

**The Execution of Public-Private Partnership Projects in
Abu Dhabi: Strategic Objectives and Critical Success
Factors**

تنفيذ منهجية الشراكة بين القطاعين العام و الخاص في مجال المشاريع في إمارة أبوظبي:
الأهداف الاستراتيجية و عوامل النجاح الرئيسية

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ABSTRACT

Public-private partnerships or PPPs are becoming very popular in project execution across the globe. Plausibly, PPPs were initiated as the best avenue to evade spending controls and possibly conceal public budget deficits. Although various countries adopted PPPs early enough, UAE is on record for belatedly using this latest procurement approach in availing public infrastructure or services. From literature reviews, little acknowledged work has been documented in ascertaining the rationale behind the increasing use of PPPs approach in UAE and the necessary factors for PPP projects to succeed. The main aim of this study was evaluating Abu Dhabi's experience in assuming Public-private partnership as a relatively new procurement strategy.

Various project cases were evaluated and analyzed in revealing the perceived objective behind adoption of PPP approach within Abu Dhabi and finding the critical success factors to implement PPP projects successfully. The results demonstrated economic growth, Value-for-money, and maximizing revenues and government assists as the highly ranked economics and financial objectives for adopting PPPs in Abu Dhabi. Further, the results revealed quality related objectives such as quality of provided public services, and function focus. Further, the findings have shown that CSFs such as planning stage factors, PPP structure factors and economic environment factors are considered as the most fundamental factors in executing PPPs project successfully in Abu Dhabi.

المخلص

انتشر الاعتماد على الشراكة بين القطاعين العام والخاص بدرجة كبيرة في تنفيذ المشروعات في جميع أنحاء العالم. وعلى ما يبدو، فقد تم تبني منهجية الشراكة بين القطاعين العام والخاص في بادئ الأمر باعتبارها أفضل السبل لتجنب الرقابة على الإنفاق وربما لإخفاء عجز الموازنة العامة. وأصبحت الشراكة بين القطاعين العام والخاص تلعب دوراً هاماً في تعزيز الالتزامات الحكومية لضمان الكفاءة والفعالية عند الانتفاع من الخدمات العامة التي تم تقديمها في البداية تحت إشراف القطاع العام، بعد أن أصبحت هذه العمليات أكثر شفافية وتم تصميمها بشكل صحيح، وعلى الرغم من أن العديد من الدول قد تبنت قوانين الشراكة بين القطاعين العام والخاص بشكل مبكر، إلا أن الإمارات العربية المتحدة استخدمت مؤخراً منهجية الشراكة الحديثة للاستفادة من البنية التحتية أو الخدمات العامة. وفيما يتعلق بالدراسات الأكاديمية والبحثية، فقد تم إعداد دراسة علمية محدودة توثق العوامل الضرورية أو الأسباب المنطقية لزيادة الاعتماد على منهجية الشراكة بين القطاعين العام والخاص في دولة الإمارات العربية المتحدة. وتهدف هذه الدراسة لتقييم تجربة أبوظبي في تبني الشراكة بين القطاعين العام والخاص باعتبارها إستراتيجية شراء جديدة نسبياً. كما تم تقييم وتحليل مختلف المشروعات للتركيز على عوامل النجاح الحاسمة والأهداف الملموسة لتبني منهجية الشراكة بين القطاعين العام والخاص داخل الإمارات العربية المتحدة. وقد أظهرت النتائج أن عوامل النجاح الحاسمة مثل عوامل بناء الشراكة بين القطاعين العام والخاص، والعوامل البيئية، وعوامل مرحلة التخطيط مصنفة باعتبارها من أكثر العوامل الحيوية والضرورية وراء تنفيذ مشروعات الشراكة بين القطاعين العام والخاص في الإمارات العربية المتحدة. وقد أظهرت النتائج أن النمو الاقتصادي وأعباء الموازنة وفعالية التكلفة وتحقيق القيمة مقابل المال وتعظيم الإيرادات ودعم الحكومة، تأتي في مقدمة الأهداف الاقتصادية والمالية لتبني منهجية الشراكة بين القطاعين العام والخاص داخل الإمارات العربية المتحدة، ثم يليها مستوى الخدمات العامة من حيث جودة الخدمات العامة وتأمين المشروع.

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ABBREVIATIONS

PPP: Public-Private Partnership

CSF: Critical Success Factors

UAE: United Arab Emirates

1 INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Public-private partnership (PPP) has become the globally recognized innovative vehicle for financing capital-intensive projects, by delivering value-for-money in any public service or infrastructure sector. In essence, PPP are pre-planned collaborations in which both the private and public sectors conditionally combines their contemporary skills or competencies to a defined project, by assuming different levels of responsibility and involvement for the benefit of availing public services in a more efficient milieu (Chan et al., 2010). Therefore, the resulting PPP is characterized by a contractual agreement drawn between private sector and government (public) as regards to the provision of various infrastructures or public services. Under PPP agreement, the public sector has to document the final operating features of the project or facility, while the private sector has the role to use professional skills to innovatively deliver the entire project.

This proposition is premised on the realization that the pace at which the economy is growing often results to desperate demand for indispensable infrastructure development; thus, creating inevitable bottlenecks in the government's sustainable development capacity by making it technically impossible to fund such projects into completion. With PPP approach, such projects are realized under minimal risks, and manageable resources or costs. In any project, there are inherent liability risks attributable to environmental, operational, and financial uncertainties. Under, PPP these risks get to be spread among all partners involved in the contractual arrangement, making the project somewhat secure from unmanageable risks.

Further, PPP arrangement partners can easily support the project with the required resources on a timely basis and, thus, reduce long-run costs. With the aforementioned merits, UAE is slowly adapting the PPP approaches in rhyming with the rest of the globe in using this form of procurement. Nevertheless, some researchers have documented the application of PPP concept and, most importantly, in singling out the rationale behind utilizing PPP, and the perceived requirement for delivering successful PPP projects.

1.2 BACKGROUND ON THE OBJECTIVES OF ADOPTING PPP

From early 1980s, various nations like the U.S., UK, Spain, and France, have for varied reasons adopted PPP procurement procedures in facilitating public infrastructure or service delivery. The theoretical rationale behind adopting PPP approach is primarily financial, or economic development oriented. Though the trend of adopting PPP approach has been quite impressive in the economies well-versed with the technique, countries like UAE are just experimenting with PPP for structural or economic reasons. As Colman (2000); Bovaird (2004); Kakabadse & Summers (2007); and Turhani posits, nations tend to adopt PPP based on the perceived cost-effectiveness, and value-for-money benefits. According to Colman (2000), public infrastructural projects bear inevitable economic-life and related costs which forms the basis for using PPP rather than the mainstream traditional procurement procedure which in most cases results in escalation of project costs and delays in projects delivery. Further, Kakabadse and Summers (2007) indicates that, value-for-money or VfM which tentatively correlated with cost-effectiveness, appear to be the main rationale for using PPP procurement procedures. VfM is based on the tenet of decreased project's costs, and increased revenue stream both for the private-sector, and the client or public sector.

Additionally, as Li et al. (2005); Chua et al. (1999); and Chan et al. (2010) concludes, adoption of PPP approach in developing as well as developed economies has been solely on the need to avoid any poor quality delivery on public services or infrastructures. In fact, as Li et al. (2005) notes, when infrastructural projects transportation projects are left in the hands of inexperienced public sector, the results are poor quality, delayed delivery, and higher costing. As the nation's public demands keep on changing due to the perceived population growth, the governments prefer use of PPP procurement technique in ensuring quality, speed-up project's realization, lower project's stalling rates, and enhance public service quality.

However, adoption of PPP approach has been mainly premised on the need to avert budgetary burdens and, subsequently, enhance economic growth. According to Chan et al. (2010); Zhang (2004); and (Bovaird, 2004) developed economies like China, UK, and the U.S., have used PPP as an effective project vehicle in driving economic

growth under constrained funding environment devoid of demanding public budgetary burdens. As the population grows like the case of UAE, the government is likely to invest a lot in delivering public services; but by using PPP these costs are significantly managed as the projects expenses are never charged directly on public spending budgets. In essence, public projects demands huge sums of money for the initial capital-outlay, and life-long costs in maintaining the infrastructure, which if charged on public spending allocation would obviously strain the national budgets. According to Bovaird (2004), the best option is to employ PPP arrangements in securing such capital-intensive devoid of inevitable public debts in completing the projects. In fact, shifting or sharing project's cost with private sector allows the government to invest in other development quarters.

Further, according to Chan et al. (2010), the perceived technical expertise, and experienced associated with private-sector in delivering megaprojects has seen the adoption of PPP gain pace in both grown, and developing economies. Projects like road/highway construction, or plants constructions which take longer duration, and are demanding competency wise, may see a country opt for PPP procurement. In fact, as noted by Chan et al. (2010); and Fox and Skitmore (2007), projects have always failed when left in the hands of public-sector which in more often than not appear to lack the needed competencies, innovativeness, and professionalism in delivering megaprojects. From case scenarios across Europe, the US, and in Australia, PPP has proven as the best approach in availing public infrastructure without any delays, compromised quality, and inflated costs.

1.3 BACKGROUND ON CRITICAL SUCCESS FACTORS

Various PPP projects have reported different outcomes depending on either external or internal critical factors. Major projects from a wide array of sectors have been successfully realized through PPPs with considerably value to the final outputs. Such projects include: ports, bridges, airports, roads, railways, water supply systems, telecommunication networks, and ICT systems. Further, projects like construction of military facilities, prisons, hospitals, schools, and hotels, have been realized via PPPs arrangements. Nevertheless, various problems associated with developing or young economies worldwide have been instrumental in causing majority of PPPs

project failures (Chan et al., 2010). UAE procuring procedures have for some time been inclined towards the traditional or conventional methods, and PPPs approach is just but in infant phases. Notwithstanding this fact, CSFs affecting PPPs projects elsewhere may be a replica of possible outcome of such projects or different ones to UAE.

Though some failures have been directly linked to global financial upheavals, forces like long-term PPP contracts uncertainties and risks, insufficient PPP expertise and experience in many regions and countries, and the multiple parties involved, have arguably led to various projects casualties (Chua, Kog, & Loh, 1999). Nonetheless, the global trend towards PPPs has fueled an imperative need for UAE to initiate an efficient and workable procurement protocol aimed at improving future PPP projects executions. This realization has led to the identification, categorization, and analysis of various factors that are deemed indispensable to the successful implementation of PPPs arrangements. These factors have been termed as CSFs or Critical Success Factors, which must be met in order to have a successful PPPs project. However, as noted by Chan et al. (2010), sub-factors which are market, operational, and consortium oriented tend to affect the success of any PPP implementation as well.

The CSFs encompasses those vital activity areas in which suitable outcomes or favorable results are indispensable for project executors or managers to attain their goals. Different literatures have identified various CSFs based either on some expert opinions or on quantitative measures (Chua et al., 1999). All documented CSFs have been drawn from lessons learned from either successful or failed PPPs projects in both developing, and developed countries. Detailed discussions and research aimed at investigating CSFs for various PPPs projects have been previously documented by Tiong (1996), Chua et al. (1999), and Zhang (2004). Tiong (1996) when studying strategies for securing BOT contracts within China identified six CSFS which include: technical solution advantage, entrepreneurship and leadership, financial package differentiation, consortium's strength, and differentiation in guarantees

1.4 HISTORY OF PPPS PROJECTS IN UAE

The history of PPP in UAE started with instructions from the founder of UAE, Sheikh Zayed Bin Sultan, in the 1990s when he involved international players to bid for privatization projects in the water and power sector. His vision was clear that the delivering reliable resources of water and electricity are a main target for UAE to grow. According to Chan et al. (2010), in western world PPPs project has been widely used as the most appropriate method in government procurement endeavors. Nevertheless, as Dulaimi et al. (2010) notes, the realization of this method in United Arabs Emirates (UAE) has been belatedly recognized. This is because most of the UAE countries assume full responsibility in procuring nearly all public services (Dulaimi et al., 2010). Having incurred unmanageable costs, and project's risks, the government has in the very recent past chose to create favorable atmosphere to allow effective PPP arrangements to thrive. With supportive systems in place, and positive political-will, UAE will gradually catch up with the rest of the Europe and American culture of PPPs projects implementation (Dulaimi et al., 2010).

However, doubts on the future of PPPs across emirates have been casted by the lack of commitment by the leadership in supporting pilot schemes aimed at laying foundation for this new and effective procurement approach. The recent case in context relates to the shelving of the famous 'Hassyan scheme, IPP (Independent Power Project) one of its kind in the entire UAE region by the Dubai leadership, according to a director in ADWEA. The IPP could have been realized by the close of fiscal 2009 had the nation electricity and water authority had not decided to shelve the project citing the possibility of having the completed IPP lay idle as the usual power capacity generated was enough. Hassyan IPP would have paved the way for health and transports projects to follow had the government exuded political support to test the PPPs module. Majority of skeptics held that, possibly the Dubai leadership feared the unknown success of PPPs programs as such procurement has not received unanimously support across UAE region.

Heading into FY2011, UAE governments has continually been blamed for failing to created shared-control on major projects under PPPs program.

The government reluctance in handing over control to the private sector has seen projects like ports renovation, railway networks, and water transports scheme, fall apart even before the projects commenced. Essentially, this has been associated with restrictive political culture assumed by UAE individual principalities, which has seen the government takeover some of the key construction projects (Chan et al., 2010).

1.5 PROBLEM STATEMENT

Realizing public infrastructures under the policy of defined timeframe, project quality, and costs has been a problem across the globe. Therefore, various countries have reported failures, and others success in availing public infrastructures under PPP approach. The perceived causes of failures or success have been an investigatory subject area over the last two decades. With some countries well-equipped with the best practices in employing PPP under diverse modules in project's delivery, UAE has in recent times joined the pack by using PPP approach for economic developmental reasons. Currently, UAE is experiencing both economic and population growth at unmatched pace and, consequently, there has been the inevitable demand for public service or infrastructure developments which has evidently fashioned the execution of various infrastructural under PPP model. The UAE government has, therefore, considered PPP procurement as the viable SPV or Special Project Vehicle in delivering public projects. The inclusion of PPP strategy has been prompted by the government commitment to engaged private-sector in the nation's development.

