |
|-------------|----------------------------------|-------------------------------|--------------------------------------|-------------------------|-------------------------------|--------------------------------------|
|             | Proportion in Syndicate          | Proportion in project Company | Equity Amount (RMB 10 <sup>7</sup> ) | Proportion in Syndicate | Proportion in Project Company | Equity Amount (RMB 10 <sup>7</sup> ) |
| BSAMC       |                                  | 65.98%                        | 762,100                              |                         | 58%                           | 605,133                              |
| CITIC       | 65%                              | 22.113%                       | 255,410                              | 65%                     | 27.3%                         | 284,830                              |
| BUCGC       | 30%                              | 10.206%                       | 117,880                              | 30%                     | 12.6%                         | 131,460                              |
| GSHGC       | 5%                               | 1.701%                        | 19,650                               | 5%                      | 2.1%                          | 21,910                               |
| Total       | 100%                             | 100%                          | 1,115,040                            | 100%                    | 100%                          | 1,043,333                            |

Thus, one could argue that the government deliberately chose the BCEG Syndicate as the preferred winner of the bid as that it will downsize its proposed percentage equity. The highest BCEG Syndicate dropped out, due to irreconcilable differences between the partners; the government had no other choice, but to hurriedly negotiate with the second highest bidder CITIC Syndicate.

The Project Company believed that it is easier to get loans to finance the stadium; from those domestic commercial banks showing strong interest in the project. These banks should be involved since they also possessed sound and strong financial capacity in both domestic and foreign currencies. They were therefore confident that the required funds could be raised from domestic commercial banks. We then used Table 3 to illustrate comparison of the original and final sources of fund.

Table 3. Comparison of the original and final sources of fund

| Source of fund                 | Original ( during bidding process) |                      | Final                          |                 |
|--------------------------------|------------------------------------|----------------------|--------------------------------|-----------------|
|                                | Proportion in total investment     | Amount (RMB million) | Proportion in total investment | Amount (RMB 10) |
| Government contribution        | 65.98%                             | 2,286.29             | 58%                            | 1,8515.40       |
| Equity capital from consortium | 11.34%                             | 394.94               | 12.6%                          | 394.38          |
| Bank loan                      | 22.68%                             | 785.89               | 29.4%                          | 920.22          |
| Total                          | 100%                               | 3,1300.00            | 100                            | 3,130.00        |

The table shows the original funds during bidding and the final agreed proportions of various sources of funds.

Consequently, the Project Company took a bank loan which is seen as the senior debt because of its tenure of 16 years. This loan includes a four year draw-down and a six year grace period. The principal will have to repay the loans in equal installments on a quarterly basis from 2010, with interest also paid quarterly and commencing from the first draw down. Before the tendering process, the Project Company had to obtained letters of commitment from three banks, the Industrial and Commercial Bank of China (ICBC), China Construction Bank (CCB) and China CITIC Bank.

Thus, the three banks at first, expressed a great deal of doubts about the financial viability of the project. We could argue that the reasons for the doubts were due to their careful analysis of the project, where they raised questions of what might be the fate of the stadium, if the retractable roof is cancelled. Another of such doubt is that the retractable roof might result in cost-overruns; this made them to be more cautious about the over-all financial viability of the project. These banks and BMG therefore suggested to the shareholders of the syndicate (CITIC, BUCGC & GSHGC) to replace the Project Company as the borrower of the loans, since (CITIC, BUCGC & GSHGC) all have a very strong financial base and integrity. The suggestions were first resisted by the shareholders leading to more extended negotiations between the banks and BMG.

## 8. Data Analysis and Discussion of Three Major

Three major issues arose before, during the construction stages and right till the completion stages of the project.

### 8.1 The Disputes in the Project

A dispute is primarily a claim, which has been rejected by the defendant. Dispute circumstances are intrinsic in any PPP construction projects and it could influence the success and failure of projects, there by generating additional costs for all parties (Thompson et al., 2000, Marzouk et al., 2011). PPP construction projects issues, concerns and disputes occur as a result of numerous factors such as, technical, climatic and logistic events, while resolution of PPP construction projects disputes is influenced by people's inspiration, manners, activities and cultural implications (McInnis 2001).

