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Preliminary Critical Success Factors of Public Private Partnership (PPP) in the UAE Public Healthcare Projects

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Abstract
Public Private Partnership (PPP) is a procurement method that employs a long-term contractual arrangement between the public sector and the private sector for the intention of developing a public facility. It utilizes private sector finance and best practice to achieve value for money in the public services provided. The United Arab Emirates (UAE) is not new to the idea of PPP especially for infrastructure projects. The UAE, with its currently significant infrastructure development, is an environment which is well suited to the use of the PPP model, which is currently being utilized by the Abu Dhabi government in the power, water, healthcare, and education sectors.

The Critical Success Factors (CSF) are those that must be maintained in order to increase the project success rate and manage it in an efficient and effective way. This paper reports on the first stage of an ongoing research project aiming at developing a CSF framework for integrating the PPP procurement approach in the development of the UAE public Healthcare projects. The main objective of this paper is to develop a preliminary list of possible critical success factors for projects procured under the PPP concept with an emphasis on the UAE environment. The study is guided by a comprehensive literature review. It is expected that the results of this research project will raise awareness of needed success factors at an early planning stage of the UAE Healthcare projects.

Keywords
Public Private Partnerships (PPP), Private Finance Initiative (PFI), Critical Success Factors (CSF), public sector organizations, private sector organizations, healthcare projects.

1.0 Introduction

Private Finance Initiative (PFI) and Public Private Partnerships (PPP) are forms of liberalization from conventional project procurement forms where public services and facilities are produced and delivered through a partnership over a long-term contractual relationship between both public and private sectors and targeting planning, designing, financing, implementing, and operating infrastructure facilities and services that were traditionally provided by the public sector only (Jamali, 2004).

There has been significant growth in the PPP model throughout the world. In fact, it is estimated that there has been an increase of 60% in the use of PPPs worldwide and this growth is rapidly embracing the UAE (Foo, 2010). According to Jamali (2004), the growing appreciation of the importance of the market

mechanism, coupled with the success of a privatization approach in various countries has increased interest in the continuously emerging PPP phenomenon. Several factors served to increase the interest and popularity of PPPs approach in different countries. The demand of PPPs can be generally explained in terms of their expected benefits, including access to private finance for expanding services, clearer objectives, new ideas, flexibility, better planning, and improved incentives for competitive tendering, and finally greater value for money for public projects (Jamali, 2004).

In the healthcare sector, a lot of projects have been developed using the PPP scheme in several countries. For example, the UK Government has adopted the PPP, in the form called Private Finance Initiative (PFI), as the major vehicle for the delivery of additional resources to the health sector in order to achieve a greater investment in healthcare facilities (Akintoye and Chinyio, 2005). According to Merna (2008), the PFI was a policy born out of a series of privately financed projects beginning with the Channel Tunnel project in 1987. This approach is currently being used to deliver healthcare premises (new hospitals, elderly homes, staff accommodations, residences, community hospitals, primary healthcare schemes), services (energy management scheme, IT system, catering, integrated management system, radio control systems), and equipment provision (Akintoye and Chinyio, 2005).

The UAE, and in particular the Abu Dhabi Emirate, with its significant infrastructure development, is an environment which is well suited to the use of the PPP model. The PPP structures can be used in many different sectors and is currently being used by the Abu Dhabi government in the power, water, healthcare and education sectors including the development of the Industrial City of Abu Dhabi (ICAD) in the Special Economic Zone. Mubadala Healthcare, a division of Mubadala Development Company, in Abu Dhabi, has started several PPP healthcare projects in the UAE, such as Cleveland Clinic in Abu Dhabi, Abu Dhabi Knee & Sports Medicine Centre, Tawam Molecular Imaging Centre in Al Ain City, and other projects (Foo, 2010).