Despite the increased cases of PPP procurement strategy in the UAE, very little has been documented on the perceived experience of Abu Dhabi in using PPP in economic development circles. Further, no in-depth evaluation or analysis has been done in ascertaining the driving forces towards the adoption of PPP in UAE. Also, there are no comprehensive intellectual findings on how Critical Success Factors or CSFs has shaped the adoption of PPP in UAE. Therefore, this paper focuses at not only ascertaining the role that PPP procurement procedure has played in the UAE development, but also evaluating the rationale behind adopting the PPP approach.

Additionally, the paper identifies and analyzes how various CSFs affects the realization of PPP projects in the UAE.

1.5.1 PURPOSE OF THE STUDY

In the context of UAE; and due to the fact that UAE's experience with PPP has recently began and still evolving; very few researches have investigated the objectives of adopting PPP and the critical success factors (CSFs) that propel the approach implementation or hinder it altogether. Apparently, UAE has created an enabling environment for the realization of joint ventures or partnerships between the private sector and the very public sector in delivering public services. With the government fully focused towards having an effective PPP procurement framework in place, researches evaluating the reason behind the implementation of PPP projects in the UAE remains eminent. In addition, as global PPP projects continue to register failures, there is an urgent need to analyze the underlying CSFs that potentially affect the execution of PPP infrastructures in UAE.

For the purpose of this study, the perceived trend in usage of PPP approach in UAE will be analyzed by focusing on various aspects which include: project's cost-effectiveness, quality, complexity associated with megaprojects, public budgetary burdens and economic growth, and project's funding constraints. Further, the study evaluates CSFs which include: strong private consortium, risk sharing and allocation, project technical feasibility, economic viability, government guarantees, political support, transparency and competition in bidding, and financial package, among others, by ascertaining their influence on execution of various PPP projects in UAE. Based on the evaluation of the aforementioned areas, the study will avail both structural (fiscal or economic in nature), and policy (legal framework) recommendations in facilitating success among PPP projects across UAE.

From wider perspective, UAE has exuded capacity in using PPP procuring procedures as the most viable approach in availing public infrastructures like roads, power plants, transports, wastewater and water desalination plants, hospitals, and schools. Adoption of PPP models in UAE has been on the rise with the government

aiming at using this tool in bolstering private sector participation in nation's development.

1.6 AIM AND RESEARCH OBJECTIVES

The UAE experimentation with PPP approach and its application in public project(s) completion has surfaced various lessons on the indispensable and enabling environment for successful project's delivery. On this context, the ultimate aim of this research is to evaluation Abu Dhabi's experience in adopting Public Private Partnership (PPP) as a procurement strategy. Along with that, the Objectives are as follows:

- To determine the role of Public-Private Partnership as one of the procurement strategy available for Abu Dhabi government
- To reveal the main objectives for adopting PPP in the emirate of Abu Dhabi
- To Identify the factors that contribute into the success of the PPP in Abu Dhabi
- Discuss and analyze how each factor influences the PPP projects.

1.7 RESEARCH QUESTIONS

The research questions that have been developed from the literature studied, pilot interviews and different case studies are as follows:

- i. Why has Abu Dhabi adopted Public-Private Partnership as a strategic procurement method?
- ii. What are the main objectives that Abu Dhabi seeks behind adopting PPP?
- iii. What are the Critical Success Factors (CSFs) that contribute into successful implementation of PPP projects in Abu Dhabi?
- iv. How do these factors influence the outcome of PPP projects? What mechanism they work upon?

1.8 STRUCTURE OF THE DISSERTATION

The paper consists of five chapters: introduction, literature review, methodology, discussion, and conclusion. First, the introduction highlights the concept of PPP as a procurement approach, and the ideals for PPP application in public service or infrastructure delivery. Second, the literature review will demonstrate wider theoretical framework from various related researches covering an in-depth investigation on the perceived objectives or rationale for adopting PPP. The section also documents findings on CSFs and their role in PPP procurement model, as highlighted by the related studies. Third, the methodology section identifies, and justifies the theoretical and analytical method employed in sourcing, analyzing, and reporting the study findings. Further, in the fourth section, the study focuses at analyzing and discussing the identified objectives for adopting PPP model in Abu Dhabi, UAE. Also, the section, by use of case studies, will analyze the various CSFs which influence the successful realization of PPP project in UAE. The last section will feature the study's conclusion and recommendation section based on the analyzed findings.

This introduction chapter has surfaced the interpretation of PPP procurement model by advancing the feasible definition of the approach, and contextual application of PPP model in delivering public infrastructures. By using global view, the chapter has highlighted the background information on adoption of PPP model, and related history on the CSFs which shapes project completion as pre-determined parameters. Further, following the documentation of the history of PPP model in UAE, the chapter advances the study problem statement. Subsequently, the study aims and objectives which are premised on the role that PPP model has played in project's completion across UAE, the rationale behind the approach, and CSFs and their perceived influence on PPP projects have been stated. The final section of this chapter highlights the conceptual framework, and the paper structure used in documenting the entire study. The next chapter will demonstrate the theoretical framework on PPP objectives and CSFs.

2 LITERATURE REVIEW

2.1 PRIVATE-PUBLIC PARTNERSHIPS (PPPS)

From the late 1980s, PPPs have been employed by various countries on global scale with focus to expedite or make achievable the efforts to avail the much needed infrastructure(s) where the public sector has repeatedly failed in delivering either on time or at cost effective capital outlay. PPPs avails an opportunity for various governments to accelerate timely provision of diverse social capital infrastructure like hospitals, seaports, roads, and railway networks, among others, while enjoying accruing benefits from greater cost-efficiency associated with private sector involvement. Countries like U.K, China, New Zealand, Australia, Israel, India, Argentina, Sweden, and Denmark have for the last two decades been on the forefront to employ PPP/PFI in provision of major public infrastructures. Implementation of PPPs has been premised on the doctrine that, private sector contribution in public service and asset provision bolsters effort to capitalize on value for money among various governments by expediting or facilitating innovation, financing, integrating life-cycle management, and availing better risk management.

Depending on the perceived nature of individual country's economy policy, various forms of PPPs/PFI including licensing, BOTs (Build-Operate-Transfer), management contracts, TOTs (Transfer-Operate-Transfer), leasing, BO (Build-Operate), disinvestment, and service contracts, have been employed (Weiermair, Peters, & Frehse, 2008). Although the spread of PPP/PFI has been on a speedy pace, a myriad of problems have been reported by PPPs arrangement from worldwide infrastructure development circles. Problems associated with PPP/PFI implementation include issues like: complex negotiation, higher costs during tendering, and conflict objectives among various project stakeholders. These issues are not surprising due to the broad spectrum of uncertainties and risks associated with PPPs contracts, multiple participants, and insufficient expertise and experience among stakeholders in some regions. Consequently, factors instigating failure or success of PPP implementation have become an indispensable subject for investigation (Li et al., 2005).

2.2 REASONS/RATIONALE FOR ADOPTING PPP METHOD IN VARIOUS REGIONS

While Spain, France, U.K., New Zealand, the U.S., and other nations have by now accumulated extensive experience in PPPs implementation, other counties like UAE, Russia, Croatia, and Kazakhstan, are currently experimenting with this relatively new contractual arrangement option. The perceived disparity in the implementation of PPPs arrangement has been spurred by diverse rationale or theoretical reasoning behind use of PPPs rather than the traditional procurement procedures. However, the core reasons behind various countries desire to adopt PPPs arrangement in offering the much needed public services or even facilities includes: increased efficiency, reduced costs, improved service delivery, public services or infrastructure sustainability, and balanced economic growth, and averting budgetary burdens. In regions like Dubai, Sharjah, and Abu Dhabi key projects on public utilities like electricity and water distribution has been procured via PPP arrangements with an aim of ensuring financial savings, and substantial reduction on public budget (Dulaimi et al., 2010).

Bovaird (2004) posits that in various situations effectiveness and economic efficiency constitutes the fundamental reasons behind the adoption of PPPs by mature economies across Asia, the U.S., and Europe. Although some literatures have extensively supported this view, Kakabadse & Summers (2007) exhaustively studied the concept of VfM or 'value for money' as the prime reason that supports the need for assuming PPPs contractual arrangements. According to Kakabadse and Summers (2007) findings, VfM in regard to PPP is based on the logic that, the use of 'in-house' or public agencies would possibly results in higher spending from public funds compared to when the delivered public infrastructure or services in left on the hands of private sector. Colman (2000) notes that, the economic-life interpreted in terms of combination of quality and costs should justify the use of PPP procedures in place of traditional procurement approaches that are deemed expensive and ineffective. Further, Turhani & Shqau (2011) in support of VfM rationale concludes that, due to the usage/market risks associated with project realization across its entire life-cycle, the private sector stands at a greater position in handling or managing such risks more effectively compared to any public sector.

Additionally, the costs met in managing these risks are somewhat lower when the management procedures fall in the hand of experienced private consortium. Based on Turhani and Shqau (2011), private sector can considerably invest a lot on the initial project capital outlay, and avert incurring recurring maintenance costs in future. The public sector would possibly abandon some projects if the cost to initiate the infrastructure is deemed higher.

Borrowing from Goldratt's TOC or theory of constraints, the public sector tends to be somewhat poor in managing project costs, and handling cost related risks; thus, resulting in late project delivery (Blackstone, Cox, & Schleier, 2009). In completing the project, internal constraints like policy constraints associated with project measures and project delivery methods, have seen the budgeted costs on projects escalate as the public sector have no effective control mechanisms in mitigating risks (Blackstone et al., 2009). According to Blackstone et al. (2009), the inefficiency in delivering any project is premised on the idea that megaprojects involved some higher levels of uncertainty, and such projects may suffer from delay, compromised content or quality, and higher budgets.

These identified TOC aspects tend to further jeopardize the VfM ideology, particularly when the projects is executed via conventional procurement methods where public sector is tasked in managing multiple projects bearing shared and common resources. In situations where projects suffer delays, and register higher costs, the government may seek PPP with an aim to allow the sector to initiate approach 'change mechanisms' to build on VfM for the resulting project, under the TOC canons. From Blackstone et al. (2009) findings, PPP projects may result in cost-effectiveness as private sector have good history in robust project planning procedures, effective scheduling process, maintenance of appropriate work behaviors, and execution of processes that ensures excellent project control.

However, as Bovaird (2004) concludes, the public sector should not at all time rely on VfM concept analysis, and project's costs in justifying the need to employ PPPs arrangement; rather, the reason to adopt PPPs should be supported by dire need to accelerated economic or equal community development. According to Turhani and Shqau (2011), major sectors like utilities infrastructure (water provision and

sewerage treatment), transport infrastructure (airports, seaports, railway networks, and roads), and energy (transmission and generating facilities) hallmarks the key socio-economic developments in public sector fronts. If any project on these sectors are completely left on the hands of traditional procurement procedures; then, the result would be; slow delivery, poor quality, and increased costs.

For example, the recently witnessed UAE initiative in adopting PPP contractual arrangements is directly linked by the government development goals premised on sustainable national growth mission. Based on scope and urgency in availing the desired national development, UAE has sought to employ PPP approach in availing complex projects which traditionally have constrained the existing public resources, and capacities from the conventional procurement techniques. In fact, the idea of availing more efficient public services or facilities has driven UAE in adopting the PPP philosophy during recent procurements (Dulaimi et al., 2010).

Li et al. (2005) indicates that prior to adoption of PPPs approach by 1980s, France, and the UK infrastructure projects like highways road-networks, railways, and water transportation systems were poorly delivered, or when completed the perceived costs were astonishingly high, and the outcome was poor quality. Thus, premised on the need to avert poor quality and ineffective project delivery, the PPPs arrangement has been quite popular across Europe, and Asia (Chua, Kog, & Loh, 1999). As Chua et al. (1999) validates, developed nation would possibly consider the PPP option as an indispensable catalyst for ensuring timely public-sector reform.

In fact, Zhang (2004) viewed adoption of PPP as the only way to ensure value addition in public service delivery, particularly where the partner(s) from private sector brings in their expertise or skills in the course of delivering and operating a public infrastructure or services. Based on experience and vast know-how in the project management, and public infrastructure construction; private sector remains the most suitable source of professionalism in availing high-quality public services or infrastructures with low casualty rates. Based on Chan et al. (2010) the key impetus for any government to implement PPP/PFI arrangement is premised on the strong desire to institute sanity in the public sector, enhance efficiency improvement,

and most importantly, enhance sufficient public services in accordance to the prevailing population needs.

Indeed, the government results to PPP adoption as the most effective strategy for in-sourcing private expertise across various fields including telecommunication, and healthcare for the improvement of public sector management capabilities, and in ensuring excellent service delivery mechanism(s). As concluded by Bovaird (2004) while employing PPP, the government can learn from the experience and utilize the acquired skills and knowledge from the designated private sector partner(s) to ensure that future service delivery within the public division is greatly improved. For example, the recent PPP arrangement between Abu Dhabi and GGGI (Global-Green Growth Institute) where the completion of the proposed renewable energy micro-grid project would help the country avail clean and efficient energy; and further help in sharing the innovation expertise with the local talents. This innovative collaborative South Korea-UAE project is focused at not only at availing the much needed clean energy source, but also in developing synergy between the two entities in furthering innovation and research procedures in sustainability whilst ensuring UAE's human capital is well skilled and oriented in handling such projects in future (United Arab Emirates, 2012). This is mainly attributable to the resulting synergy among the stakeholders which makes it pretty easy for the knowledge, skills, and expertise to be effectively transferred and integrated to public sector. Based on Turhani and Shqau (2011) partnerships focusing at offering public services or facilities through the participation from the private segment may possibly accelerate the realization of essential projects, and further initiate technology and innovation in all service delivery procedures.