However, disputes have been part of the Beijing Olympic Stadium project right from the start of the negotiation. First, different kinds of disagreements arose among the Project Company's stakeholders. The non-existence or and lack of good rapport amongst the partners. Because of issues on how to share the gains, from the profits of construction works of the project, it was a problem that the Project Company must deal with. It argues that any profits will be divided into three parts which represents CITIC, BUCGC & GSHGC according to each company's proportion of the equity in the Project Company. Thus, a direct result of this arrangement was that the Project Company failed to establish good, independent control over the construction. Second, because of the structural characteristics of the project and the detailed design not readily available at the time the contract was signed. The contractor could only sign a Unit Price Contract (UPC) with the Project Company. BUCGC, as the general contractor, then paid more attention on its own profits, time and safety issues that relates to them, than to the entire interest of the syndicate in general. As time goes on construction cost overruns resulted and most difficult, when delays were incurred due to the design changes resulting from the cancellation of the retractable roof. Other issues include the technical aspect of the problem, as the BUCGC asked for a technical-measures fee just to accelerate the construction schedule.

### 8.2 Disputes between the Project Company and the BMG

Even though, that disputes were seen from the start of the project negotiation process both parties did not do enough stem the tide. Accordingly to Cheung et al, 2002, if disputes are not swiftly resolved, they tend to linger on and escalate to the level whereby it causes project delays, that finally leads to claims, which require litigation

proceedings for resolution, and eventually destroy business relationships.

### *8.3 Reduction of the Car Park Spaces from 2000 Cars to 1000 Cars*

The original design agreed by both parties for the car park was for 2000 parking spaces. In the process of construction, BMG asked the Project Company to cut down the car spaces to 1000 spaces, because it wanted to construct a larger parking lot for the whole Olympic area. This singular act made it a problem for the national stadium, because 1000 spaces insufficient for its numerous needs. One of such problem that it created was that it made a large number of people to park their cars in the BMG parking lot and then take a walk to the stadium.

### *8.4 Reduction of the Public and Commercial Areas*

The BMG asked the Project Company to reduce the commercial areas in the stadium and did not give any tangible reason for doing so, which caused more disputes for both parties.

### *8.5 Cancellation of the Retractable Roof*

The BMG asked the Project Company to cancel the retractable roof. Even though, that during the concession agreement the retractable roof was one of the distinctive features of the Beijing Olympic Stadium. These unnecessary interferences and changes by the BMG significantly impacted negatively on the projected sources of revenue, income and profit turnovers of the Project Company.

### *8.6 Tight Deadline*

Even with the changes and interference in the design of the stadium, it did not even stop the BMG from setting a tight deadline and requested that the Completion Date must be on or before 31st December 2006.

The financial closing date was set on 15th December 2003, thus not enough time for an in-depth economic reconsideration in view of the strict deadline. In the event, the actual date was delayed for about two months and, just after the concession agreement was signed, the BUCGC had to rush into the site to start construction.

### *8.7 Complex Design and Changes to It*

These changes to the already complex design also presented a substantial problem for the Project Company. Although, the BMG did not own the copyright for the National Stadium's design, it had asked the Project Company to follow it nonetheless. However, the Project Company's weakness in status could be seen in the negotiation with the design syndicate. This is because there were risks that such a design is not good enough for proper commercial use, yet the Project Company allowed such changes to take place.

In most cases, the construction of this type of facility, due to its magnitude is usually owned by the Project Company, and the sole responsibility of the design syndicate is to satisfy the Project Company's detailed requirements. Sadly, this is not the case with the 2008 Olympic Games Stadium. BMG exercise too much influence on the project and played a much bigger role in deciding on the complex blueprint than would normally happen. Thus, such wanton over bearing presence hampered the Project Company's ability to efficiently and effectively maximize the commercial prospects and use of the stadium. These disputes such as car parking space reduction, public and commercial areas reduction, cancellation of the retractable roof, tight deadline, complex design structure and changes to it significantly reduced the Project Company's projected sources of revenue.

