

**The impact of stakeholder integration on large-scale,
innovative PPP infrastructure projects**

تأثير تكامل أصحاب المصلحة على المشاريع الابتكارية الضخمة: الشراكة بين القطاع
الخاص والعام لمشاريع تطوير البنية التحتية

by

HOORIAH AHMED ALBALOOSHI

A thesis submitted in fulfilment

of the requirements for the degree of

DOCTOR OF PHILOSOPHY IN PROJECT MANAGEMENT

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Abstract

Public-Private Partnerships (PPPs) are recognized as a viable option when procuring public services and infrastructure projects. In recent years, PPPs have become one of the most effective methods adopted by governments across the world, both in high-income and low and middle-income countries, these projects involved multiple stakeholders with varying interests and power in projects.

United Arab Emirates recognized the importance of PPP project, therefore for the country began to legalize this practice and develop policies and procedures to facilitate the government and private sectors relationships and ensure the success of PPP projects. An example of this is the cabinet resolution No1/1 of 2017 and the Local Law of the Emirate of Dubai No.22 of 2015. The thesis focused on single case study that helped to explore and define how to ensure stakeholders integration in innovative PPP projects.

PPPs have received attention from researchers and practitioners for their effects and associated risks on projects and participating parties and the crucial role of the stakeholders in PPP projects that affect project outputs, outcomes, and impacts. Much research has addressed the success factors of public and private sector projects and related challenges where a set of common factors have been identified, including stakeholder management factor. Examples of failed PPP projects indicate that some of the projects failed due to stakeholder related issues such as stakeholders' knowledge, experience, and engagement.

Despite the importance of stakeholder management in PPP projects, it has not yet received significant attention, this thesis seeks to address this gap in our current knowledge by holistically examining stakeholder integration (SI) in PPP innovative projects, as the integration of stakeholders between all parties is essential to the success of PPP projects,

especially if it is innovative. SI is determined by a set of factors that must be integrated in equal measure to ensure the success of projects and conformity to organizational requirements and objectives. In addition to the importance of spreading knowledge and benefiting from experiences through harnessing the agreements between government and private agencies to implement these projects

This study adopted qualitative research methodology to collect data through the conduct of a single case study of a cancelled PPP project based on a BOT contract in the UAE, which had been at the planning phase for more than eight years. The case study involved document analysis, participation observation, structure interviews, and semi-structured interviews with private sector representatives, members of local governments, members of the federal government, and sub-contractors and consultants.

The main findings revealed that there are factors related to the extent of integration of stakeholders in the project that affect the success of these projects, such as knowledge, skills, experience, powers & interest between government organizations according to phases of the project as well as the unified PM tools, process and procedure in governments in innovative large-scale project management. Also, the findings reveal that the absence of procedures and laws in such projects causes a large number of obstacles that lead to the failure of these projects and not to take advantage of the opportunity associated with this kind of projects.

The key contributions to knowledge included bridging the gap in the literature related to the importance of stakeholder in delivering successful PPP project by considering factor that shape the level of integration between the two parties specifically and others. In addition, this empirical study focused on SI in large-scale innovative infrastructure PPP projects, which will fill the gap of defining the impact and the importance of SI in these fields.

Based on the findings the study came up with a set of six variables that defines the Stakeholder integration: Knowledge; experience; skills; legal awareness; unified process and procedures and unified project management tools. Also the a framework was developed to highlights the required process and decision in managing PPP project in the earlier stages of the project with the case of the absence of process, law and the lack of experience, the framework was validated by industry experts to ensure that this new framework will provide local government organizations with a valuable basis for planning, implementing and evaluating the successful delivery of PPP projects.

Keywords: Public-Private Partnership; infrastructure projects; stakeholders; innovation; and stakeholder integration

Abstract in Arabic

تعتبر الشراكات بين القطاعين العام والخاص كخيار عملي لتوفير الخدمات العامة أو تنفيذ مشاريع البنية التحتية. في السنوات الأخيرة، أصبحت الشراكة بين القطاع العام والخاص أحد أهم الطرق فعالية التي اعتمدها الحكومات في جميع أنحاء العالم والتي تضم العديد من أصحاب المصلحة ذوي المصالح المتنوعة والقوة في المشاريع. يلعب أصحاب المصلحة هؤلاء دورًا مهمًا في هذه المشاريع حيث يمكنهم التأثير على مخرجات المشروع ونتائجه وأثره بشكل كبير وفي مراحل مختلفة من المشروع. أصبحت المشاريع المشتركة محط اهتمام الباحثين والممارسين لآثارها الكبيرة وطويلة الأمد والمخاطر المرتبطة بها على مستوى المشاريع والأطراف المشاركة.