In regions like the U.S., and China, as noted by Zhang (2004), PPP has been adopted in facilitating economic growth, and reducing budgetary burdens. This is because PPPs approach tends to support market-oriented transformation policy adopted by the two counties in late 1970s (Bovaird, 2004). For example, China projected that between FY2006 and FY2010, the ever increasing population would see the government incur over RM 470Billion in availing various public services (Chan et al., 2010). Fearing the projected budget would put pressure on the government's

capacity to deliver infrastructural developments; China sought to employ PPPs as the most favorable option to offer the rapidly demanded public services, and works (Chan et al., 2010). Further, with environmental sustainability and infrastructure development forming Abu Dhabi's vision 2030 cornerstone, the need to adopt PPP arrangements by emulating Ireland, Norway, and New Zealand is very eminent. By borrowing from these countries economic development scenarios, the Abu Dhabi leadership proposed an economic policy that avails suitable economic platform for private sector to maneuver and initiate the infrastructural development in transport and traffic systems (Department of Planning and Economy, 2008).

Further, as supported by Chua et al. (1999) findings, PPP arrangement under PFI model would see the whole infrastructure project costs charged directly to the public division over the PPP contractual life. As a result, the enormous costs required to commence the project would see the government fail to break free of any short-term constraints, and instead, consider public-sector borrowing in seeing the particular project to realization. According to Bovaird (2004) economic growth would be easily compromised if the public-sector borrowing keeps on swelling as the government struggles to meet the ever increasing public service(s) needs. Therefore, when implementing any capital-intensive projects like infrastructural developments, the projected costs are solely borne by the partnering private sector, and such cost is never accounted for under public spending. Majority of countries, particularly those with the EU or European Union region, have their public debt put under specified ceilings for each member-state and, therefore, this restriction acts as the incentive towards the governments' desire in adopting PPPs approach whenever procuring public services or infrastructures.

Zhang (2004) indicates that purportedly various countries facing limited or inadequate funding on national infrastructure budgets which forms the backdrop of economic development, would certainly find PPPs the best option by shifting the financial burden of availing or maintaining public services and facilities. In this regard, the adoption of PPPs is solely premised on the perceived flexibility in allowing the government to induce economic development off-budget rather than relying on public borrowing. Nevertheless, in developed economies like China, and

in the UK PPPs adoption cannot solely be pegged on costs diminution and economic growth, by ensuring balanced growth in sectors that are lowly funded (Li et al., 2005). Shortage of public funding across some countries in Asia, and Europe has seen the government consider PPPs option in realizing public facility or infrastructure delivery (Li et al., 2005).

According to Meng, Zhao, and Shen (2011) in a country like China where remarkable economic developments have been registered, the local governments charged with the responsibility of financially supporting utility projects like water supply had in recent past reported huge deficits. For instance, in 2000 the deficit tolled at 396.0Billion RMB Yuans before hitting highs of 1,000.35Billion RMB Yuans by 2005 (Meng et al., 2011). Due to such irrecoverable deficits, the Chinese government had no choice other than to inject some participation through PPP in delivering water projects under BOT model. For example, Singapore government does consider PPP arrangements as the only effective way of procurements that enables the public sector ample time to focus on acquiring public services under cost-effective basis, instead of directly operating and owning such assets or public facilities (Dulaimi et al., 2010). As a result, countries like Abu Dhabi have greatly borrowed from the transformed Singapore economy by allowing private sector, and existing workforce contribute regional and social developments as the government alone cannot fund and sustain key economic developments (Department of Planning and Economy, 2008).

Chan et al. (2010) singled out the idea of project complexity and technical expertise as the most important rationale for countries across Europe, and Asia to adopt PPP in order to easily hasten economic growth. For example, projects like hospital constructions, government office constructions, roads construction, and learning institutions construction are somewhat complex, and demand considerable experience or competencies in delivering them to the public. Further megaprojects like Burj Khalifa in Dubai, signifies the importance of PPP in realizing complex project on time, budget, and required quality. The completion of this project played a landmark role in boosting Dubai economy as the city plays host to varying business avenues, and further, act as tourist hub (Chan et al., 2010) In fact, as El-Gohary,

Osman, and El-Diraby (2006) concludes, private sector which in most cases is driven by ROI or return on investment across various project investment over a period of time, have the required professionalism, craftsmanship, and innovational competencies in completing complex projects under manageable financial constraints, and within the delivery deadline.

If the public sector is left to run megaprojects, there is higher likelihood that such projects will be abandoned with the concerned parties citing poor managerial and planning incompetence. According to Fox and Skitmore (2007), various governments across the globe fear project failures, and consider PPPs owing to their perceived ability to utilize private segment expertise in delivering complex projects without delay. Nevertheless, according to Fox and Skitmore (2007), in countries like Canada and Australia with long history of utilizing PPPs programs in delivering infrastructural projects, government collaboration with diverse private sectors is instigated by the need to ensure increased project efficiency and sustainability. All complex projects need a certain level of commitment in ensuring their sustainability, and their sole purpose of ensuring societal development.

2.3 CSFS FOR PPP/PFI IMPLEMENTATION

Jefferies et al terms CSFs or Critical Success Factors as the perceived key activity areas in which favorable outcomes are entirely crucial for managers to attain their goals. Coined from this definition, various scholars have used the CSFs criteria to delineate various forces that contribute to positive outcomes on any PPPs projects. When ascertaining various CSFs elements approaches like systematic, quantitative, and analytical techniques have been employed among diverse PPPs forms. Key research in construction management have resulted in a myriads of CSFs based on the countries of origin or project client, and the model of PPPs approach used. Tiong (1996) explored vital CSFs for China's private constructors in any competitive negotiation and tendering procedures under BOT projects, whereas Jefferies et al. (2002) examined how various public clients succeeded in managing BOOT or build-own-operate-transfer project(s) procurement. Qiao et al. (2001), further, ascertained eight independent CSFs under BOT model of PPPs within China. According to Qiao et al. (2001), these CSFs include: stable economic and political condition,

appropriate project identification, acceptable tariff/toll levels, an attractive financial packages, selection of appropriate subcontractors, reasonable risk allocation, technology transfer, and, management controls.

Borrowing from the early 2000 sports stadium project in Australia, Jefferies, Gameson, and Rowlinson (2002) singled out key CSFs as: strong or solid consortium characterized by wealth of expertise, substantial experience, high ranking profile and a strong reputation, efficient project approval procedures considerate of tight timeframe, and innovative ways during consortium financing procedures. Qiao et al. (2001); and Jefferies et al. (2002) good governance, government support, stable macroeconomic conditions, and favorable administrative and legal framework has been identified as indispensable CSFs. According to Tiong (1996) and Akintoye et al. (2000); the most important CSFs ought to include: sound economic policy, availability of financing, good and strong private consortium, effective risk allocation, cost-benefit analysis, and innovative solution attributes on the consortium side. All the aforementioned CSFs are ranked differently depending on the region, economy, and experience in using PPPs approach accorded to the country in question. Using different ranking techniques the following twelve CSFs, discussed herein, have been recognized by various research findings.

According to Tiong (1996) and Jefferies et al. (2002); solid private consortium entails the formation of consortia or group of experienced and knowledgeable private firms come together in exploring their individual strength in taking part in PPP/PFI markets. The formed consortia are capable of exploiting and synergizing their individual private firm's strengths in delivering a PPP project. According to Zayed and Chang (2002) in UK this CSF is accorded greater weight given the nature of PFI model employed in realizing public infrastructures or services under PPP approach. For example, according to U.S. Department of Transport (2007) in 1994, the success of England Highways Agency (EHA) in completing the \$900Million M6-Tollaway project by 2003 was due to strong private consortium established between Autostrade (25%) and Macquarie Infrastructure Group (75%) that enabled in delivering the road infrastructure. As researched by Dulaimi et al. (2010), local governments PPP arrangements in UAE have been employed by allowing

experienced, resourceful, and skilled private sector participants to deliver those municipal projects where the funding demands are higher, or when strong-local private consortium can be engaged in a contractual partnership under BOT model.

As noted by Li et al. (2005), strong private consortium plays a vital role during tendering procedures in UK as only those experienced and reputable big private firms have regularly won PFI contracts. Further, in China under the BOT model noted by Tiong (1996), strong private consortium is ranked second as based on the nature of various utility, and infrastructural projects delivered under PPP arrangement. According to Meng et al. (2011), use of TOT or even BOT requires relatively solid private consortium in delivering urban utility projects like water supply projects either as water pipe network or water plan project. In most cases, PPPs approach in China where water supply project are being delivered, the local governments have inevitably been involved in all utility procurement procedures. One such scenario relates to the 1995 TOT project within Shenyang, where by seeking private investor's participation the local government was able to realize the 250Million RMB Yuan's project (Meng et al., 2011). Though other factors were in play, investor A as the partner in the concession used synergy approach in making it possible for the China government to avail the *Shenyang No.8* water project.

Li et al. (2005); Zhang (2005); and Akintoye et al. (2000) define this CSF as the perceived capacity to allocate particular risks to partners able to manage or handle such risks. Chatua et al. (1999) indicates that sharing risk appropriately is only attained if the parties involved engage in reliable contractual agreements bearing clear rights and obligations that each partner ought to execute or enjoy. Chan et al. (2010); Zhang (2004); and Chua et al. (1999) identifies agreements like loan agreement, operation agreement, supply agreement, shareholder agreement, and insurance agreement, among others can see various risks associated with BOOT, BOT or any PFI projects report minimal risks.

In both the U.S. and UK where PPP/PFI have regularly been used in delivering transportation projects, risk sharing and appropriate allocation has been ranked as the second CSF in any project (Zhang, 2004). This has been based on the understanding that, various economic risks may directly affect the timeframe for the

project realization or the total economic costs in sustaining the project's whole-life. Under TOT or even BOT projects in China, this CSF has been ranked fourth as the government makes effort in averting higher risks during project realization. According to Weiermair et al. (2008), in Australia risk sharing/allocation CSF aspect is ranked second as the government, particularly when involving private-sector in delivering tourism related project. For example, the early 2000s Water theme park and Mountain leisure beach saw the government involve over 140 private consortium in realizing the project in 7years, as a way of averting greater risks if less number of private investors were involved in an extensive period; about 20-30 years (Weiermair et al., 2008).

Commitment in terms of human capital and resources from all parties involved help in shaping the success of any PPP/PFI project (Zhang, 2004). Chan et al. (2010); and Chua et al. (1999) reported that the most experienced countries in PPP/PFI like Canada, UK, Australia, and China tends to rank this CSF third. According to Qiao et al. (2001), these counties tend to have strong controls, and involvement in seeing any PPPs project to success. In developed economies like South Africa, this CSF is ranked fifth. In UK effective commitment from private sector saw the 1991 QE2-Dartford Bridge estimated at \$86Million realized without of extra costs or risks involved.

According to Tiong (1996) feasibility CSF is ranked among the leading factor that enables private sector to win any PPP/PFI contract. Zhang (2004) views project technical feasibility as the perceived capacity by the PPPs parties or consortium team to table valid proposal of satisfying all relevant regulatory authority. In UK, technical feasibility has been ranked forth while in countries like Singapore disregard to the factor has resulted in project casualties (Li et al., 2005). A case in context in Australia relates to the New City Tollway (NCT) project assumed under PPP BOOT model where novel technology compromised the delivery of the project due to poor uncertainties and feasibility ascertaining procedures (Li et al., 2005).

Qiao et al. (2001); Akintoye et al. (2000); and Chang et al. (2005) entail both sound economic policy and stable macroeconomic conditions. According to Chan et al. (2010); and Chua et al. (1999) in UK the reported PFI value is strongly correlated

with the country's GDP. In support of this view, Qiao et al. (2001) indicates that stable macroeconomic conditions helps in lowering corresponding market risks, which further lowers investors risk in participating on development activities via PPP/PFI contractual arrangements. As noted by Chan et al. (2010), the government is charged with the duty to ensure development oriented policies are entrenched in stabilizing market prices, and ensuring balanced budget. In the UK, economic viability CSF is ranked fourth as the existing economic conditions are obviously capable of propelling any PPP/PFI project (Li et al., 2005). In China, Australia, Canada, and the U.S. as Tiong (1996) posits that, BOT projects have been very successful due to stable macroeconomic conditions entailing dimensions like financial market availability, multi-benefits objectives, and favorable legal framework. For example, Chinese government via joint investment funding and supplemental periodic service agreements or payments, have seen the municipal council realize water supply projects like the 2003 Shenghen Water Supply (SWS) plant at manageable costs of 2Million RMB Yuans under the TOT model (Meng et al., 2011).

According to Li et al. (2005), social and political support coupled, with good governance has been ranked fourth in countries like China, Argentina, and Canada, whereas regions like the UK, India, and U.S value effective procurement procedures as facilitated by supportive governance from the existing regimes. Chang et al. (2005); Akintoye et al. (2001); Chua et al. (1999); and Chan et al. (2010) findings indicates that, political has direct correlation with any development or implementation of various public policies. In UK, any PPP/PFI implementation procedures are directly pegged on unlimited support from the government (Li et al., 2005). In realizing positive outcomes from various transportation projects, the UK government has always portrayed positive attitudes towards PPP/PFI and the direct involvement in growth projects. Similarly, as noted by U.S. Department of Transport (2007), the current political support accorded by the Indian government in the construction of the Vivekananda Bridge valued at \$148Million under BOT model, has been a success so far due to favorable tax concessions availed by the government in a bid to attract private investors.

Li et al. (2005); Meng et al. (2011); and Riess (2005) conclude that governments avail PPP/PFI programs guarantees via diverse approaches. According to Riess (2005) within the OECD countries the government subsidy guarantees across various public corporations have the charged prices deliberately kept low by the government, and efforts assumed to ensure even the private section does not in any case raise such prices. As indicated by Mathias and Legros (2005); and Zhang (2004), guarantees significantly lowers risk associated with concessionaire, raise the lenders or investors' confidence, and support the concessionaire cash flows. In UK, India, the U.S., and China, government guarantees has been ranked sixth, but the priority given on facilitating infrastructure projects indicates the government commitment in bolstering PPP/PFI implementations. In UK various desirable infrastructure projects enjoys some tax holiday of about 5-10years or even bond guarantees (Li et al., 2005). In China during the construction of Shanghai YD-2nd Tunnel project, the municipal government offered six vital guarantees towards the concessionaire (Zhang, 2004).