The presented work in this paper is a part of an ongoing research project aiming at developing a CSF framework for integrating the PPP procurement approach in the UAE public healthcare projects. This paper reports on the literature review stage, which focuses on identifying the possible success factors from different project cases, procured under the PPP concept from developed and developing countries and create a preliminary list for possible CSF of integrating the PPP procurement approach in the UAE public healthcare projects. The paper starts with providing a background on the PPP concept. Following that, it reviews the success factors for public construction projects, in general, with an emphasis on projects utilizing the PPP approach in particular. The paper then discusses the public healthcare projects environment in the UAE and suggests a preliminary list for CSF of integrating the PPP approach in the UAE public healthcare projects. Finally, it ends with a conclusion and a plan for future work.

2.0 Public Private Partnership (PPP) : A Background

The Egyptian Suez Canal experience demonstrated that the concept of private sector participation in public infrastructure provision is not a new idea (Jefferies, 2006). The publicly-funded projects typically include some type of structure that is required by the community, such as dams, highways, bridges, schools and government buildings. Since 1980, larger infrastructure projects have begun to incorporate some private sector involvement (Acobson and Sang, 2008). The PPP projects are now undertaken in many countries and have been used to provide a wide variety of facilities, ranging from bridges, tunnels and roads, to schools, hospitals, and even defence facilities.

The famous term of the PPP contractual relationship is the Build, Operate, and Transfer (BOT) and Build, Own, Operate, and Transfer (BOOT). According to Merna (2008), the BOOT projects, sometimes referred to as a concession contract, can be defined as a project based on the granting of a concession by a principal, usually a government, to a promoter, sometimes known as the concessionaire, who is responsible for the construction, financing, operation, and maintenance of a facility over the period of the

concession before finally transferring, at no cost to the principal, as a fully operational facility. During the concession period, the promoter owns and operates the facility and collects revenues in order to repay the financing and investment cost, maintain and operate the facility, and make a margin profit (Merna, 2008).

When reviewing literature, other variants to the BOT and the BOOT can be found. According to the United Nations Industrial Development Organisation (1996), such variants include BOO (Build, Own, and Operate, i.e. without any obligation to transfer); BOR (Build, Operate, and Renewal of concession); BLT or BRT (Build, lease or rent and transfer); BT (Build and transfer immediately); BTO (Build, Transfer, and Operate - possibly subject to instalment payments of the purchase price); DBFO (Design, Build finance, and Operate); DCMF (Design, Construct, Manage and Finance); MOT (modernize, own/operate and transfer); ROO (rehabilitate, own and operate); and ROT (rehabilitate, own and transfer). All of the above are more or less the same approach with different contractual requirements. For this paper the acronym BOT will include all of the above.

According to Kagiannas, Patlitzianas and Psarras (2003), the main parties in a BOT project are the project company (or concession company or promoter), the government, the government agency, the investors (or sponsors), the lenders, the contractor (construction company), the operator, and the suppliers. The structure of a BOT project is presented in Figure 1.