أبدت دولة الإمارات العربية المتحدة أهمية لمشاريع الشراكة بين القطاعين العام والخاص، لذلك بدأت الدولة في تقنين هذه الممارسة ووضع سياسات وإجراءات لتسهيل العلاقات بين الحكومة والقطاع الخاص وضمان نجاح مشاريع الشراكة بين القطاعين العام والخاص. مثال على ذلك قرار مجلس الوزراء رقم 1/1 لعام 2017 والقانون المحلي لإمارة دبي رقم 22 لعام 2015.

حظيت الشراكات بين القطاعين العام والخاص باهتمام الباحثين والممارسين لتأثيراتها والمخاطر المرتبطة بها على المشاريع والأطراف المشاركة والدور الحاسم لأصحاب المصلحة في مشاريع الشراكة بين القطاعين العام والخاص التي تؤثر على مخرجات المشروع ونتائجه وآثاره. الكثير من الأبحاث حددت عوامل نجاح مشاريع القطاعين العام والخاص والتحديات ذات الصلة حيث تم تحديد مجموعة من العوامل المشتركة بين هذه الأبحاث، بما في ذلك عامل إدارة أصحاب المصلحة. حيث تشير أمثلة مشاريع الشراكة بين القطاعين العام والخاص الفاشلة إلى أن بعض المشاريع فشلت بسبب القضايا المتعلقة بأصحاب المصلحة مثل معرفة أصحاب المصلحة وخبرتهم ومشاركتهم.

على الرغم من أهمية إدارة أصحاب المصلحة في مشاريع الشراكة بين القطاعين العام والخاص، إلا أنها لم تحظ باهتمام كبير بعد، وتسعى هذه الأطروحة إلى معالجة هذه الفجوة في معرفتنا الحالية من خلال الفحص الشامل لتكامل أصحاب المصلحة (SI) في مشاريع الشراكة بين القطاعين العام والخاص، كتكامل أصحاب المصلحة بين جميع الأطراف ضروري لنجاح مشاريع الشراكة بين القطاعين العام والخاص، خاصة إذا كانت مبتكرة، تكامل أصحاب المصلحة يتم تحديده بمجموعة من العوامل التي يجب أن تتكامل بينهم بشكل متكافئ لضمان نجاح المشاريع ومطابقته مع المتطلبات والأهداف التنظيمية لمؤسساتهم.

تعتمد هذه الدراسة منهجية البحث النوعي لجمع البيانات من خلال إجراء دراسة حالة واحدة لمشروع شراكة بين القطاع العام والخاص في أحد الإمارات الشمالية، والذي تم إلغاؤه مؤخراً بعد ان كان في مرحلة التخطيط لأكثر من ثماني سنوات وتوقف المشروع بشكل غير صريح، حيث كما اعتمدت هذه الدراسة في جمع المعلومات عن المشروع محل الدراسة، على المقابلات المنظمة و الشبه المنظمة، والملاحظة ومراجعة الوثائق والمستندات ذات العلاقة بالمشروع مع ممثلي القطاع الخاص وأعضاء الحكومات المحلية وأعضاء الحكومة الفيدرالية والمقاولين من الباطن والاستشاريين حيث تم اختيارهم وفقاً لدورهم وصلاحياتهم في المشروع.

تكشف النتائج الرئيسية أن هناك عوامل تتعلق بمدى تكامل أصحاب المصلحة في المشروع والتي تؤثر على نجاح هذه المشروعات، مثل المعرفة التقنية وثقافة المنظمات الحكومية والاختصاصات القضائية المتداخلة والسلطات السياسية بين المؤسسات الحكومية والمصالح المختلفة وفقاً إلى مراحل المشروع وكذلك ضعف بعض السلطات المركزية في الحكومات في إدارة المشاريع المبتكرة على نطاق واسع. كما تكشف النتائج أن غياب الإجراءات والقوانين في مثل هذه المشاريع يتسبب في عدد كبير من التحديات التي تؤدي إلى فشل هذه المشاريع وعدم الاستفادة من الفرصة المصاحبة لهذا النوع من المشاريع.