Chan et al. (2010); and Chua et al. (1999) findings indicate that China rank this CSF third, while countries like the U.S., UK, New Zealand, and Sweden grade the CSF among the most important factors that accentuates social perception towards the role of PPP/PFI in supporting infrastructures projects. According to Chua et al. (1999), efficiency and transparency in procurement procedures is attributed to competitive procurement, and open bidding procedures. UK, Sweden, and Australia familiarity with PPP/PFI has seen the public procurement procedures value competitive bidding in a bid to attract proficient and expertise consortium team. For example, during the Sweden PPP construction projects like the 1992-2000 Øresund Bridge infrastructural project valued at \$5.4Billion, the government engaged competitive procurement before settling for Øresundsbro Konsortiet firm that delivered the project under build-design model (U.S. Department of Transport, 2007).

According to Zayed and Chang (2002); and Grant (1996), this CSF entails the perceived commitment exuded by public agency to engage in negotiation on public body behalf. Zayed and Chang (2002) indicate that during project procurement, project manager, sponsor, and the consortium team, should posses essential technical

and management competencies not only for engaging in the project, but also for taking part in structured negotiations. Across Asian countries like Japan, Kazakhstan, and China where negotiation is marred by cultural influences, the government finds itself hiring external advisors capable of negotiating with the assigned private sector or even the consortium (Grant, 1996). For example, in China during the initiation of TOT model in realizing Shenzhen Water supply plant valued at 5.9Billion RMB Yuans, over 21 bidders took part in the negotiation forcing the government to seek the intervention of professional negotiators or experience professionals (Meng et al., 2011).

According to Grant (1996), major PPP/PFI infrastructure projects have been most often funded on limited recourse or nonrecourse basis, with financial instruments like debt, mezzanine finance, equity, or sureties been used to finance such projects. In regions like Thailand, UK, China, Peru, India, and Singapore, have encouraged the aforementioned instruments by allowing low financial charges, suitable schedules of investment, low interest rates, and suitable payment structures in support of PPP/PFI implementation (Chan et al., 2010). According to Dulaimi et al. (2010) in UAE region, financial institutions, and local banks can avail competitive financial packages bearing low charges on accruing interests in supporting private sector involvement through PPP arrangements. During the 1990's Rosario-Victoria Bridge PPP/PFI project in Argentina, valued at \$430.8Million, the government availed affordable equity financing to private sector under design-build-operate-manage model (U.S. Department of Transport, 2007).

Chan et al. (2010) defines social support CSF as the perceived public acceptance to the idea of private provision, and the doctrine of PPP/PFI. Traditionally, the public associates the provision of infrastructural projects with reasonable prices, and quality; hence, the need for the government to go public of any infrastructure project aimed at serving the public needs. On this tenet, the government does go public on any proposed PPP/PFI project via modern Medias in seeking social support from the citizens. In Europe, Asia, the U.S. and South America has graded this CSF as vital in encouraging accountability and transparency during procurement procedures. For instance, during M2-Motorway PPP project execution, the Australian road division

went public to attract various private partners in making the \$650Million project a reality after Tollaust Pty Ltd., won the bid to undertake the project under operate-and-maintain model from 1994-to-1997 (U.S. Department of Transport, 2007).

This CSF is lowly ranked, but for healthy PPPs arrangement all parties involved in PPP/PFI projects must always appreciate, and respect each other's objectives or goals. The public sector key objective is premised on the need to reduce financial restraints, attainment of VfM, and effective provision of the needed services or public facilities. From private sector the core objective is market penetration, profit maximization, and skills and technology acquisition, with an aim to enable the public benefit from better services (Zayed & Chang, 2002). Next chapter will demonstrate the methodology and participants framework.

3 RESEARCH METHODOLOGY

The main two research approaches are qualitative and quantitative approaches. The quantitative approach includes numbers and measures to explain and demonstrate the sought answers. By such approach, significance relationships are driven between different variables to represent particular outcomes (Creswell 2003). Qualitative research depends mainly on collecting and analyzing the empirical data from what the participants say. The researcher, in the qualitative research, is the one who interpret the collected data (Creswell 2003 and Cromack 1991).

3.1 RESEARCH APPROACH:

In this research, this researcher adopted the qualitative approach to collect the necessary information and data instead of the quantitative approach. The qualitative approach in this paper was adopted because of the limited number of PPP projects implemented in the region. Further, the limited experience and awareness among people in managing PPP projects makes it unreliable to depend on quantitative approach because the sample required for such approach would be relatively small. The nature and structure of this research require a deep understanding of the topic; and adopting qualitative approach is the most appropriate as it helps acquiring clear

interpretation of thoughts and ideas. The key advantages of qualitative research are its concentration on details, its representation of perspectives and conveying of messages clearly (Cromack 1991). Adopting the qualitative approach will be useful for this research as it will enable the researcher to understand the perceptions of the participants of PPP execution and make it possible to reveal the rationale behind their various perceptions. Further, this study is all about revealing the objectives and CSFs, therefore, the research followed the inductive approach where the findings are developed rather than confirmed.

3.2 STUDY SAMPLE:

3.2.1 DESCRIPTION OF SECTORS INVOLVED:

The major sectors that chose PPP as a strategic procurement method are: Water and electricity supply sector, transportation sector, educational sector, health sector and real estate sector. In order to provide reasonable coverage for this research, it was necessary to interview representatives from various industries and sectors. From the water and electricity sector, the researcher interviewed representative from a high authority responsible for power and water distribution. The authority has various distribution centers that receive water and electricity from different production units. The authority has managed several projects under PPP concept since 90s.

The second industry was the educational sector in which the structure of PPP adopted has some differences from the one in water and electricity supply sector. Those differences in the structure of PP adopted are due to the industry needs and types of projects implemented. However, this paper won't discuss this aspect as it focuses on the objectives and CSFs of PPP in UAE. in the educational industry, the paper reflects public perspective as well as private perspective since the researcher had the chance to meet senior managers from both parties.

The transportation sector was involved in this study as well. Two senior managers were interviewed to discuss the aspects of the execution of PPP in UAE. this industry hasn't experienced much PPP projects in UAE; however, the interviewees had enough experience in dealing with PPP project worldwide. The last sector to be involved in this study was the healthcare sector, but the researcher couldn't reach

respondents involved in such projects due to the unavailability of the participants or the participant is not qualified based on the criteria mentioned below.

3.2.2 CRITERIA FOR SELECTING STUDY PARTICIPANTS

Because of the in-depth aspect of this study and the data analysis required, the qualitative research requires a small and selective sample (Cromack 1991)

The selected participants have sufficient knowledge about the PPP concept and have managed to plan or execute several PPP projects in the UAE. In fact, some of the participants had a wide experience in managing PPP projects in Europe; that has added a significant value to the research. The participants who were interviewed were from both public and private sectors. The reason behind such variety was to enhance the research with reliability and validity of the information provided to the research as well as the nature of the paper that it does require both parties to participate. Further, the diversity of the sectors of the participants was a major criteria to ensure providing a full picture of the PPP implementation in the whole region of Abu Dhabi Emirate.

3.2.3 PRESERVATION OF ANONYMITY AND CONFIDENTIALITY

All types of researches have various ethical matters which a researcher shall always consider while conducting the research. The main ethical issue in this study is privacy of the respondents. To respect the participants' privacy, the researcher had to omit the names of the participants along with the names of their organizations. However, the sector and the industry they worked in were mentioned to add value to the research and to differentiate between the objectives of each industry. Another ethical issue was the confidentiality of the information the participants provided. In this regard, the researcher ensured that all information shall be focused in the general objectives of using PPP rather than specific reason of a particular project. Moreover, the participants allowed the researcher to use their feedback and information in this study to add reliability and credibility to this study.

3.2.4 STRUCTURE OF QUESTIONS:

According to Cohen D, (2006), using semi-structured interviews gives the participants the opportunity to express their opinions freely. Further, the qualitative data is better presented and discussed by adopting and utilizing semi-structured questions. Therefore, Face to face Semi-structured interviews were conducted with the participants to collect data. In the semi-structured interviews, the researcher has the chance to discuss the important issues with limitations. Afterwards, the interviewer opened the door for other discussions related to the subject.

The interviews started with introducing the industry of the expert and demonstrating a brief about the projects which adopted PPP as a procurement choice. Further to that, the questions presented in the interviews reflected two main aspects of each sector implementing PPP as a strategic procurement method. For the first aspect, interviewees were asked to reveal the reasons behind adopting PPP and discuss objectives behind such a strategy. The second aspect was the identification of the success factors that contribute into delivering successful implementation of PPP projects. The discussion was not limited to the CSFs found in the literature review, but took an approach by which it revealed the nature of all factors involved. It was noted that there was a research by BUiD that discussed those CSFs; however, it was found that those factors are dynamic and change with time due to the fact that the market is being more mature about PPP.

The paper depends on the data provided in the literature review as well as the information acquired and discussed with the interviewees. No access to project agreements or contracts was provided due to the confidentiality of those documents; but the researcher was allowed to explore and discuss all aspects of project agreements.

The semi-structured questions were developed to explore the understanding and perceptions of the participants about the execution of PPP projects in Abu Dhabi. The structure of the questions enabled the participants to identify the reasons and objectives of adopting PPP as a procurement method in Abu Dhabi. The questions were developed in such a way they the respondents would compare Abu Dhabi with

other regions worldwide in the objectives of using PPP. Furthermore, the questions were developed in depth so the participants have the opportunity to explore more about the topic as the aim of the research is focused into two main directions: the objectives of adopting PPP and achieving those objectives.

Method of recording data:

All data obtained from the interviews were captured through taking notes and discussing each single questions and point of the research. The participants did not approve the audio recording due to privacy issues. The researcher ensured proper transferring of thoughts and ideas through effective discussion with the participants and reviewing the answers at the end of the interview.

Data Analysis:

The primary reason for analyzing qualitative data is to develop empirical conclusions for the research. Propositions had been drawn from the literature review, and then questions and assumptions were developed for discussions with the participants. The base of the questions developed was the literature review data; however, the participants were the given the chance to discuss and elaborate far beyond that to explore their points of views. Then, the researcher depended on the interpretations and deep discussions with the participants and the research supervisor to develop the framework of the discussion chapter. Hence, the presentation, categorization of the discussion chapter, was the ultimate result from both data drawn from the literature review and interpretation of the discussions.

Limitations of the methodology:

❖ **Generalization:**

Due to selecting a small sample for this qualitative research, there is a suspicion that the researcher could have been influenced by a particular disposition; that would affect the generalization of this study. Further, having the sample only from Abu Dhabi makes it hard to generalize the findings and make it applicable for all UAE Emirates.

❖ **Reliability & Validity:**

If the quantitative approach was to be used here, the data collected would be more reliable and valid. Nevertheless, the nature of this topic and the experience of UAE in PPP forced the researcher to adopt the qualitative approach. It is harder difficult to establish a clear realization of the validity and reliability of data collected from this approach; but, this does not necessarily mean the data is less valid or reliable, it is just difficult to prove its reliability as in quantitative approach, the data can be tested thorough validity test, confirmatory analyses, and other tests. To counter this risk, the researcher has to adopt high analytical ability along with selecting well defined sample of participant

4 DISCUSSION AND ANALYSIS

In a couple of years to come, Gulf Cooperation Council or GCC's nations including UAE are poised at spending in excess of \$500 trillion on diverse national development programs (Atalla, Aly, & Itani, 2012). With such ambitious plans on the table, PPPs avails the most potential development and valuable financing mechanism in ensuring the attainment of this economic growth agenda. This is because UAE demands for public services or infrastructure will remain escalating even in the future, and as Turhani and Shqau (2011) notes, major infrastructural projects like utilities projects (water and sewerage treatment), energy projects, and transportation projects which forms socio-economic in any public sector fronts are well accomplished via PPP procurement. Indeed, the featured economic development programs aims at bolstering the participatory level of private-sector and, most importantly, facilitate the economies' shifting away from the perceived overdependence on the existing natural resources. From global circles, in over two decades, countries like UK, the U.S., Spain, and New Zealand, among others have employed PPPs contractual options in ensuring speed, efficiency, transparency, and inclusive economic growth by availing vital infrastructure or public services.

4.1 OBJECTIVES OF USING PPP IN THE UAE

To follow suit, UAE states like Abu Dhabi are currently at the experimenting phase with PPPs arrangements. The impetus behind the adoption of PPPs options in this

tentatively closed-society has been an investigatory subject area, as UAE has to adopt a unique approach compared with that used in developing or even industrialized countries. This is because UAE has been using trial methods in implementing PPP devoid of comprehensive governance, supervisory, and legal frameworks are suited for the intention of overseeing this relatively new and complex mechanism to fruition. The PPP project procurements in global scale are driven by objectives such as project's capital constraints, faster project completion, project's risk transfer objectives, superior return on investment (ROI), government budgetary constraints, and quality work objectives, among others. This paper, throughout the discussions and empirical data, has classified the indispensable objectives of adopting PPPs in the Abu Dhabi are into two categories of rationales namely: first, financial and economic objectives, and second, level of quality objectives.

4.1.1 FINANCIAL AND ECONOMIC OBJECTIVES

4.1.1.1 ECONOMIC GROWTH

As envisioned under Abu Dhabi Policy Agenda (PA), the objective in adopting PPPs contractual arrangements in the recent pasts has been driven by the government's intention in broadening the region's economic base by primarily promoting the role played by Private-sector in availing public services to the visitors and the residents. The economic objective is further supported by the government's efforts in enhancing income sources diversification and economic structure by fostering the non-oil divisions, encouraging direct foreign investment (DFI), and bolstering PPP, and engaging in joint ventures premised upon comparative advantages. In realizing these economic heights, the Abu Dhabi government ascertained the prospects of shifting the public purse to private-sector in an effort to lessen budgetary allocation burdens posed by mega-infrastructure projects. According to Neuhof (2012), Abu Dhabi alone has projected to generate over 7% of the nation's energy requirements from renewable sources by year 2020, and has sought to employ PPP model in realizing the first mega-scale solar project: the 100MWTS Shams project. The need to adopt PPP is premised on the fiscal 2011 public spending tolling at Dh940.2Bn

on alternative energy segment (Neuhof, 2012). Therefore, shifting such massive spending burdens to competent private-sector to deliver alternative energy projects in coming years will allow the government to divest the saved funds to other development divisions.