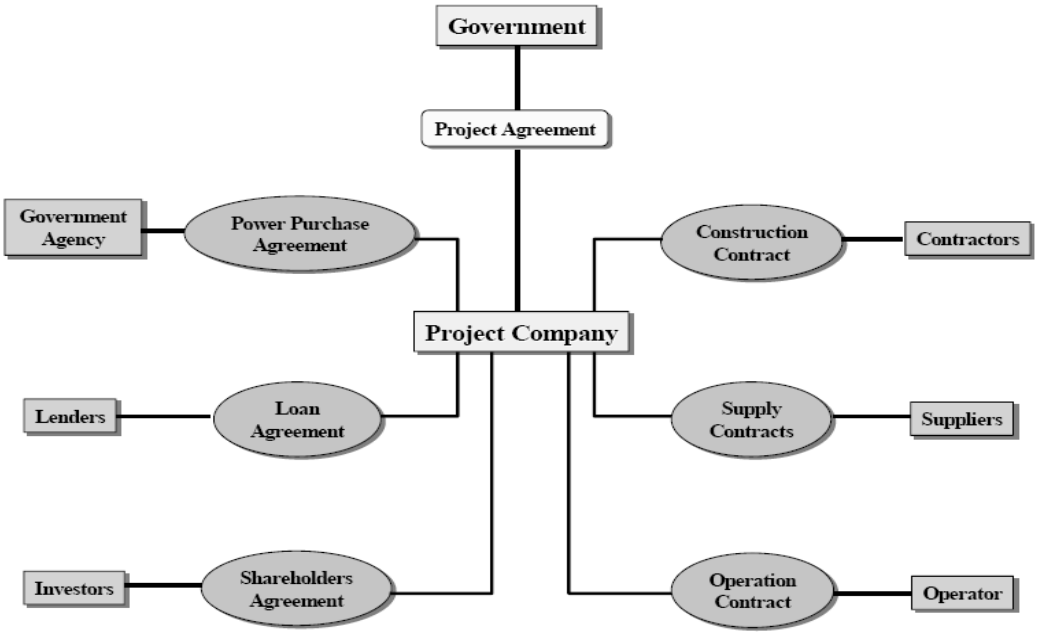

Figure 1: The Structure of BOT. Source: (Kagiannas et al., 2003)

Three main reasons for using the PPP approach were suggested by Walker *et al* (1995). First, better mobility provided by the private sector that contributes in cost saving, avoidance of bureaucracy, and reduction of administrative burden. Second, the private sector can provide better service to the public sector and establish a good public-private partnership so that a balance risk-return structure can be maintained. Finally, the private sector participation can also mitigate the government's financial burden as the government lacks the ability of raising funds for the large-scale infrastructure projects.

However, according to Levy (1996), various problems have been reported on PPP initiatives around the world that have eventually led to project failure. Public opposition due to various factors has been reported as the main reason for failure in several instances. Major PPP transportation initiatives in the United States have reportedly failed due to stakeholder opposition. These failures were mainly due to the

fact that public was (a) unaware of the concept of PPP, (b) not sufficiently educated about PPP, and (c) denied access to detailed information contained in the consortium's PPP proposals (Levy, 1996). In addition, the multiplicity of parties and their interrelated contractual relationships give rise to complex and time consuming negotiations. Furthermore, the lack of expertise in putting together a BOT project, particularly within governments, acts as a hindrance in the negotiating process (Kagiannas et al., 2003).

In general, the different parties involved in the PPP scheme are either individuals or organizations which are affected by or affect the development of the project. Therefore, it is important to capture their input to determine their views and concerns to better facilitate the development of a project that will meet the needs of those different parties (El-Gohary et al., 2006). To ensure a true involvement of the parties in different project phases, the public has to be taken in full confidence that their involvement will influence the decision making process (Stanford, 2000). In addition, transparency and trust in the involvement process is vital to its success as stakeholders tend to be sceptical about the involvement program if they believe that decisions have been made before-hand. This will have a negative effect on the level of participation in the program; individuals may either tend to participate in an antagonistic way or to refrain from participation altogether (El-Gohary et al., 2006).

3.0 General Success Factors for Public Construction Projects

The degree to which the construction team can be integrated into the process at the design stage is determined by the tendering arrangements, which are made for obtaining the price for construction (Walker and James, 2002). For public projects, the conventional design-bid-build sequence is the most common arrangement for awarding the contract in most countries. This is due to the familiarity with the system rather than an objective selection of the most appropriate method. However, the main problem associated with the tradition design-bid-build sequence is that the integration of the construction team experience is not utilized in early design stages of the project, which frequently leads to problems in achieving project objectives.

According to Jacobson and Choi (2008), there are problems with traditional procurement of public work projects that can lead to problems of disagreement, quality, time, and budget. Meanwhile the team-building effort in team/partnering relationships, such as the management based approach or the design & build approach, as well as the PPP, can be an alternative strategy that achieves project effectiveness by integrating the construction team experience earlier in the project. This encourages open communication, trust, and focuses the entire project team towards a shared vision (Larson, 1995, Glagola and Sheedy, 2002, Tang et al., 2006, Chan et al., 2004, Jacobson and Choi, 2008). Furthermore, the PPP addresses the common problems that are associated with public sector procurement such as high construction costs, construction overruns, operational inefficiencies, poor design, and community dissatisfaction (Mustafa, 1999).