إن النتائج التي توصلت إليها هذه الدراسة تعد إضافة مهمة إلى أدبيات إدارات أصحاب المصلحة وإدارة المشاريع المشتركة بين القطاع الخاص والعام، بالإضافة لذلك تم تطوير إطار متكامل لإدارة مشاريع الشراكة بين القطاع العام والخاص ويقتصر الإطار على المشروعات التي تديرها الحكومات المحلية الواقعة ضمن تنظيم الحكومات الفيدرالية والتي لا تملك الخبرة الكافية لإدارة مثل هذه المشاريع في ظل عدم توفر الإجراءات والقوانين لذلك.

بناءً على النتائج، توصلت الدراسة إلى مجموعة من المتغيرات التي تحدد درجة تكامل أصحاب المصلحة مثل: المعرفة، الخبرة، المهارات، المعرفة القانونية، إجراءات وعمليات موحدة، وأدوات إدارة مشاريع موحدة بين الأطراف. بالإضافة نتج عن البحث إطار عمل يسلط الضوء على العملية والقرارات المطلوبة في إدارة مشاريع الشراكة بين القطاعين العام والخاص في المراحل المبكرة من المشروع في حالات عدم توفر العمليات والإجراءات والقانون بالإضافة إلى نقص الخبرة. تم التحقق من صحة الإطار من قبل الخبراء لضمان توفير إطار العمل الجديد قيماً لتخطيط وتنفيذ وتقييم التنفيذ الناجح لمشاريع الشراكة بين القطاعين العام والخاص للقطاع الحكومي والخاص.

الكلمات المفتاحية: الشراكة بين القطاعين العام والخاص؛ مشاريع البنية التحتية أصحاب المصلحة؛
ابتكار؛ وتكامل أصحاب المصلحة

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Contents

Chapter 1: Introduction	1
1.1. Research background	1
1.2. Research problem and scope	4
1.3. Research aim and objectives	7
1.4. Research questions	8
1.5. Research strategy	8
1.6. Research significance and contribution to knowledge	10
1.7. Outline of chapters	11
Chapter 2: Review of large scale, innovative PPP Projects	15
2.1. PPP projects	16
2.3. Different models of PPP	25
2.3. PPP Critical Success Factors	27
2.4 Challenges of implementing PPPs	31
2.5. PPP projects and stakeholders	34
2.6. PPP projects and innovation	37
2.7. BOT contracts	40
2.7.1 Risks and BOT	42
2.7.2 CSF of BOTs	43
2.8. Public sector large-scale projects	48
2.9 Large-scale project success factors	54
2.10. Innovation	56
2.10.1 Innovation process	57
2.10.2 CSFs and drivers of innovation	59
2.10.3 Conflict management and innovation	63
2.11. Key problems identified in the literature	65
2.12. Chapter Summary	66
Chapter 3: Review of managing projects and stakeholder management	68
3.1. Introduction	68
3.2. Project Management	68
3.3. Project Management Process	74
3.4. Project planning phase and success factors	77

3.5. Stakeholder management	82
3.5.1 Definition of stakeholders	83
3.5.2 Classifications of stakeholders	86
3.5.3 Justification for stakeholder management	88
3.5.4 Roles of project partners in stakeholder management.....	88
3.5.5 Roles of project partners in stakeholder management.....	89
3.6. Stakeholder Theory	89
3.6.1 Perspectives of stakeholder theory	91
3.6.2 Dynamics of stakeholder theory	93
3.7. Stakeholder Critical Success Factors and Challenges.....	95
3.8. Stakeholder and project success	98
3.9. Stakeholder analysis.....	101
3.10. Stakeholder integration	104
3.11. Stakeholders and innovation	114
3.12. Conceptual framework	118
3.13. Chapter summary.....	120
Chapter 4: Research Methodology	121
4.1 Introduction	121
4.2 Research philosophy (epistemology/ontology/axiology).....	122
4.2.1 Epistemology	122
4.2.2 Ontology	123
4.2.3 Axiology	125
4.2.4. Research philosophy in this study	126
4.3. Research Approach	127
4.3.1. Inductive and Deductive Approaches.....	127
4.3.2. Comparing and contrasting Deductive and Inductive Research Approaches	128
4.3.3. Abductive Research Approach	132
4.3.4. Research Approach of this Study	133
4.4 Review of research methodology	133
4.4.1. Types of Methodology	133
4.5 Research design.....	158
4.5.1 Case study selection	170
4.6 Research methods and sample	173