In addition, the current economic development prospects in UAE have seen the leadership in the region adopt PPP models. Abu Dhabi Plan-2030 envisages economic developments on public transport, aviation, highways, and maritime sectors, and in order to allow accelerated growth and realization of the projects on time, the government is currently developing PPP management policies or frameworks in order to steer the region's economic growth (United Arab Emirates, 2008). According to Middle East Report (2011), after realizing the project volumes in the region are quite enormous, the UAE government is deliberately employing PPP model. Notably, Abu Dhabi has in excess of \$68bn allocated for the realization of the Surface Transport Master (STM) Plan, and Qatar's metro projects with budgetary requirements in excess of \$25bn (Middle East Report, 2011). Such huge financial requirements has seen the government in the region move at a fast pace in developing PPP law as pioneered by Dubai, and Kuwait in ensuring that the public purse is not depleted while realizing economic growth. In fact, under the concession model to be employed by states like Abu Dhabi, and Qatar, the public budget is very likely to be accounted for 'off-balance sheet' thus attracting investors to contribute more in delivering public infrastructures or vital public services like education and health services devoid of huge spending burden on public purse. In addition, Abu Dhabi alone has been able to enhance economic development by using PPP model in procuring about 10 integrated power and water projects, and has in great effect applied PPP procurement procedures in developing hospitals, transportation, schools, universities, and military projects (Teitelbaum, 2010). Through those 10 integrated projects and more, Abu Dhabi was able to achieve the target of supporting the economy to a sufficient level of growth. A study by Mohamed Al Saadi, PhD Student in Zayed University, states that adopting strategic partnership, in the last decade, between the government sector and the private firms in Abu Dhabi has contributed into achieving a high level of economic growth. Thus, Abu Dhabi is

seeking through implementation of PPP to enhance its economic growth by placing such strategic partnerships.

4.1.1.2 COST-EFFECTIVENESS AND VALUE-FOR-MONEY (VFM)

Using PPP model makes it possible for individual states in UAE to report success in realizing a number of public projects on manageable costs outlay. The rationale behind the PPP model is primarily hinged on the perceived demands in whole-life project costing, and the resultant VfM. Typically, private-sector has great incentive to spend huge investments on the projected initial capital outlay on any project, as compared to public-sector which in most cases considers lowest-initial capital outlays. This is because private investors are mainly driven by greater ROI, and VfM as supported by the need to maximize project returns and contain unnecessary cost incurrance or risks. In fact, low-cost dimensions has driven the decision to seek PPPs model in delivering projects with inherent financial risks from water and power supply sectors in regions like UAE. The inherent risks particularly during project usage or management phases have seen the UAE 2030 economic development goals strategists propose the need to involve private-sector firms in delivering cost-effective infrastructures.

According to Brass and Gale (2012), Abu Dhabi's DoT or Department of Transport is presently re-evaluating the move to realize the mega road project: Mafraq-to-AlGweifat Highway budgeted in excess of Dh10bn or about \$2.772bn from the capital to Saudi Arabia, as an attempt to spread the project's risk and ensuing maintenance costs to private-sector under concession PPP-model. Further, the PPP arrangement will allow the government to realize the 327km highway project while still ensuring value and quality transport for its public, without necessarily having to spend more (Brass &Gale, 2012). This is because the project's concession plan is likely to span to over 30years, and the private-sector will be in charge of building, maintaining, and operating the highway (Brass &Gale, 2012). Therefore, the unpredictable maintenance-cost is wholly transferred to the private-sector who will be charged with the duty to meeting the defined standards as defined under the concession model. Through such partnership, the value for money concept is being

well managed for the public sector because the money that government entities used to spend in designing, building and maintain such projects has been transferred to another entity. According to this project planning director, the aim of adopting PPP here was to ensure huge money savings and use the allocated money in other investments along with ensuring that the private sector will use engineering value concept effectively to minimize the costs of design and construction.

Under the education sector, Mubarak Al-Shamesi, the ADEC Director General, reckons that the 2006's PPP model project, projected at \$35Million would see Abu Dhabi partner with competent international consortium in attempt to upgrade the learning-teaching experience in the region to world-class levels, and in line with vision 2030 policy paper, allow the government in availing quality education at cost-effective levels (Khatib, 2009). Other infrastructural projects across Abu Dhabi have been realized on cost-effective basis by engaging private-sector under the PPP model. In fact, majority of IWPP projects under the Abu Dhabi Water and Electricity Authority (ADWEA) have been completed or are underway to completion under PPP contractual model. According to a director in ADEWA, a main objective of adopting PPP model was to create and facilitate an effective cost and value for money to support ADWEA strategically in the projected plans.

4.1.1.3 MAXIMIZING REVENUES AND GOVERNMENT ASSISTS

As noted by Chua, Kog, and Loh (1999), success derived from use of PPP approach has been the key impetus for adoption of PPP contractual arrangements in a view to maximize revenues, while ensuring the realization of the much-needed infrastructural developments. The private-sector involved in various projects has seen the government endorse the use of PPP model in order to deliver water and power projects with enormous revenue streams. Under the vision 2030, and as supported further by data collected, Abu Dhabi has made it possible for private-sector to play an indispensable role in strengthening efforts from the government to attain the set developmental goals. With an aim to make Abu Dhabi secure the capacity to maintain the projected demographic and economic growth across Emirate, the government has portrayed diligent efforts by supporting transportation,

technology, education, and industrial sector's related projects (Collins & Hills, 2010). This has been made possible by availing governance and financial assistance to various contractors undertaking such projects. ADWEA has completed and initiated many projects under PPP model to maximize its revenues along with the private sector revenues. According to a director of ADWEA, maximizing the revenues comes from both creating a value for money by not spending cost on projects as well as revenues generated by electrical fees from the public. That is also linked with increasing and maximizing the government assists by developing many tangible projects that will end up being owned by the government.

The same concept applies with the transportation sector where many projects under construction and financed by the private sector will end up owned by the government entities; this itself achieves the main objective which is maximizing the revenues and government assists.

In essence, Islamic finance has played key role in ensuring that even after the private-sector engage in project delivery, the intended projects are overseen to completion devoid of any delayed delivery. From the \$1bn Zayed University (ZU) New Campus project in Abu Dhabi, completed by November 2009, the private contractor: Al-Habtoor-Murray Roberts JV; secured about AED1.45 or about \$395 in 2008 from ADIB in order to complete the project (Collins & Hills, 2010). Securing such tranche funding meant that, the consortium could not at any time withdrawal from the project prematurely as government assists through Islamic finance tranche is certain. The government sector, Abu Dhabi Educational Council (ADEC), aimed through adopting PPP procurement strategy in this project to maximize its assists and create value for money that should have been invested in this project.

4.1.1.4 LIMITED OR CONSTRAINED FUNDING

Fiscally, UAE countries are wealthy and pride to have valuable natural resources that make it pretty easy for the region to finance public infrastructural projects. On this regard, all federations within UAE can be able to finance any public infrastructure from national budgets. This oil- rich region in Middle East has some

traditional records in scrapping PPP projects midway or prior to commencing time, making critiques to question the commitment of the region in embracing PPP model. Zhang (2004) indicates that various countries in Europe have faced limited funding to develop infrastructure projects to serve the national development, that is one of the main reason, if not the primary, why those countries has adopted PPP as the best strategic choice to develop their infrastructure. A senior manager in a government authority said when asked about the applicability of this reason for Abu Dhabi said: "the reason of is not to be considered as a main cause or motivation for employing PPP model, there are other reasons and objectives to be achieved when adopting PPP". Those other reasons and objectives are the once we are revealing in this study. Further, according to a senior manager in a well-known private sector, all private sector realizes the fact that constrained funding is not the issue with the governments authorities in Abu Dhabi, therefore, the private sector should focus in building strategically focused rather than financial focused with the public sectors.

The main finding here is that the Abu Dhabi does differ from other countries when realizing PPP due to such reason like limited funding; Abu Dhabi has the financial capabilities to finance all infrastructures projected plans for the next thirty years, according to a senior vice president in a government authority. The basic theory in this case was the other countries adopted PPP for a need, but Abu Dhabi for an objective to achieve.

The UAE federations tend to consider PPP model as mega infrastructure projects would end up imposing some insufficient tax revenues; consequently, limiting any public-sector borrowing should the economy collapse like fiscal 2008.

The aforementioned doctrine has been the basis of IF or 'innovative finance' commonly practiced across U.S., Australia, or even UK where PPP model application on infrastructural projects are very common. In fact, compared to U.S., New Zealand or UK; the PPP model user giants, Abu Dhabi has been deliberately using governments funding in realizing key projects in hospitals, education sector, roads, and other public services segments. Lately the need for private-sector participation has been renewed in a view to share the funding burdens by using PPP contractual arrangements, in realizing renewable energy projects where the

governments fail to see the project through to completion; particularly, owing to a troubled global economy implications (Neuhof, 2012). It has been recorded that majority of mega-projects across UAE have failed to be realized as private consortium, and lenders get concerned on project profitability issues due to political unrest across the UAE region (Noack, 2007).

Table 1: Overview on the Financial & Economical Objectives

Financial & Economical Objectives	
Economic Growth	This objective is considered to be a major goal behind Abu Dhabi's approach towards PPP. All sectors, with no exception, has confirmed the applicability of this objective as one of the main behind targeting PPP as a procurement strategy.
Maximizing Revenues & Government Assists	Another major objective behind adopting PPP in Abu Dhabi; this started with water and power sector then other sectors realized the significance of such objective. All participants believe that utilizing PPP procurement strategy is the most appropriate approach meanwhile to achieve such target.
Cost Effectiveness & Value for Money	A major objective among several countries not only UAE; in fact, most experts believe it's the primary objective for adopting PPP. The objective, as per the participants, is sought through effective implementation of PPP in Abu Dhabi.
Constrained Funding	This reason is highly valid in Europe countries and Australia; but according to all participants from all involved sectors, does not really count as a main objective for adopting PPP in Abu Dhabi.

4.1.2 LEVEL OF QUALITY

After demonstrating the financial and economical objectives, the other category that was revealed and will be demonstrated in this section is the perceived level of quality of delivered public services and the performance of some organizations.

4.1.2.1 QUALITY PUBLIC SERVICE DELIVERY

Delivering of quality public services is the most driving force towards economic growth in UAE. Among the nine-pillars established by Abu Dhabi government in realizing economic vision 2030, two pillars namely: premium healthcare, infrastructure assets, and education, and empowered private-sector, portrays the government commitment in prioritizing public service needs (Department of Planning and Economy, 2008). In order to be at par with the rest of the world, Abu Dhabi drafted the vision 2030 strategy commonly dubbed 'Abu Dhabi Plan-2030'. Under this visionary development plan, Abu Dhabi's DoT in accordance with 2007/2008 Policy Agenda have sought to use PPP contractual model in delivering effective transport system capable of contributing to the defined 2030 Strategy and economic growth thresholds, and quality of life among the growing Abu Dhabi populace. In fact, based on these targets, Abu Dhabi Urban Planning Council (UPC) has sought to see the transport sector become world class system in an attempt to meet the growing urban populace needs and standards. Therefore, in delivering quality transport services a strong consortium structure comprising of Abu Dhabi Municipalities, UPC, the Environment Agency, the Western Region, regional Chamber of Commerce, along with private-sector under PPP approach has been put in place (United Arab Emirate, 2008).

In addition, Abu Dhabi Department of Transportation (DoT) under the established transport master plan has seen the PPP approach or private-sector participation as the surest way in delivering integrated seaports that meets the highest set global standards, and which can make it possible for the region to organize and manage waterways across the Abu Dhabi region via viable regulations. For example, in Abu Dhabi the anticipated Khalifa Port under at Taweela interlinked with an industrial zone which is a state-of-the art project, is an exemplary work of the government commitment in delivering quality public service (United Arab Emirate, 2008).

Further, Abu Dhabi desire to propagate PPP model is premised on the need to align the region's public services delivery under global best practice thresholds as evidenced by the federation's commitment in maintenance and expansion of major

highways, as an approach in guaranteeing safety at the highest public standards. Also, the Abu Dhabi DoT has been on the forefront in prioritizing PPP model in the wide aviation sector in order to ensure quality of cargo, passenger, and airlines services availed to the public under highest service standards in line with public interest. In fact, involvement of PPP in delivering key transportation projects is greatly spurred by feasible investment priority, and trade avenues to the global world.

From education sector, Abu Dhabi EC (Education Council) or ADEC by fiscal 2006 geared up efforts to employ PPPs arrangements in improving education delivery and quality, while ensuring the resulting quality of education across Abu Dhabi is at par with strategy 2030 goal. Under the PPP model, ADEC involves international education operators in developing appropriate educational plans, resources, curricula, and activities while improving on teaching performance by instituting continuous training programs (Khatib, 2009). The need to enhance quality education has seen Abu Dhabi employ competitive bidding procedures where among others, competent and proven private-operators like Nord Anglia, CfBT Education LLC, Cognition, Mosaica, School Improvements Partners, Sabis, TaaleemEdisonLearning, and Beaconhouse, won the tender (ADEC, 2012).

The PPP model will see ADEC make it possible to realize improved student competencies, and quality of learning procedures, and improved school leadership quality by instilling competencies among the teaching and administration body across various public schools. In addition, ADEC uses PPP with an objective of improving quality of education by enhancing existing community and environment linkages contribute to productive learning where the entire community including the parents takes part in ensuring successful learning practices by encouraging student to engage in community work (ADEC, 2012). The move by ADEC to utilize PPP procurements was aimed at improving the outlook of Abu Dhabi public schools by first instituting education experts teams tasked to work hand-in-hand with teachers and public school leadership in realizing effective teaching techniques and methods.

Further, in order to enhance the expected delivery of quality education, Abu Dhabi government has employed PPP project to unearth indispensable areas for change or improvement as established under the 10years Strategic Plan. Under the Strategic plan, the education ministry is solely tasked with the duty to not only deliver education services, but also ensure that the learning help students in developing the indispensable leadership abilities and skills much-needed in contributing to the realization of the economic and social goals as envisaged under the Economic Vision-2030 (Department of Planning and Economy, 2008). In deed the commitment of the government in availing quality education to the populace under the PPP project was fruitful following fiscal 2006 pilot study where initially 27 Grade KG-5 public schools were involved with the number growing enormously to a whooping 176 public schools along with 9 private ones by the close of fiscal 2009/2010 (ADEC, 2012).