## **9. Implication of Cancelling the Retractable Roof**

A mega-sporting event, like the Olympic Games, provides the host country with numerous opportunities, some involving direct economic impacts (Kasmati, 2003) but other related directly to raising awareness of the host country and positively strengthening or altering the attitudes held by the rest of the world about the country, i.e. building and improving a country brand image (Dolles & Soderman, 2008; Heslop et al., 2010).

Consequently, the Chinese government wanted to show the world a new portrait of china. And the way to do so is to make sure that the entire Olympic Games arena, gymnasiums, sports halls, courts and all sports facilities must be a landmark structures and magnificent construction projects. However, from the start of 2004, the government became more realistic, sensible or perhaps more responsive to other pressing internal political and economic consideration. These internal issues made the government to reconsider its motives and stirred towards the need to build a 'Harmonious Society' with more concern for the ordinary citizenry. Some believe that it could be due to the thoughts and suggestions from some experts, who believed that most of the original designs for the Olympic Games gymnasiums might be too luxurious and could not guarantee value for money after the end of the Olympic Games. Other also argues that, such extravagant construction projects are likely to create post-Games budgetary problems, if the original designs are jettison. After more consultations, the BMG

began to modify most of its designs so as to meet the new official slogan of ‘Host the Olympic Games Frugally’ (Xinhua News Agency 2004, 2005).

#### *9.1 Waste of Money, Resources, Manpower and Time*

Just like several mega-sporting events, including the Olympics, are widely acknowledged as being a constructive vehicles for building national pride inside the country and for country’s self-promotion to global audiences outside the country (Rivenburgh, 2004).

Although, this decision was good for the long term, changing the designs halfway resulted in a waste of money, resources, manpower and time. For instance, after the original construction and structural designs of the National Stadium were released, notable Chinese architects, structural and building engineers wrote to the government suggesting an outright cancellation of the retractable roof so as to save money and accelerate the construction schedule (CCTV 2008). Moreover, from structural engineers’ perspectives, it is thought that by reducing the weight of the roof and the intricate design installation and operation. They believed that this singular act would strongly improve a large part of safety standard during the construction and the entire operation of the stadium. After more detailed analysis of the debate, the government then succumbs and accepts to terminate the retractable roof feature of the stadium.

This decision to terminate the retractable roof had many merits and demerits. For instance, the retractable roof termination drastically reduced the load of the steel structure and also saved at least 2,000 tons of high quality expensive steel materials that would have been used for the supporting structure and another 1,700 tons of steel for the retractable roof itself. In addition, after the re-design, it was expected that there could be many other economic benefits; for example, the total cancellation estimated savings for the project is put at 400,000,000 Million RMB, if all goes according to plan. The complexity of the retractable roof with its unique characteristics and décor such as the distinctive wide-span design would have made it complicated to install with both the roof and its supporting structure each weighing more than 1,700 tons and even more complex within the stipulated time frame.

#### *9.2 Innovative and Complexity of the Retractable Roof*

The previously conceived steel structure with its unique wide-span retractable roof would have been as big as a world class standard football pitch, enveloping the entire open space of the stadium structure. It moves with an aid of a permanent fixed rail as it opens and closes. The contractor explored many ways to install it, but each of these will still cost too much money and also its safety is not adequately guarantee. After the termination of the roof, the construction work in the stadium improved rapidly and the rest of the steel structure for the stadium were much easier to install and cost-effective.

#### *9.3 Redesigning of the Original Design Structure*

The termination of the retractable roof represented a very major design change, which leads to other features needed to be redesigned, for instance, the film system and the steel structure lost its original design model. As a result of the redesign, the design syndicate claimed 40,000,000 Million RMB for redesigning the project. The fee is approximately, one-third of the previous design fee of 120,000,000 Million RMB.

#### *9.4 Time Consuming*

The BMG invited numerous experts to discuss and critically evaluate the situation before it decided to terminate the original design and then asked the design syndicate to start the redesigning of the stadium structure. All the many disputes associated with the proposed termination process were consuming a great deal of time. In some cases the construction work had to stop and wait for the designers, structural engineers and architects to provide new construction diagrams. The redesigning changes delayed the construction schedule for about six months and led to huge cost overruns.