4.6.1 Primary data collection.....	174
4.6.2 Secondary data collection.....	185
4.6.3 Data collection process.....	187
4.7 Case study data analysis.....	188
4.8 Validity, Reliability and Generalisability in qualitative research.....	192
4.9 Researcher reflexivity.....	195
4.10 Research ethics.....	196
4. 11 Chapter summary.....	200
Chapter 5: Case Study Background and Results.....	202
5.1 Background: Overview of legislation of the United Arab Emirates.....	202
5.1.1. UAE Constitution.....	203
5.1.2. Federal and Dubai legislation.....	205
5.1.3. Northern Emirate (case study).....	208
5.2 Context of the case study.....	210
5.3 HAT Background and Information.....	216
5.3.1. HAT and project stakeholders.....	221
5.3.2. HAT and innovation.....	222
5.4 Case Study Results.....	224
5.4.1 Theme 1: Project complexity and innovation.....	227
5.4.2 Theme 2: Federal, country laws and local authorities' role.....	230
5.4.3 Theme 3: Approvals and planning were inadequate.....	241
5.4.4 Theme 4: Public and private sector roles.....	247
5.4.5 Theme 5: Stakeholder integration and projects Elements of success.....	252
5.5 Chapter summary.....	267
Chapter 6: Discussion of the Results and the Proposed Framework.....	269
6.1. Overview of findings.....	269
6.2. Research questions and main findings.....	274
6.3. Proposed framework.....	286
6.3.1 The need for a framework.....	287
6.3.2 Aim and objectives of the framework.....	288
6.3.3 Proposed framework.....	288
6.3.4 Validation of the framework.....	307
6.4. Contribution to Knowledge and Implications.....	312

6.5. Relationship with Existing Literature	313
6.6 Chapter summary	315
Chapter 7 Conclusion and Recommendations	316
7.1 Conclusion.....	316
7.2 Achievement of Research Objectives	317
7.3 Recommendations	320
7.3.1 Project Practitioners.....	321
7.3.2 Government Policymakers	321
7.3.3 Organisational Executives and Managers	322
7.4 Limitations and future studies	323
References.....	326
Appendices.....	356

List of Figures

Figure 1-1 Literature review topics.....	9
Figure 1-2 Research Strategy.....	14
Figure 2-1 Basic PPP structure (Chowdhury, Chen and Tiong, 2011).....	27
Figure 2-2: Particular stakeholders of a project (Watt, 2012)	35
Figure 2-3 Framework for CSFs of BOT projects in China (Qiao et al. 2001, as cited by Yang, Nisar and Prabhakar, 2017).....	46
Figure 2-4: Innovation adoption process by Wilkening (1963).....	59
Figure 2-5: Results of regression analysis by Xie <i>et al.</i> (2013).....	62
Figure 3-1 The project management process	71
Figure 3-2 Project Management Success Factors (Radujković and Sjekavica, 2017).....	76
Figure 3-3 Stakeholder typology – One, two, or three attributes (Mitchell, Agle and Wood, 1997)	95
Figure 3-4 Stakeholder management strategy framework (Sutterfield, Stroud and Shivers-Blackwell, 2006)	101
Figure 3-5 Outline of the stakeholder power-interest grid (Ackermann and Eden, 2011)	102
Figure 3-6 Variables of successful stakeholder integration (Briola, 2015)	112
Figure 3-7 Dynamic capability underlying sustainable innovation (Ayuso, Ángel Rodríguez and Enric Ricart, 2006, p. 14).....	116
Figure 3-8 Hypothesised model for enterprise dialogue with stakeholders (Ayuso et al. 2011)	116
Figure 3-9 Perception-based innovation Approach (Lewis et al., 2007)	117
Figure 3-10 Conceptual Framework	119
Figure 4-1 Types of ontology and epistemology	125
Figure 4-2 Inductive (qualitative) research design process	128
Figure 4-3 Deductive (quantitative) research design process	128
Figure 4-4 : Framework for research (Creswell, 2014)	134
Figure 4-5: History and evolution of case study research (Johansson 2003, cited in Harrison <i>et al.</i> , 2017)	151
Figure 4-6: Creswell’s (2003) research model.....	159
Figure 4-7: Alternative knowledge claims (Creswell, 2014).....	160
Figure 4-8: Final research design by the researcher	165
Figure 4-9: Most used methods for PPP studies (Osei-Kyei & Chan 2015)	166
Figure 4-10: Participants organization.....	179
Figure 4-11: Interview Methods	179
Figure 4-12: NVivo qualitative analysis process (adapted from Dollah, Abduh and Rosmaladewi, 2017)	192
Figure 5-1 United Arab Emirates performance overview (World Economic Forum).....	213
Figure 5-2: HAT project location	220
Figure 5-3: Analysis stage diagram	224
Figure 5-4 Ways of Completing the project suggested by the participants	263
Figure 5-5 Causes of HAT failure	266
Figure 6-1: Leading causes of innovative, large-scale PPP project failure	277