Jacobson and Choi (2008), reviewed literature on the success factors in construction projects with an emphasis on projects that utilized team/partnering techniques. The reviewed research works include; (Larson, 1995, Glagola and Sheedy, 2002, Tang et al., 2006, Chan et al., 2004). Larson (1995) suggests seven critical success factors which are cost, schedule, technical performance, litigation avoidance, customer satisfaction, participant satisfaction, and overall results. Glagola and Sheedy (2002) studied success factors for construction projects of the US Army. They describe eleven success factors: sharing common goals, clear shared expectations, trust, commitment, taking responsibility, open and honest communication, respecting goals of other participants, collaboration of resources, expectation of excellence, dispute resolution mechanisms, and reasonable relaxation of contract requirements.

In the same line, Tang, et al. (2006) use ten CSF for project success which are mutual objectives, commitment, equity, trust, attitude, openness, effective communication, teambuilding, problem resolution, timely responsiveness, and incentives (Tang et al., 2006). In the context of international

construction projects, Chan, et al. (2004) identified ten success factors that include establishing a conflict resolution strategy, commitment, monitoring of the partnering process, clear identification of responsibilities, mutual trust, willingness to improve processes, early partnering implementation, sharing resources, innovation, and subcontractor involvement.

4.0 Critical Success Factors of Public Private Partnership (PPP)

According to Jefferies (2006), the concept of CSF was developed by Rockart and the Sloan School of Management with the phrase first used in the context of information systems and project management (Rockart, 1982). Critical success factors are those fundamental issues inherent in the project, which must be maintained in order for team working to take place in an efficient and effective manner. They require day-to-day attention and operate throughout the life of the project (Rowlinson, 1999).

A number of conditions are required to be met to make a successful PPP. This includes horizontal relationships between the parties, consensual decision-making, or use of respect and trust as major reforms of social capital, and greater clarity describing relationships between government and the private sector (Yates, 1995). Various problems have been reported on PPP initiatives around the world that have eventually led to project failure. According to Levy (1996), Public opposition, due to various factors, has been reported as the main reason for failure in several instances. Major PPP transportation initiatives in the United States have reportedly failed due to stakeholder opposition. These failures were mainly because the public was (a) unaware of the concept of PPP, (b) not sufficiently educated about PPP and, (c) denied access to detailed information contained in the consortium's PPP proposals (Levy, 1996).

Reviewing the literature, a number of authors have identified the success factors of project procurement under PPP or similar concepts. Jefferies (2006) reviewed literature for CSF of the PPP approach from the following research work (Tiong, 1990, Tiong et al., 1992, Tiong and Alum, 1997, Keong et al., 1997, Grant, 1996, Salzmann and Mohamed, 1999, Kanter, 1999, Jefferies et al., 2002, Duffield, 2005, Hardcastle et al., 2005). The most common success factors are summarized in Table 1.

Table1: review of Critical Success Factors in PPP- Developed based on (Jefferies, 2006)

Critical Success Factors	**Author(s)**
- Developed legal and economic framework - Favourable inflation, exchange interest rates	Tiong 1990
- Financial capability and support - Technical innovation	Tiong et al., 1992
- Avoiding delays and cost overruns - A well prepared Environmental Impact Statement	Tiong and Alum, 1997
- Comprehensive feasibility study - Existing infrastructure - Political stability and support	Keong et al., 1997
- Expertise - Local partner(s)	Salzmann and Mohamed, 1999
- Commitment - Strong private consortium	Hardcastle et al., 2005
- Appropriate risk allocation	Grant, 1996
- Shared authority/ Consensual decision-making	Kanter, 1999 & Yates 1995
- Transparency	Jefferies et al., 2002
- Developing a culture of partnership	Duffield, 2005

5.0 Critical Success Factors of Public Private Partnership (PPP) in UAE Healthcare Projects

As mentioned earlier, the UAE is not new to the idea of PPP especially for infrastructure projects. The PPP structures are currently being used by the Abu Dhabi government in the power, water, and education sectors including the development of the Industrial City of Abu Dhabi (ICAD) in the Special Economic Zone (Foo, 2010). Mubadala Healthcare, a division of Mubadala Development Company, in Abu Dhabi, has started several PPP healthcare projects in the UAE. One of these projects is Tawam Molecular Imaging Centre in Al Ain City. This project was recently constructed for SEHA which is the government agency that manages the public hospitals and clinics of the Emirate of Abu Dhabi.