#### *9.5 Compensation Fees and Claims*

Some compensation fees were also paid to BUCGC whom happens to be the main contractor for the project. The Project Company, however, argued that these delays were caused by the BMG, and that the BMG should bear the additional costs should be made to pay some fees. These led to more disputes which were not even resolved during the Olympic Games, but it was finally settled at the fourth quarter of 2008 with the BMG paying most of the compensation fees.

#### *9.6 Disadvantages*

The implication of cancelling the retractable roof clearly affected the Post-Olympic market revenue generation and incomes for the Project Company. The researcher will use three ways to look into the implication.

First, loss of income sources due the termination of the retractable roof. Instead of an outright cancellation, there should have been a design strategy whereby, the opening and closing of the roof should have carried an operation fee, or operated on an hourly rate basis. But now, the Project Company would not have such income due to cancellation of the roof. On the other hand, the high costs of maintenance could be saved.

Second, without the ability to close the roof the National Stadium, the stadium loses the market competitive edge of attraction, and no longer an all-weather multi-purpose Stadium. Consequently, without any roof cover, it becomes uncomfortable and un-suitable for outdoor exhibition, in-door sporting games, cultural, musical and other international events. Hence, as an ordinary open air stadium, it would not attract lucrative naming right bid from companies and establishment.

Last, the cancellation diminished the 2008 Beijing Olympic Stadium's brand value. It made the stadium to have no unique advantage characteristic in relative to other larger stadiums in China.

## **10. Overview of the Dispute Resolution Process in China**

We will start with the definition and the kinds of dispute resolution process in China. Dispute resolution process in China can be categorized into two main kinds: mainly traditional dispute resolution methodologies and the alternative dispute resolution (ADR) methodologies. Traditional dispute resolution techniques includes negotiation and litigation, while ADR is defined as any process or procedure, other than adjudication by a presiding judge, in which a neutral third party participates to assist in the resolution of issues in disagreement, through processes such as early neutral evaluation, mediation, mini-trials and arbitration (Hoogenboom et al., 2005).

In view of the possible kinds of dispute resolution process in China as regards to the segment of the article due consideration was also given to the Chinese culture and the dispute resolution system for construction projects in China (Chan, 1997, Hu, et al. 2008). Chan (2002) discovered med-arb which is perceived as a distinctive resolution technique used for domestic dispute resolution in China. Its distinctiveness has made it to be integrated as one of the dispute resolution techniques which includes negotiation, arbitration, mediation, litigation, expert determination, adjudication, dispute resolution adviser, dispute review board, mini-trial and med-arb (Chan & Suen, 2005). Thus, the civil and commercial dispute resolution channels in China is like a pyramid, whereby the negotiation machinery serves as the bottom stratum, the mediation machinery serves as the second bottom stratum, the arbitration machinery serves as the second top stratum and the litigation mechanism serves as the top stratum ( IDE Asian Law Series no. 15 2002).

The Chinese dispute resolution measures, especially mediation, have long been maybe the single characteristic of the Chinese legal system most extensively researched in the west. However, we will like to draw from the rich literature of dispute resolution in China such as the works of Chan (2002) in the international construction projects in China, Howlett (2003) discuss about the Chinese arbitration and law, Lau (1979) explain in details on the teaching of Confucius, Liu and Fellow (1999) in the Chinese organizational culture, Kumaraswamy & Yogeswaran (1998) research on the sources of construction disputes. Uff (1998) mentioned on the issues of addressing multi-tiered dispute resolution methods in large-scale construction and infrastructure development projects and Mitropoulos and Howell (2001) discusses in the prevention and resolution of construction disputes, while Chan and Suen (2005) mention on the dispute resolution management in China.

Firstly, In China the methods of dispute resolution are traditionally placed along a spectrum that ranges from informal negotiations between the parties at one end to formal adjudication by some court-like body at the other. Once third parties are involved and it is with third-party dispute resolution procedures that would be used to resolve the disputes. According to the Chinese law, in the event of civil law and commercial law disputes, the private parties may pursuer the following avenues of alternative dispute resolution in settling their disputes. They are as follows, (a) negotiation; (b) mediation; (c) arbitration.