Figure 6-2: Stakeholder integration variables.....	286
Figure 6-3: Framework legends	289
Figure 6-4: Proposed PPP framework to ensure the integration of stakeholders	292
Figure 6-5: Step no. 1 to Step no. 5 of the Framework.....	296
Figure 6-6:Step no. 6 to Step no. 12 of the Framework.....	300
Figure 6-7: Step no.13 to Step no. 17 of the Framework.....	304
Figure 6-8: Step no.18 to no. 23 of the Framework.....	306
Figure 6-9: Participant comments on the proposed Framework.....	310

List of Tables

Table 2-1: Definitions of PPP	18
Table 2-2: Comparison between PPP and traditional public procurement	25
Table 2-3 Critical success factors for healthcare PPPs (Abdou and Al Zarooni 2011, p.7)....	28
Table 2-4 shows the Comparison of critical success factors	30
Table 2-5: Key differences between public and private sector ERP implementation experiences (Wagner and Antonucci, 2009)	38
Table 2-6 CSFs as refined by Yang, Nisar, and Prabhakar (2017).....	47
Table 2-7: Recommendations for managing large-scale government projects (Patanakul <i>et al.</i> , 2016)	49
Table 2-8: Classification of projects/characteristics (Rudolf and Spinler, 2018).....	53
Table 3-1 Changing views on project management (Frame, 2003).....	70
Table 3-2: Square route to understanding success criteria by (Atkinson, 1999)	72
Table 3-3: Definitions of a Stakeholder, Adapted from Benn, <i>et al</i> 201	84
Table 3-4: The Normative Bases of Stakeholder Claims (Reed, 1999).....	92
Table 3-5: Ways of judging project success over different time scales (Turner and Zolin, 2012)	100
Table 3-6: Critical PE factors (Yu and Leung, 2015).....	112
Table 4-1 Assumptions by Kivunja and Kuyini (2017).....	126
Table 4-2 Differences between paradigms (Khan, 2014)	140
Table 4-3 Summary of quantitative, qualitative, and mixed methods approaches (Creswell, 2003)	162
Table 4-4 Research Design by the Researcher	163
Table 4-5 Case study questions aligned with research objectives	168
Table 4-6 4:6: Research units of analysis	169
Table 4-7 Case study selection and criteria under UAE PPP laws	171
Table 4-8 Main characteristics of the case.....	172
Table 4-9 Number of participants	179
Table 4-10 Researcher roles in participant observation.....	184
Table 5-1 Comparison between PPP law and the process in UAE and the Case Study	209
Table 5-2 HAT Project Timeline	217
Table 5-3 Distance between HAT project and other emirates	220
Table 5-4 HAT project stakeholder classification	221
Table 5-5 List of existing and new projects near the HAT project.....	243
Table 6-1 Summary of Achievement of Research Aim, Objectives and Questions.....	271
Table 6-2 Stakeholders' roles and responsibilities	290

List of Abbreviations

PPP	Public-private partnership
CSFs	Critical success factors
UAE	United Arab Emirates
SI	Stakeholder integration
MOF	Ministry of Finance
SH	Stakeholder
PMO	Project management office
EC	Executive Council
MOF	Ministry of Finance
PMI	Project Management Institute

Chapter 1: Introduction

As an introductory chapter, this chapter provides an outline of what follows in the remainder of the thesis. It identifies an important element of the thesis, including the research background, the research aim and objectives, the research questions, and the research strategy. It helps to provide an understanding of how the research was completed and what the factors were which motivated the research on this subject. The chapter also provides a summary and identifies the purpose of the entire thesis.