In addition, another objective in adopting PPP model across UAE has been premised on the need to realize remarkable heights in delivering clean, and quality power or electricity. In September, 2012, UAE showed the role that PPP model would play by establishing a partnership with Global Green Growth (GGG) Institute or GGGI in developing a 100% micro-grid renewable energy project (United Arab Emirates, 2012). With the Abu Dhabi renewable energy targets at seven-percent by fiscal 2020, and the subsequent launch of Shams projects, it is evident that UAE is focused in using the PPP approach in procuring long-term energy projects aimed at ensuring meeting ‘green environment’ thresholds. Experts posit that, though PPP approach is relatively new technique across UAE, with the best framework in place, the Abu Dhabi energy division can certainly meet the clean energy standards, and the entire populace needs by 2030.

Further, water and wastewater management or treatment market size tolling at 50% in UAE, the highest in GCC region, and the perceived financial constraints following the 2009 economic downturn effects being felt by the region, the inclusion of private-sector in this industry is the key priority of UAE federations (Naidu, 2011). From projections, however expensive, desalination projects will continue being the

main source of clean and quality water to the millions of UAE population. In fact, UAE is currently anticipating an increase on desalination capacity by over 76% to around 14.2million m³ per day by fiscal 2016 (*Naidu, 2011*). Because funding projects is getting even tougher while the need for improved public services keeps on heightening, PPP models like BOOT, BOT, and BOO are gaining prominence across the UAE region. Currently, UAE is creating opportunities to increase the current 56% market-size shareholders from private-sector large players like WETICO, Metito, and Aquatech International, among others, who dominate the fray. The aim is to ensure the growing population is provided with clean, and safe domestic-use water with the 2010 projections for clean domestic water use pegged at an increase of 13% in years to come (*Naidu, 2011*).

Finally, from the health division, PPP model has been instrumental in availing of quality and improved medical services among the UAE residents. Between fiscal 2006 and 2010, UAE population grew immensely by over 64.5%, posing more demands on budgetary spending on health, and the need for improved care (*Deloitte Survey Report, 2011*). Since 2006, both Dubai and Abu Dhabi are frontiers in instituting PPP laws aimed at allowing private-sector hand in delivering quality care. The inclusion of private-sector has been tailored to the Abu Dhabi populace health demands with quality deliver care in mind. From 2006, Abu Dhabi has attracted private players like Cleveland Clinic, Vamed, Bumrungrad, and John Hopkins, under the PPP model arrangement (*Deloitte Survey Report, 2011*).

4.1.2.2 ENSURING SECURITY AND LIABILITY OF THE SERVICE PROVIDED

In mature economies, PPP has been used to avert incurrence of unmanageable costs associated with long-term projects like road infrastructures. In this regard, such economies have been using PPP; particularly under PFI model to ensure the security of the targeted project, by having the project timely delivered and as per concessions conditions. Under such concessions the private-sector does bear the whole-life maintenance costs associated with the resultant project. This guarantees continued service delivery, and zero liability incurrence by the public-sector or the government. Nonetheless, UAE has lagged behind on this aspect with notable

projects under PPP model being stalled year-after-year. This is because learning from past project or pathfinder project from global PPP experiences has not been easy as certain economy experiences may not be 100% replicated on UAE PPP scenario. The failed principles of UAE in realizing infrastructural projects like the troubled Mafraq–Gweihat project can be attributed by issues in project selection, and bidding or evaluation procedures employed in securing the PPP concession (Middle East Report, 2011). Well-structured and unambiguous PFI and PFQ procedures is the key in unlocking UAE potential in realizing projects under the PPP model.

Project insecurity is mainly associated with economic or market risks in project financing, but currently the UAE is using Islamic finance tranche in supporting private-sector in delivering key infrastructural projects. During the experimental levels on appropriateness of PPP concession in helping Abu Dhabi realize water and power related projects, the private-sector has proven to be reliable in delivering projects, and managing the costs liability during the agreed concession period (Noack, 2007). Although, the government has been availing funds in having projects in place, the inclusion of PPP approach has been solely driven by the aim of spreading risks associated with mega-projects.

4.1.2.3 FUNCTION FOCUS

In essence, if the financing cost for the entire project along with the perceived whole-life costing escalates, then the country may possibly suffer from finance losses. The function focus is another objective seen to be crucial for selecting PPP as procurement method; however, this focus influences the quality of the performance of the organization itself unlike the previous objectives where the quality of the product is sought to be targeted. Nonetheless, handling huge investment projects has seen Abu Dhabi consider employing PPP procurement procedures if the resulting project(s) proves productive on VfM tenet. The concept of function focus means that every single authority in Abu Dhabi should focus all its human resources into its

main function rather than diverting those resources to manage their business needs, in this case projects.

According to an executive director, who has managed three PPP projects, the attention on the function focusing was developed due to the many issues generated from having the public entities managing their own required projects. For instance, Abu Dhabi Educational Council has reported several major issues when managing designing, building and maintaining their universities and schools. The functions focused along with other objectives have found ADEC signing strategic contractual agreements with Mubadala, a well-known developing company, in which PPP model was effectively adopted. Nevertheless, the power and water sector does not really consider this as a major cause to adopt PPP in their industry. According to a senior manager in ADWEA, managing consortiums to deliver projects is one of their major functions. Therefore, the structure of the team managing PPP projects varies from one governmental organization to another; but this is not the core of this paper.

4.2 CSFS THAT AFFECT THE EXECUTION OF PPP PROJECTS IN ABU DHABI

Globally, projects have been realized successfully, but definitive reasons behind these success stories sometimes remains far-fetched truth, particularly in the UAE where minimal scholarly information is documented on CSFs on the completed or executed PPP projects. It was found through the interviews that there are three major categorizations of CSFs which apparently tend to have directly or indirectly influenced the level of success of completion of transportation, power and water infrastructures, and education sector related PPP projects, mainly in Abu Dhabi. The identified three CSFs classification includes: planning stage factors, PPP structure factors, and environmental factors. Planning stage factors and PPP structure factors are considered controllable factors. Meaning that Abu Dhabi government organizations can enhance the efficiency of those factors. But the economic environment factors are uncontrollable.

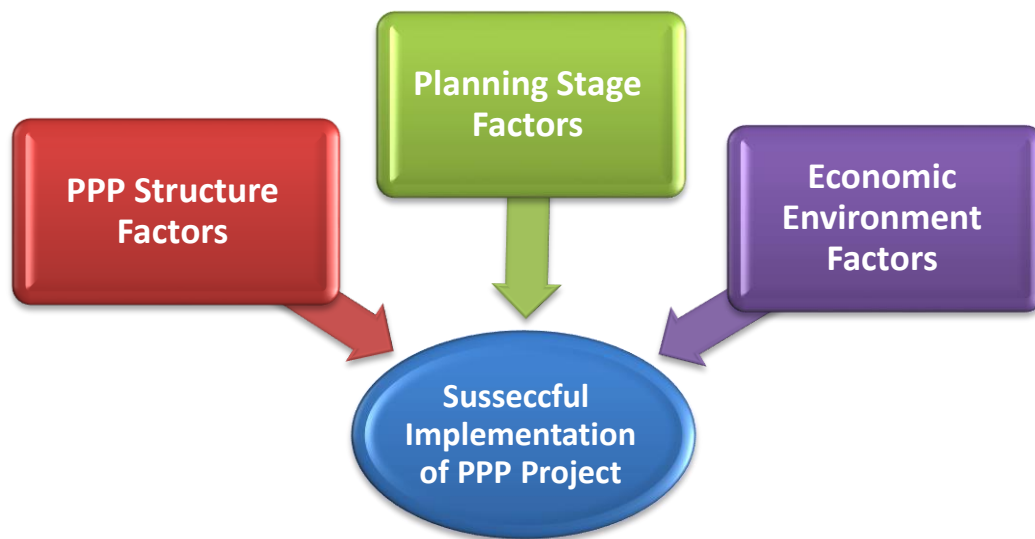


Figure 1: Overview of the Categories of CSFs

Below section discusses in-depth each category along with its sub-elements

4.2.1 PLANNING STAGE FACTORS

Those are the once being measured for during the planning stage of each project. This falls under the realization that effective planning processes in place would contribute into delivering success to PPP project. The below factors are demonstrated and discussed through evaluating the success of several PPP projects in the Emirate of Abu Dhabi. The data presented and discussed is a result of data collected in the literature review and the discussions with the participants who contributed into this research.

4.2.1.1 STRONG PRIVATE CONSORTIUM

Chan et al. (2010) identifies strong private consortium aspect to constitute attributes like private sector competency or skills, experience, productive partners' relationship, and appropriate technical know-how. Essentially, strong private consortium directly influences the success of PPP projects in any country (Jefferies et al., 2002). These favorable planning stage factors have been identified by Jefferies

et al. (2002), as the major foundation for the successful procurement procedure under the PPP approach in regions where the client or the concerned government have little experience on how PPPs projects are effectively managed. In order to clarify this view, the research identified three PPP projects as executed by the UAE federation regions. In 2001, Abu Dhabi executed project A where ADWEA aimed at have an existing power plant expanded to over 1,430MW capacity, and about 385million liters by volume of clean water supplied daily to the households.

The 4-year project worth Dh5.52019 Billion was publically procured and following successful open bidding by global private operators, only two qualified private firms won the contract. As learned from the advisory team, the two firms engaged in the consortium had a verifiable positive track record in completing major projects in GCC region. The consortium acted as an integral negotiation party with ADWEA as the client. From records in executing similar projects, the consortium exuded reputable professionalism, and invaluable experience in delivering water and electricity related plants projects under PPP. The project team also indicated that the consortium team had great capacity in managing tasks, organizing project phases, and prioritizing the project requirements within the defined financial budget. Based on such strong consortium attributes, project A was successfully delivered by early May, 2003. As documented by Bovaird (2004), the ability by the consortium to manage, and organize key project tasks or requirements enhances efforts in preventing unnecessarily budgetary overruns.

Further, Project B aimed at upgrading Zayed University by establishing a modern campus institution in Abu Dhabi, attests to the strong consortium claim as an indispensable CSFs in executing PPP projects across UAE. Project B was to be completed following strong partnership between Abu Dhabi Education Council (ADEC), and Mubadala; a private sector. The completed project at a budget of over Dh3.7Billion saw the campus accommodate over 6,000 graduate and undergraduate students, after its launch in 2011 final quarter. As derived from ADEC executives, the modern Zayed University campus was realized as the involved consortium exhibited responsibility and professionalism, and realistic management of the

projects costs, and shared duties. In fact, as Li et al. (2005) supports, an indispensable CSF in realizing any PPP project entails the perceived strong relation between the client and the private-sector, that essentially enhances the responsibility and commitment by the consortium team. From project B, ADEC and Mubadala have a strong relationship; an aspect that saw the realization of the new Campus as scheduled, and as per the defined quality standards.

Finally, under transportation sector, strong consortium CSF is mainly attained by defining higher delivery standards by the bidding parties. In UAE, this is realized during public bidding procedures under open bidding, where the key qualifications, skills, and experiences thresholds are well defined by the client. For instance, 2010 Project C, a 1,500Km Railway network PPP project budgeted at over Dh40Billion projected is reaping success due to strong consortium factor. The resulting network aimed at connecting all seven Emirates across the region, and particularly link UAE to Saudi Arabia by stretching through Ghweifat city towards Oman. The project which was procured publically via open bidding was limited to experienced and skilled consortium team, as mandated under the pre-qualification requirements. Although other CSF factors played a vital role in the initial stage of the project under BOOT plan, strong consortium as strengthened by a local bank which acted as the major adviser to the client, helped in averting other inherent project risks. Senior director of a government authority argues: "Private consortium teams should be drawn locally, and internationally engaged in competitive bidding procedure, and be evaluated on technical knowledge, control and management competencies, and risk management skills". Indeed, through the collected data and the discussions with senior managers, it was found that this particular factor plays a crucial role in delivering successful PPP project.

4.2.1.2 PROJECT TECHNICAL FEASIBILITY

Tiong (1996); and Qiao et al. (2001) singled this CSF as vital for bidding private sector to win PPP contract. In UAE where little cases of very successful PPP projects which are infrastructural in nature can be found, project technical feasibility is deemed crucial in order to avoid risks related to infrastructure collapse, or damages. The quizzed project D meant for linking Ghweifat and Mafraq, and which

was subsequently abandoned by the government signifies the importance associated with technical feasibility of road projects under PPP program in UAE. Project D which is a 327km PPP infrastructural project was aimed at having a well designed, a standard, safe, and modernized road network in opening the UAE to regional commerce. In order to ensure project technical feasibility, Department of Transport (DOT) aimed to use BOOT model with the winning consortium team being required to be fully responsible for operating and maintaining the already upgraded highway, and adhering to the set stringent performance standards in relation to quality, availability, and safety for 25 years concession term. Using an extended concession period allows the client to evaluate the particular project's technical feasibility by ascertaining the significant contributions made by the consortium in averting or containing the completed project risks and dangers that may adversely affect the end-users or the public.

In addition, UAE, particularly in Abu Dhabi appear to highly rate the idea of project's technical feasibility prior to having any PPP project on full use. For example, project E where Abu Dhabi has initiated the construction of clean energy plant, places this CSF at the top ranked aspect in defining the possible outcome of the final project. The PPP Project E commenced in mid-2003 and completed by early July 2007, with the winning consortium accounting for 40% equity ownership with the government securing 60% via ADWEA. A director in energy authority states that the energy and water desalination project valued at AED7.7Billion, was put under concession for about 23 years to enable the government evaluate the effectiveness of the expanded plant facility, and the quality services availed by the consortium. Indeed, the technical feasibility aspect allows the government to make observations on the plant's operations, and progress; thus supporting the CSF role in ensuring success of PPP projects in developing economies.