### *10.1 Negotiation*

In China, the civil and commercial parties tend to hold negotiation talks between them. The negotiation mechanism encourages the parties to reach an agreement on settling their disputes without the intervention of the third neutral parties. But there is a problem here since no third party appears in the negotiation process; the negotiation machinery is most confidential method among all the Alternative Dispute Resolution (ADR) methods. However, due to advantages of confidentiality, efficiency and sustaining friendship, the negotiation machinery is the most predominant channel in resolution of disputes in China.

### *10.2 Mediation*

In China, mediation is classified into administrative mediation and private mediation. In administrative

mediation process, a government agency acts as the mediator while in private mediation process, a private party, natural person or legal person, or non-governmental organization acts as the mediator. The Chinese case is peculiar because just like negotiation, mediation also permit maximum private autonomy to be enjoyed by the parties due to these factors; both parties choose the mediator, active involvement of both parties in dispute resolution process and disputes settlement are reached by both parties. Both negotiation and mediation require concerted efforts and trust from both sides. The two methods have thus far achieved great success in setting construction disputes in China (CIETAC, 2000). And also play a very significant role in the dispute resolution of the Beijing Olympic Games Stadium. Thus, among the ADR methods, the mediation machinery is the second most popular channel for disputes resolution process in china (IDE Asian Law Series no. 15 2002).

### *10.3 Arbitration*

According to the Arbitration Law of 1994, the arbitration award is final binding on the parties, and the party that is not satisfied may sort the option of going to the people's court, with an exception of labour dispute arbitration which of course is too cumbersome and stressful to embark on. Also individuals have reservations over the competence and fairness of judges in some the law courts in China. (Feinerman, 1995; Chan & Suen 2005; Hu et al, 2008). After negotiation, arbitration is the most preferred machinery because of its obligatory consequence where it draws the strengthening of legislation. Many typical construction projects contracts in China include an "arbitration clause" which stipules that arbitration should be pursue when the parties failed to negotiate or mediate a reasonable settlement. An arbitration clause generally specifies a choice of arbitration organization, which may be located in China or abroad, and a preference of law to govern the dispute. In China, there are two internationally highly recognized government-approved arbitration institutions, namely the China International Economic and Trade Arbitration Commission (CIETAC) and the China Maritime Arbitration Commission (CMAC) which is for the maritime disputes resolution. Furthermore, in 1987, China consented to the United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards (the New York Convention). Under the New York Convention, arbitral awards by Chinese arbitration bodies are enforceable in other countries signatory to the New York Convention (CIETAC, 2000; Department of Commerce of China, 2002; Chan and Suen 2005).

Thus, we could in a nutshell, say that the civil and commercial dispute resolution channels in China is like a pyramid, whereby the negotiation machinery serves as the bottom stratum, the mediation machinery serves as the second bottom stratum, the arbitration machinery serves as the second top stratum and the litigation mechanism serves as the top stratum (IDE Asian Law Series no. 15 2002).

Before we stop here, let us also mention that detailed description of resolution techniques along with their advantages and disadvantages can be found elsewhere (Gillie 1988; Mix 1997; Phillips 1997; Phillips 1999; Levine 2000; Trantina 2001; Harmon 2003; Chan et al. 2004; Cheung et al. 2006, Hu, et al., 2008, Chan et al, 2010).

## **11. Research Findings**

### *11.1 Other Associated Risks in the Project*

We will discuss the research findings and other risks associated in the construction of the Beijing Olympic Stadium with some risks assessment study.

According to Fang et al 2008, it carried out a risk assessment study of the sport venues for the 2008 Olympic Games and found out various critical risks associated with the National Stadium project which were identified as follows.

### *11.2 Irrational Construction Schedule*

The construction schedule for the project was tight and the timing for some of the structure and architectural designs were tight as well. Thus, with not more than three year between signing of the Concession Agreement and the stipulated construction completion hand over date. The high advanced technology required for a project like this made construction planning to take bit longer than necessary, due to the intricate designs and functions to be served by the building. The Project Company battled round the clock just to solve the problem of completing the stadium on time. As a result of the termination of the retractable roof, the project needed an extra half –year construction work for structural frame remodeling and redesigning works.