In the UAE, the effects of globalization are best seen in the construction industry with professionals, from different countries and nationalities, working in the design and construction of large engineering projects. Abdou, Al Zarooni and Lewis (2005) conducted a questionnaire survey to identify and rate risk factors/events that affect the development of the UAE healthcare projects that lead to variations in the client's cost from its initial estimate. The analysis revealed that design changes by client turned out to be the most significant factor to all respondents and to each section of the industry, public and private as well. The other important factors for all respondents include slow process of government approvals, lack of design experts, and lack of guidance from clients. The completed list is shown in table 2.

Table 2: risk/ uncertainty factors affecting UAE healthcare project- source: (Abdou et al., 2005)

Risk Factor
Design changes by client
Slow process of government approvals
Lack of design experts
Lack of guidance from client
Market conditions
Inadequate specifications
Incomplete/poor project scope
Poor project management systems
Lack of communication/coordination within Gov. organizations
Inappropriate project organization structure
Project design complexity
Errors and omissions
Defective/ inadequate designs
Lack of communication/coordination within design team
Resources shortage
Culture differences
Unforeseen soil conditions
Exchange rate fluctuations
Inflation & interest rate
Changes in project consultancy costs
Changes in policies and laws
Taxation on material
Political instability
Act of God

Several success factors for the UAE public healthcare projects can be recognized from the above potential threats. They are: a clear and detailed project brief /client outcomes in the early stages, an appropriate risk allocation, proper integration of public and customer/end users' needs, adequate/technical correctness of design and specifications, and effective communication/ coordination between project participants. Some

of these factors are identified earlier as success factors in the PPP projects (Keong et al., 1997, Hardcastle et al., 2005, Grant, 1996, Kanter, 1999 & Yates 1995).

In light of the identified success factors, in the previous two sections, for public construction projects in general and the PPP in particular, a preliminary list of CFS of PPP in the UAE healthcare projects is developed and shown in Table 3.

In the following stage of the current research project, this list will be used in conducting future interview sessions in order to test the validity of these CSF list identified earlier, and to establish a framework for CSF for PPP in healthcare project type in the UAE.

Table 3: Preliminary Critical Success Factors (CSF) of Public Private Partnership (PPP) in the UAE Healthcare Projects.

Critical Success Factors
1. Comprehensive & business viability of project feasibility study
2. Clear project brief and client outcomes
3. Proper integration of public and customer/end users' needs;
4. Adequate/Technical correctness of design and specification
5. Proper project control systems during different project phases
6. A well prepared Environmental Impact Statement
7. Appropriate risk allocation
8. Effectiveness of governmental Approval process
9. Effective communication/ coordination between project participants
10. Strong private consortium and design/engineering teams
11. Clear roles and responsibilities of different stakeholders
12. Commitment to success
13. Shared authority/ Consensual decision-making
14. Open communication & trust among project stakeholders
15. Unifying a specific vision and developing a culture of partnership
16. Proper dispute resolution mechanisms
17. Political stability and support
18. Credit rating of investors

6.0 Conclusion and Future Work

The presented work in this paper is part of an ongoing research project aiming at developing a CSF framework for integrating the PPP procurement approach in the UAE public healthcare projects and draws out lessons for improving the effectiveness and viability of applying the PPP approach in these projects. This paper reports on the literature review stage, which focuses on identifying the possible success & barrier to success factors of project cases, procured under the PPP concept and develop a preliminary list for possible critical success factors of the PPP procurement approach in the UAE public healthcare projects.

Tawam Molecular Imaging Centre, a recently constructed public healthcare projects in Al Ain City is selected as a case study to be investigated in the forthcoming stage of this research project. The case study project in question will serve to test the validity of the CSF list identified earlier from the related literature, and presented in this paper. Semi-structured interview sessions will be conducted with several key project personnel from both public and private stakeholders involved in the selected case study project. The main purpose of these interviews is to test and validate different CSF, identified earlier, in

order to establish a framework for CSF for integrating the PPP approach in the public healthcare projects in the UAE.

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