4.2.1.3 TRANSPARENCY AND COMPETITION

Chau et al. (1999) attributes transparency and competition to the utilization of open bidding, and creation of public-private relations, and goodwill by the local community. Some cultures in the Middle East may appear skeptical of foreigners

taking over the private sector, and more so, by securing tenders that may equally benefit local firms. Therefore, as Zhang (2004) notes, to allow fair ground in securing various PPP projects for infrastructural developments, the public-sector though government authorities has the culture of engaging competitive bidding, and transparency in the entire process in order to possibly have the best or the highly competent private operator secure the tender. From the interview reports developed from semi-structure questions in gathering valid information on this CSF, it is evident that transparency and competition as an integral CSF in realizing PPP projects is mainly pegged on the need to engage qualified, and competent consortium in building, maintaining, and operating mega structures or projects. For instance, the significant role played by transparency and competitive bidding is evident by the November 2011 project F where Abu Dhabi aimed at expanding the existing terminal facility. The project valued at \$2.9billion or AED10.6Billion was secured under PPP approach, with only six contractors who constituted the consortium winning the tender. As Zhang (2004) posits, construction related projects secured under PPP must undergo through rigorous process in order doing away with the consortium team whose past experiences in related project is hard to ascertain. Transparency has to do with keeping all parties involved during the execution of the PPP project informed, and educated on PPP issues that may jeopardize the project realization timeframe or defined standards of quality. Below table demonstrates the mechanism of those factors:

Table 2: Summary of the Mechanism of PPP Structure Factors

Planning Stage Factors	
Strong Private Consortium	The consortium team entails the financing bank, the private investor or developer, and the government as the project's client. A strong relationship among these partners facilitates key financing, planning, and execution decisions that make it possible to execute PPP project. The financing institution or bank is tasked with the responsibility of availing sufficient lending, under affordable interest rates, making it possible for the private developer to acquire adequate project financing.
Project Technical Feasibility	This aspect relates to the perceived technical suitability of the delivered project. The project's scope, timeframe in delivering, and complexity tends to affect the delivery of PPP projects. Impossible projects are characterized by poor planning, incompetency by private sector in managing project scope, and adhering to defined project's standards.
Transparency and Competition	Transparency affects public-will towards the project right from the bidding procedures. If open and genuine procedures are followed by engaging competing bidders, then the project succeeds without any halting. Project halting occurs when bidders or general public move to court in objecting the procedure used in selecting the most capable private sector in delivering the project.

4.2.2 STRUCTURE OF PPP IN EACH PROJECT

4.2.2.1 APPROPRIATE RISK SHARING AND ALLOCATION

According to Dulaimi et al. (2010); Zhang (2005); and Chatua et al. (1999), identifies major PPP projects risks to constitute those inherent risks handled by private consortium in constructing, designing, and operating the delivered project, and those risks associated with finance and economic risks shared by the public-sector. Zhang (2004) indicates that risk sharing and appropriate allocation among the parties involved in the realization of any PPP project narrows down the perceived cost on whole-life project maintenance, and the economic related costs that overruns some mega-projects. In UAE, risk sharing has been brought into right during the completion of three major infrastructural projects; executed under BOOT PPP model. From project F; a case study in context saw the Abu Dhabi realize an upgraded desalination projects to allow the Municipality attain a 157MGD and 2,200MW thresholds. Under this PPP arrangement, the Abu Dhabi leadership introduced the idea of risk sharing between the public-sector, and the selected private consortium.

Towards the completion of the project, the public-sector would assume 70% to the total cost in realizing the project, while the private consortium assumed about 30% cost commitment. In the concession arrangement, the government was to inject some financial support via the Islamic project financial tranches, in supporting the private sector efforts to contribute the realization of vision 2030 goal as driven by ADWEA body. The project which saw the old plant retired by 2008, attracted consortium team from Japan, and local banks who financed the initial phase of the project, which is expected to be fully completed after 8years. According to Privatization Director at ADWEA, the risks shared includes the initial capital investment or cost outlay, the operational costs for the eight years, and related maintenance costs during the entire concession period. This idea is well supported by reviewed literature where Dulaimi et al. (2010); Zhang (2005); Chatua et al. (1999), Akintoye et al. (2000); and Weiermair et al. (2008), documents project management risks, operational risks,

design, and construction related risks, as very instrumental in defining the success of any PPP project on global scale.

Further, there is a project G; an electricity and water project situated in Abu Dhabi some 60kilometres, and which saw a local private firm secure the contract by year 2005. In the project, risk sharing and allocation saw the concession team enter into some SPA or Share Purchase Agreement with the government in delivering the 50MIGD and 710MW project by mid-2007. Under the SPA, the risk in owning and operating the project under the concession agreement necessitated that the private consortium own about 94% rights under BOOT with ADWEA securing a 4% stake. According to senior manager of this project, the success of this Tawelaah project was credited among other CSFs to appropriate risk allocation or sharing right from design to completion time. Such statement confirms Akintoye et al. (2000); and Qiao et al. (2001) conclusions that, risk allocation is vital as this CSF allows competent and equipped party to assume risks that they can comfortably handle and manage at minimal overall costs or lowest costs which in long-run does not increase the project's cost-outlay.

In addition, as learned from project H which was launched by ADWEA, and awarded to an experienced global private consortium, risk sharing proved indispensable in contributing to the evidenced success of the project which was valued at \$2.8Billion. Project H was aimed at delivering a total of 100MIGD of fully desalinated water, and 1,500MW power, and was awarded under concession partnership where the private consortium enjoyed 40% stake with ADWEA assuming the 60% stake. The director managing the project states that this form of sharing stake sets an ample platform where operational, design, and all risks associated with plant maintenance costs were shared amicably. Indeed, risk allocation should be done on strategic approach with each party assuming substantial risk share as per the competency in containing the inherent project's risks right from the PPP project initiation phase. Further, the government entities has realized the fact that under PPP approach, the risks are being allocated upon the "best" party can manage them and not only to private sector. Here, the risk terminology should be

clear enough that it's all about partnership in sharing the risks between both the private and the public entities.

4.2.2.2 GOVERNMENT GUARANTEES

Zhang (2004); and Mathias and Legros (2005) portrays government guarantees through financial support or fiscal policies does offer an opportunity for the private consortium to enjoy increased or stable revenue streams, and more borrowing avenues as lenders or investors have confidence to advance credits to the concessionaire(s). There are a number of PPP projects that have been a success in UAE due to unfailing and favorable government guarantees. For instance, in realizing the 10-year old long Strategic Plan under the Abu Dhabi Education division, the ADEC acting in the capacity of the Abu Dhabi government introduced the guarantee approach as an effort to attract reputable global educationists and investors to partner with the ministry in availing quality education.

The ADEC education project under the PPP arrangement facilitated the success of the project by introducing the 'availability demand' concept; by which ADEC targeting to provide permanent and constant payments during the concession duration to the private sector regardless of the number of students that would accommodate the university. This has created a special structure of PPP in Abu Dhabi that will guarantee profitable incomes for the private sector willing to participate and allocate this risk to best can manage it, the public sector in this case. The \$35million ADEC PPP project as piloted in Al Gharbiya and Abu Dhabi became a success as the government had committed enough guarantee support systems to supplement the private-sector contribution. These statements are in line with Riess (2005); and Li et al. (2005) study results where government guarantees were found to substantially contribute to the success of various PPP projects.

Further, from project I, where Abu Dhabi aimed at supporting the private sector in the completion of a 246KM long gas pipeline running from Taweelah to Qidfa, the government guarantee via Islamic finance tranche supported the private consortium capacity in completing the gas project by 2009. The government chipped in some

tranche and financing support by engaging local financial institutions in supporting the private sector to complete the gas pipeline project with estimated value tolling at over \$3.8 billion. The results from this project analysis confirm Zhang (2004); Riess (2005); Li et al. (2005), Mathias and Legros (2005) that government guarantee determines the level of involvement by the private sector in terms of financial institutions, and private consortium in taking a pivotal role during PPP project construction.

4.2.2.3 COMMITMENT AND RESPONSIBILITY

Zhang (2004); and Chua et al. (1999) associate this CSF with the perceived duty role or responsibility that all parties involved during the design, and realization of any PPP project ought to undertake. However, from this study, very little information has been documented in regard to commitment and responsibility from PPP project parties, with Dulaimi et al. (2010) study failing to even rank this CSF as a fundamental consideration for successful project realization in UAE. Observers state that, commitment and responsibility is not such a crucial CSF but in order to successfully oversee the completion of any PPP project, it is vital to perfectly manage the relationship. In fact, UAE would reap the key PPP project benefits by influencing commitment spirit not only with the project's Special Project Vehicles (SPV), but also with project steering boards or the private firms.

From this study finding it is certainly evident that both human capital and appropriate financial assessment analysis would enhance efforts by UAE in creating an appropriate environment for the private sector to support economic growth by taking part in PPP projects. Of great significance is the idea of financial forecast, which in most PPP projects' planning is often treated as pure 'commercial-in-confidence' endeavor. This can be realized by having some financial forecasts made by either the public-sector or even the private consortiums have the capacity to withstand thorough public scrutiny. However, the major obstacle that UAE needs to overcome is to have PPP legislation in place to govern the perceived level of commitment and responsibility from the parties involved in having a successful PPP project. The above ideas are in line with Chua et al. (1999) results where every party involved in

the execution or planning of PPP project should exude commitment and responsibility by building productive relationship based on win-win attitude.

4.2.2.4 WELL-ORGANIZED PUBLIC AGENCY AND TEAM CAPABILITY

Grant (1996) concluded that, the consortium team, along with the project client, managers, and the financier or sponsors should have the capacity to engage in productive negotiations, and delivery of the PPP project. Based on the empirical data and discussions, in UAE this CSF has been slowly entrenched as the region gradually continues to make efforts in familiarizing with the complexity that comes along PPP procuring procedures. Nonetheless, as evidenced by Project J; a NEP or Nuclear Energy Project valued at over \$20billion, negotiation skills and professionalism in completing PPP projects remains a CSF if megaprojects are to be realized successfully.

During negotiation phase, the UAE leadership engaged some global expertise who much PPP procurement know-how or experience to inform ADWEA their significant role during the PPP execution procedures. Project J whose final quality measures were termed as ‘gold standard’, attracted strong private-consortium team with vast experience in delivering such a large NEP; one of its kind in the entire of UAE. The aforementioned results are backed-up by Zayed and Chang (2002) findings where team capability and well-organized public agency with appropriate negotiation skills, management skills, and project execution competencies directly influences the success of PPP projects; particularly those from construction industry. As supported by the study outcomes, UAE has less experience in the execution of tedious and complex PPP projects. Hence, the public agency should engage consultants with much-needed knowledge on this new procurement approach prior to taking part in any PPP project negotiations. The table below summarizes the mechanism of the PPP structure factors.

Table 3: Mechanism of PPP Structure Factors

PPP Structure Factors	
Appropriate Risk Sharing and allocation	Projects involve financial, market, and execution risks which if poorly managed may cause project failure. Sharing such risks among the private consortium team-members reduces the chances of project failure as no one single partner bears the burden of all PPP project's risks.
Commitment and responsibility	There are situations where a single project developer takes up more than one PPP project, and seeks to handle such projects simultaneously. Obviously, executing more than one project at a go would result in divided attention, and lack of commitment in delivering quality standards. In most cases, such projects fail due to poor planning, and lack of responsibility in meeting the required project thresholds.
Well-organized Public agency and Team Capability	Organized public agency sets the platform for the realization of projects as the private-sector has less consultation to make regarding the project demands. If less challenging protocol is set for the private sector to follow when consulting the client or public agency, it becomes much easier to realize the project in time. Also, experienced public-agency has the capability in advising the private-sector on the best financing options in the market.

4.2.3 ENVIRONMENTAL SUCCESS FACTORS

4.2.3.1 ECONOMIC VIABILITY

Tiong (1996) identifies economic viability aspects, and stable macroeconomic conditions like availability of lenders or financial institutions, appropriate taxation on private consortiums, and currency stability as major CSF sub-elements which define the ultimate success of any PPP project. UAE is generally a wealthy-nation endowed with vast natural energy resources which contributes a lot in supporting of the private sector in meeting the projected infrastructural projects. In terms of currency stability, AED is relatively stable compared to other MENA currencies or those of developing nations, unless during global recession periods where every currency value dwindles.

Thus, the stability of the AED and the increased establishment of various financial institutions; both from local investors and global financiers, has been instrumental in building appropriate sources of borrowing for private consortium during PPP project execution. For instance, borrowing from previous project B; Zayed University campus construction, the then Islamic financial opportunities saw the private sector easily secure in tune of AED520Million or about \$142Million financed via the Islamic finance tranche. Non-Islamic or the conventional debts have been vital in supporting the private consortium capacity to finance PPP projects in the education, transportation, construction, and the power and water sectors. In fact, in the lead there has been Commercial Banks, and Islamic financial lenders who avails monetary support at manageable financing arrangement. The UAE government in its part of promoting PPP procuring has been very supportive in having appropriate lending policies under the Islamic financing model. Therefore the results here confirm to Akintoye et al. (2000); and Chang et al. (2005) study results; where economic viability dimensions like availability of affordable borrowings, and stabilized currency power as vital in driving the success of PPP projects where the private consortium seeks local financial institution funding.

4.2.3.2 SOUND FINANCIAL PACKAGE

Dulaimi et al. (2010); and Chan et al. (2010) identify various forms of affordable borrowed finances, with repayment structures or interest that is very minimal. Where funds borrowing is done at low interest rates, and flexible repayment schedules, the private sector tend to appear more flexible in securing funds through non-Islamic debts like long-run debts or loans. From the study, UAE appear to literally capable of creating leeway for the debt seekers to acquire funding with less stringent regulations, and documentations as usually the case with western nations. Further, as learned from project G; the upgraded power and water plant in 2005, UAE has solid approaches in supporting private sector secure quick and repayable loans for meeting the initial project's capital.

Such statement does confirm Grant (1996) study conclusions where if sound financial packages are availed in form of affordable financing by use of sureties, debts, mezzanine finance or even equity financing does support the successful completion of PPP project. According to a AD Islamic bank manager, the private consortium across UAE do not suffer a lot of difficulties in securing government support in form of facilitated loans or debts as Islam financing tranche does have appropriate provisions that support such endeavors. Nonetheless, UAE should entrench new regulations that seek to create appropriate way to govern extended borrowings in situations where the PPP concession duration may be in excess of 25-30years.