### *11.3 Lack of Experience in Operating a Large-Scale Stadium*

Since this is the first PPP sporting facility. The Project Company had little or no experience to draw on as on regards to coping with the many disputes and innovations in the structure. Some of the innovative designs

include highly complicated and needed multiple welding to be performed under specific temperature condition. In most cases it requires the use of an innovative and pioneering 3D steel frame and also the use of transparent inflated ethylene (ETFE) cushions for the roofing. This is a herculean task for the Project Company that lacks the experience in operating a large-scale stadium.

#### *11.4 Huge Cost Overruns*

Building any magnificent or ground-breaking edifice does come with its merits and demerits, especially when there is the issue of complexity and sophistication of such a structure. All these intricacies combined with inexperience, due to crucial fabrication, installation and maintenance problems led to enormous cost overruns. The consequences of the huge cost overruns are felt today and still lingering on.

#### *11.5 Lack of Large Scale Commercial Events*

The Project Company thought that the size of the Beijing Olympic Stadium (Bird's Nest), would open up a new horizon of large scale commercial events. But from the start, it failed to realize the signs that long term market for the Beijing Olympic Stadium (Bird's Nest) will always be a problem for the stadium. Since only non-commercial large-scale events will ever take place there and, these events must be widely publicized to build the image of the stadium both nationally and worldwide. Another associated risk includes the revenue and income reduction, should the market prove to be smaller than earlier forecast. If it happens then the Project Company income generation will be abysmally low. The issue of fall in income generation became a big crisis, when Beijing Guo'an football club, which is supposed to be based in the Olympic Stadium (Bird's Nest) after the games, but was pulled out. The reason being that it would be so embarrassing to play football matches in front of their full capacity crowd of not more than 10,000 spectators in a stadium designed for 91,000. Moreover, even when the stadium has hosted an event, it is not a major crowd pulling event of huge commercial value that was planned for during the Concession Agreement. Hence, huge commercial value events have not yet materialized. No major events have taken place apart from the production of the opera Turandot held in 2009 to celebrate the first anniversary of the opening of the Beijing Olympic Games. Another international major sporting event held at the Beijing National Stadium (Bird's Nest), is the 2009 Race of Champions (Demick 2009; ABC News 2009). It took place from 3rd to 4th November 2009 and happened to be the first time the event is held outside Europe. Due to high cost of maintenance, the stadium costs US\$ 9 Million dollars just for one year maintenance. The lack of commercial revenue has made the Project Company announce plans to turn the venue into a major shopping centre and entertainment complex in the next coming years.

#### *11.6 Development of the National Markets*

Since the Project Company has never operated a stadium before. In order to gain more experience and raise income, the Project Company is working on establishing a market of nationwide customers for the National stadium. But first, superb contacts need to be established with a variety of public and private, cultural, sporting and broadcasting societies, and the patronage of corporate promoters sought to be secured. Even though it entered into a contract with Stade de France to assist it attain appropriate information and understanding, the high consultancy fee generally became challenging which led to the cancellation of this agreement. The Project Company has thus been left alone in developing the necessary expertise.

These situations all necessitated huge risks for the Project Company, and indeed for all parties involved in the project.

### **12. Critical Lessons Learnt from the PPP Project of the National Stadium**

As we have researched and based on some wide-consultation and reviewing the 2008 Olympic Games Stadium (Bird's Nest). Some of the critical lessons learnt are as follows:

- Government support and commitment are very vital for any unique project especially in innovative and complex design structure such as the Beijing National Stadium (Bird's Nest). Thus, without a clear comprehensive support from the government, such colossal edifice will never be economically viable and too risky to even venture in the first place.
- During the signing of the agreement, from the beginning a well-defined project scope should be clearly stated such as the Project Company shareholder's agreement, design and construction contracts, insurance contracts and JV agreement must be formulated clearly and defined prior to signing the agreement. Thus, this should not be only for the Project Company's shareholders but for all the parties involved in the execution of the project. In this way, future unwarranted disputes and disagreement would be avoided or drastically reduced. Hence, even though, that short term national esteem and stress may echo for rapid infrastructure development, issues about strategic medium term community interest do involve that such

schemes are based on an all-encompassing contractual agreement.

- Sharing of comprehensive common project aims and objectives. The importance of sharing common comprehensive project aims and objectives can never be overestimated in project such as the 2008 Beijing Olympic Games. Thus, all associated stakeholders must share comprehensive common project aims and objectives. These aims and objectives should be channeled towards striving for high efficiency, international safety standard, successful completion and cost containment throughout the duration of the entire life cycle of the project. For instance, if one stakeholder is more concerned with obtaining profits or revenue from some sections of the project, then the viability, togetherness and integrity of the project as a whole is likely to experience problems and losses its competitiveness.
- Private sector interests should be aligned with public sector's interest. These interests should be very clear with strong contractual arrangements without neglecting the impact of executing effective risk management arrangements. Since interests were also critical issues in the construction projects of the National Stadium. Thus, the importance of having proper risk management cannot be over emphasized, because private and public sector interests must work together at all times, for successful completion of the project.

### 13. Conclusion

The National Stadium (Bird's Nest) was the main stadium used for the 29<sup>th</sup> Olympic Games in Beijing, China. This is the stadium that was used for the opening, track and field events, the football event final game and closing ceremony for the Olympic Games. Since, the innovative design of the stadium is important, for this reason, it is essential that the stadium is built in time to showcase the echelon of China's construction, infrastructure development and economic success story of an increasing global player in the realm of world prominence.

However, to design, construct and finish this magnificent edifice in time for the Olympic Games, is viewed in the construction and engineering sector, as a big triumph in innovative stadium construction. Thus, the National Stadium (Bird's Nest) also had various issues, risks and limitation even before the concession agreement was signed. Some questions were raised that it is doubtful that the stadium could ever gain enough revenue from its own operations to sustain and repay the huge amount of financial investment poured into the project. In trying to reverse these uncertainties, issues and make it more financially viable for Public Private Partnership involvement. The BMG took the lead in providing support, enabling environment and other incentives such as equity contribution whereby it contributed 58% percent of the total investment and did not ask for any return in the investment.

Furthermore, BMG also mandated the interested Public and Private sector companies that are interested in building the stadium to form a Project Company. The Project Company would be responsible for the financing, construction operation, manage and maintenance of the stadium and transferring it back to the BMG or BMG nominated client at the end of the 30 year concession period. This is called Build Operate and Transfer (BOT) model of PPP. Several disputes and problems also arose as the project commences and some of which involves both the public and private syndicates. But because of the parties involved in the disputes are coming from the public sector (CITIC & BUCGC) and private (GSHGC) sector background, it needed to be collectively resolved. Thus, if the issues were not collectively resolved it will hamper and delay the successful completion of the Olympic Stadium. This led to the burden of more re-negotiation between the different stakeholders, whereby they have to work together to find a lasting solution to the unforeseen long term circumstances and risks which have afflicted the stadium. These problems could be seen as regards to the lack of large commercial events, high maintenance cost, no bidding rights company name, cost overruns just to mention a few.

To this end, re-negotiation should be used more in settling disputes and stakeholder's ethos. Thus, it is unavoidable for disputes to be seen in mega construction structure such as the Beijing Olympic Stadium. However, when these inevitable disagreement and stakeholder's ethos arises, the need to use re-negotiation among stakeholders should be greatly encouraged than seeking injunction and law suits. Re-negotiation achieves more success while dealing with government than seeking arbitration, mediation and pursuing a lawsuit, which could drag on for years without any end in sight. For instance, it was through renegotiation and settlement that the design syndicate claimed 40,000.000 Million RMB for remodeling the project which is approximately, one third of the previous design fee of 120,000,000 RMB. Another clear suggestion is that re-negotiation could be more efficient and effective is the case of Beijing Olympic Stadium. The successful completion of the stadium within the stipulated time, were due to both parties coming together to re-negotiate certain section of the concession agreement.

Lastly, from the unfolding events at the moment, it looks like re-negotiation may also be crucial in guaranteeing that the Beijing Olympic Stadium (Bird's Nest) do not go under and become an irrelevant edifice. Thus, re-negotiation might help to strategically reposition the Beijing Olympic Stadium (Bird's Nest), making it more in tune to the global realities, as a vivid reminder and valuable achievement to the successful infrastructure development and economic success story of China's increasing global player in the realm of world prominence.

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