4.2.3.3 ABU DHABI VISION 2030

The Vision 2030 pillars of economic development or growth appear as the sole drive towards the witnessed adoption of PPP in delivering public services or infrastructure. Department of Planning and Economy (2008) envisions nine-pillars where the first pillar defines the Abu Dhabi government commitment in supporting and empowering private sector in contributing towards economic development. The current Policy Agenda as envisioned under the 2007/2008 document is fully committed in ensuring major public services or resources get availed by private

sector. In fact, Abu Dhabi has well enshrined strategies that aim at optimizing the government duty or role in facilitating public service efficiency or accountability during public service delivery by engaging the private sector. Further, Abu Dhabi under the vision 2030 is focused in ensuring safe and dynamic economic development around education, transportation, and public service sector. Currently, the establishment of DoT Master Plan in developing safe, standardized, and modern road networks by engaging the private sector has been a positive stride towards attaining the objectives of adopting PPP across UAE. In addition, the ADEC strategic plan on 10-year basis has been yet another indication of Abu Dhabi commitment in adopting PPP procurement approach in ensuring quality, and timely project delivery. Also, Abu Dhabi government has well established extensive review on all departments, structures, and processes, by introducing e-government initiatives, elimination of non-core services, and streamlining public service delivery, Director at Urban Planning Council. In the processes or structures review, Abu Dhabi government aims at developing new PPP legislative framework in enhancing private sector participation (Department of Planning and Economy, 2008). Thus, the Vision 2030 remains a CSF which will define the role that private sector will play under the 22year economic strategies in realizing comprehensive economic growth across all sectors.

Table 3: Mechanism of PPP Structure Factors

Economic Environment Factors	
Economic Viability	For successful projects realized, the costs ought to be lower enough to allow the private-sector enjoy higher revenues. If economic factors like higher taxations, higher interest rates, and unstable currency prevail, the private-sector is likely to shun away the bid to complete projects in such regions.
Sound Financial Package	Favorable financial supports in terms of appropriate borrowings, and non-debts financial sources assists private-sector in affording the project. If the PPP projects are affordable, the project is delivered without any delay
Abu Dhabi Vision 2030	In UAE, vision 2030 defines the projects that ought to be realized in transportation sector, education, IT, and health division under PPP procuring. Such projects supported under the vision 2030 may gain government and public support making them very successful

5 SUMMARY AND CONCLUSION

5.1 GENERAL SUMMARY

This analytical study was premised on the purpose of using UAE's experience with PPP, in surfacing the key objectives and CSFs that influences PPP projects within UAE. Thus, the study aimed at evaluating Abu Dhabi experience in employing PPP procurement approach. Further, the study envisioned objectives focused at determining the actual role played by PPP procurement approach across UAE. Additionally, the study aimed at surfacing the objectives or the rationale behind UAE interest in adopting PPP. Further, the study availed the key success factors that affects or influences PPP experience in Abu Dhabi. The final objective was to analyze and discuss how CSFs influences various UAE PPP projects.

In attaining the aims and objectives, the study made significant findings in availing various CSFs that UAE ought to consider in realizing projects. The study proved vital in offering the academic world with the right view of UAE intention in adopting PPP procurement technique. In essence, the study findings laid a solid foundation in furthering related or similar studies staged for ascertaining key CSFs for modern PPP projects, and perceived influences for adopting this new technique in UAE public sector. Also, the government and policy makers would possibly use the vital information availed via this study in drafting best strategies in delivering PPP projects across the UAE federations devoid of registering any failures.

In order to offer this value additional information, the study used qualitative approach in availing analytical information on both CSFs on the PPP projects, and objectives for UAE's interests. Employing qualitative approach was driven by the view that UAE had limited awareness of using PPP approach in delivering projects and, thus, few populaces would be used via primary data collection. Further, the study was faced with the challenge of having vast source of information from scholarly materials in relation to the use or experience of UAE in employing PPP procurement approach. Also, the sourced information tentatively appeared to avail scanty knowledge on how UAE has been using PPP approach in delivering various projects since early 1990s.

In sampling the source of intended data/information, the rationale was to use recent, valid, and indispensable projects information from educational sector, transportation sector, power and water, and health sector. The sourced information was drawn from literatures touching on the progress of PPP projects since 1980s, and the UAE experience thereof. However, the study sampled some consultants with valid experience in PPP usage in realizing projects in public sector domain. Interview procedures using a semi-structured questionnaire were used in availing required empirical data. During the interviewing procedures, the posed questions were open enough to invite the participants without necessarily limiting the contributions made by the sampled participants in terms of new ideas, and thoughts. The complied data was then subjected to analytical discussion in a view to signify the actual scenario of PPP within the UAE, and the interviewees' views on UAE experience in creating enabling conditions for using PPP procurement technique.

In addition, the interview questions used were structured under two main categories: the objectives for adopting PPP approach and the perceived CSFs that tend to influence the delivery of any PPP projects in Abu Dhabi, UAE. Finally, the study preserved the anonymity or confidentiality of the involved participants as required under ethical views of interview process. Participants were required to use anonymous names, and professional calls when engaging in the interviewing procedures. Also, the participants were required to adopt similar anonymity in order to avoid situations where some projects may be somewhat biased for adopting PPP strategy.

5.2 CONCLUSIONS

The key conclusions of this research are as follows:

The objectives of adopting PPP approach in delivering public projects in Abu Dhabi were revealed and discussed; those objectives are divided into two categories: (This answers research question number 1 & 2)

❖ The first category is economic and financial objectives; those objectives are:

- **Economic Growth**
- **Cost effectiveness & Value for money**
- **Maximizing revenues & government assists:**

❖ The second category is the level of quality objectives; and those objectives:

- **Quality of public service provided**
- **Liability and security of service provided**
- **Function focus**

Those conclusions are discussed fully below.

Further, to satisfy the research's objectives, this study has identified and analyzed nine critical success factors (CSFs) that are believed to influence PPP projects' outcomes in Abu Dhabi; below are the CSFs: (This answers research question number 3)

- Strong Private Consortium
- Project Technical Feasibility
- Transparency and Competition
- Appropriate Risk Sharing and allocation
- Commitment and Responsibility
- Well-organized Public agency and Team Capability
- Economic Viability
- Sound Financial Package
- Abu Dhabi Vision 2030

This concludes the key objectives and answers the research questions. Below are in-depth conclusions about the above mentioned objectives and CSFs.

Under the economic and financial objectives, the objectives derived from the data analysis were analyzed and ranked based on their importance in Abu Dhabi experience with PPP procurement strategy. First, adoption of PPP within UAE is driven by the desire to lessen or share the infrastructure budgetary burdens in a view to bolster economic growth under the region's vision 2030 mandate, and under Abu Dhabi Plan-2030. The results signifies that big spending infrastructures like road networks, and education sectors have seen UAE adopt PPP approach as an attempt to lower government's spending across periods. Second, VfM or value for money and cost-effectiveness influenced the desire to adopt PPP procurement approach in delivering road networks, health-sector, and, power and water projects. This objective was considered fundamental by all sectors, with the need to create ROI value for investors, and reduce costs involved in either maintaining or meeting projects capital-outlay. Third, UAE adopt PPP procurement as mode of maximizing revenues, and governments assists in support of economic growth via private sector. This objective was sated very important factor, as the government continues using Islamic financing tranche, and borrowing leverages in supporting PPP projects. Moreover, UAE is driven by the desire to avert constrained or limited funding on various projects within the public sectors. This objective is not given much priority as traditionally, UAE which is immensely wealth nation does support major projects from domestic funding. (See also section 4.1.1 page 35 for more illustration)

Under, the level of public services category, UAE opt for PPP approach in order to avail quality services. This objective revealed as UAE aims at keeping with the need to avail quality services for the ever growing population. The crucial PPP models employed in delivering quality projects include: BOT, BOO, and BOOT, where the concession periods allow the full participation of private sector in delivering quality public services in water and wastewater operations, health division, and educational sectors. Further, UAE ranks security in project delivery, and liability therein when availing public services as a main objective in adopting PPP method in public sector circles. The crucial PPP models employed in delivering quality projects include:

BOT, BOO, and BOOT, where the concession periods allow the full participation of private sector in delivering quality public services. Further, the concept of "function focus" has emerged in Abu Dhabi as a mean to enhance the quality of the performance of particular government organizations. This is achieved by focusing its human resources on its main functions rather than managing construction projects, for example. When adopting PPP, the government entity can focus on its pure function and leave the management of the project to the consortium as there are warranties that the consortium will deliver good quality. (See also section 4.1.2 page 42 for further discussions)

UAE PPP projects are influenced by three categories of critical success factors CSFs derived from this research namely: planning stage factors, project's structure, and environmental success factors. In Abu Dhabi PPP project's experience, planning stage factors entails: strong private consortium, project technical feasibility, and transparency and competition factors. The successful completion of any PPP project is influenced by strong private consortium factor where attributes like private sector know-how, skills, competencies, and effective partners' realizations, do affect the realization of PPP projects in UAE. PPP projects from UAE's transportation sector, power and water projects, and education demands for strong private consortium for successful project completion. Further, strong private consortium in UAE PPP projects have seen private sector attributes like ability to manage project's risks, resources, and partners relationship as the leading CSFs which directly influence project success. (See section 4.2.1.1)

Additionally, UAE PPP projects are greatly influenced by project technical feasibility which remains an indispensable factor during private sector bidding procedures. Project technical feasibility is the highly rated CSFs in defining the possibility of having any PPP project to completion. This is evidenced by the concession period considered during contractual arrangement drafting with the UAE government where major infrastructural projects have extended period in excess of 20 years to allow ample time for evaluating the private consortium technical capacity. To some degree transparency and competition does play a pivotal role in shaping the success of PPP projects across UAE. This CSF, though lowly rated, tend

to affect project completion as per defined thresholds by allowing public participation during open and competitive bidding procedures where the only competent, skilled, experienced, and private sector bearing the needed technical know-how in delivering the project get to be considered. (See sections 4.2.1.2 and 4.2.1.3)

Further, under PPP's structure on each project, UAE tend to value CSFs like appropriate risk sharing and allocation, government guarantees, commitment and responsibility, well-organized public agency and team capability. In UAE, appropriate risk allocation or sharing among the consortium parties, and between the client increases the possibility of seeing the project to completion without delays, higher costs due risks involved, and as per defined timeframe. In UAE, PPP projects ownership is shared between the consortium and the government under a given percentage under the concession period. The UAE PPP projects sampled evidenced that risk sharing and appropriate allocation has resulted to successful project completion. Further, UAE does realize success in PPP projects due to assured government guarantees as supported by the current financing policies, enabling borrowing leverages, taxation leverages, and financial tranches availed to private sector. Guaranteed financial supports via lending avenues to private sector have greatly influenced positive results on megaprojects. For further discussions, read section 4.2.2.1

Also, the results indicate that UAE does rank commitment and responsibility is the second rated CSF. Under this CSF, ability to see the project through turbulences, manage the relations with all parties involved, and appropriately handle financial assessment analysis for effective project completion. In addition, PPP projects success lies on the resulting relations from well-organized public agency, as well as team capability in terms of project execution competencies, management, and appropriate negotiation skills, during the initial stages of the project execution. However, as UAE continues to battle with its way in attained the needed knowledge to manage PPP projects, this CSF appear as pertinent in defining the competency that strong private-consortium team ought to exude. Nonetheless, UAE does appear to lack the much needed political support in terms of legislation or PPP procurement

frameworks; thus negatively resulting to abandoning of some major transportation PPP projects. See section 4.2.2

Under the environmental success factors, UAE tend to rank sound financial package, economic viability, and Abu Dhabi vision 2030, are indispensable CSFs for realizing PPP projects. Economic viability in UAE PPP project environment entails factors such as currency stability, availability of lenders, and favorable taxation policies. The UAE in line with economic development agenda has favorable economic conditions to enable private sector participate in infrastructural developments. This enabling environment has allows private sector to made significant contribution in the improvement of education, transportation, and service sectors in UAE. The other most important CSF is, and has been the sound financial packages availed by the UAE government. In fact, through the nature of UAE Islamic funding, and various financial tranches has made it possible for private sector to easily realize projects under PPP procedures. Finally, from the study results Abu Dhabi vision-2030 is belatedly the final CSF which under the operational 2007/2008 Policy Agenda has envisioned the role that the government should have in supporting PPP procurement, and private sector participation in economic development endeavors. This CSF does auger well with the exuded commitment by UAE government in streamlining quality, safe, and standardized public service or infrastructure delivery. Further discussions can be found in section 4.2.3

5.3 STUDY LIMITATIONS AND RECOMMENDATIONS

5.3.1.1 LIMITATIONS

The study faced limitation when targeting the right sample populace to offer valid information in the UAE PPP projects' context. Securing the right blend of participants from both private as well as public sector was both tedious, and time consuming. Also, given the nature of the interviewing process, and audio recording of the data, it was pretty challenging to identify those participants with great understanding on PPP procuring, and the experience on how PPP projects are managed. This is because, UAE has little background on PPP procurement usage,

and relying on the locals from private sector to offer valuable information possibly did compromise the reliability of the findings. Also, the smaller sample considered may possibly have caused low results validity as the generalized information may fail to fully reflect on UAE experience with PPP procuring procedures. Another challenge emanated from using the availed literature materials on UAE experiences with PPP procurement techniques on various projects in early 1990s. This challenge was mainly attributed to lack of scholarly commitment, and available database library with well documented research data on UAE practices under the PPP procurement model.

5.3.1.2 SUGGESTIONS FOR FUTURE RESEARCH

First, future research on this subject area ought to consider engaging a relatively larger study sample in averting the possibility of compromised findings validity and reliability. Second, rather than just concentrating on CSFs and rationale behind the use of PPP approach in delivering project within UAE project; future researches should also focus on the appropriate legal framework and the role of political support in facilitating the success of PPP procuring strategy in project delivery. Further, instead of using open-ended questions only and semi-structured interviewing procedures, future researches should endeavor to employ both focused-group, and Likert scale or rating on responses on a well-structured questionnaire. Further, it is advised that researchers investigate in-depth the mechanism of the CSFs and how it influences the outcome of PPP projects. This paper has revealed some information about the structure of PPP adopted; the researcher believes that this subject is worth conducting a research on.

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