1.1. Research background

An increasing number of governments are interested in partnerships with the private sector to provide capital and resources for public infrastructure projects. The World Bank defines public-private partnership (PPP) as ‘a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance’ (PPP Knowledge Lab | PPP Reference Guide, 2017). The private party is responsible for project functions and its performance, such as design, construction, financing, operations, and maintenance, and has significant risk and management responsibility in comparison to the public party. Having said that, PPP projects are considered to be a long-term commitment, involving different stakeholders with different requirements and interests who have a crucial impact on the project process and its deliverables.

PPPs are used for infrastructure projects. The term infrastructure encompasses economic, social, and government fundamental facilities, services and systems, which are needed for enabling productivity, such as transportation, communication, sewage, water and electricity systems, in an economy. Infrastructure projects require large initial investments to be funded

publicly, privately or through public-private partnerships. There are various types of infrastructure projects – buildings, highways, roads, bridges, mass transit, airports, water supply and resources, waste management and wastewater management, power generation and distribution, and telecommunications.

Since the evolution of PPPs, critical success factors (CSFs) for PPP have become a major research interest worldwide; many researchers have employed the concept of CSFs to improve the understanding and the proper ways of implementing PPP policy for infrastructure development (Liu *et al.*, 2015). Osei-Kyei and Chan (2015) found that the five most common CSFs reported over the past 23 years were risk allocation and sharing, a robust private consortium, political support, community/public support and transparent procurement. Osei-Kyei and Chan (2015) also found that the number of publications on PPP CSFs from developing countries is considerably low as this concept has not yet been fully explored in these regions.

However, an examination of five previous CSFs focused on product success rather than project management success (Liu *et al.*, 2015; Hwang, Zhao and Gay, 2013). Studying project success without considering the project management success perspective can result in a low level of stakeholder satisfaction since it not only explicitly indicates the importance of process management in project success, but also performs as a communication tool for improving stakeholder satisfaction (Baccarini, 1999). Previous CSF studies cannot assist project managers in designing, implementing and managing an effective and efficient process associated with the delivery of an asset to meet stakeholders' expectations as PPPs are long-term contracts integrated with multiple stakeholders from private and public sectors in a volatile and dynamic development process. However, most of the previous studies do not consider the impact of SI on PPP projects.

PPP projects are considered to be large-scale projects that make massive contributions to society, involving infrastructure that occupies essential strategic positions in the economy and social development, especially in developing countries (Jiang *et al.*, 2018). According to the Oxford Handbook of Megaproject Management, megaprojects are large-scale, complex ventures which typically are temporary endeavours (i.e. projects), characterised by substantial investment commitment and vast complexity, and having a long-lasting impact on the economy, the environment and society (Flyvbjerg, 2017).

In spite of the considerable interest by governments worldwide in PPP, there have been few PPP projects in the United Arab Emirates (UAE). However, there is a growing interest in such projects (Dulaimi *et al.*, 2010). In 2017, the UAE cabinet issued a resolution (1/1) on the procedures manual for partnership between federal entities and private sector in order to regulate the operations and activities according to best international standards and practices to improve the quality of services through entering partnership agreements with the private sector.

The UAE Ministry of Finance (2017) defines PPP projects as a contractual relationship between one or more government entities and one or more organisations of the private sector, with a specific role integrated into one framework. To date, there has been little empirical research conducted on stakeholder integration (SI) impact on large-scale PPP projects.

Therefore, the thesis opens up a new issue in PPPs undertaken by local government which requires a high level of SI from the federal government and the private sector in the northern emirates. This integration allows the local government to deliver successful, innovative projects, which impact positively on the economic growth of the respective emirate and the UAE overall.

Fundamentally, the thesis focuses on the impact of SI on the success of PPP projects and what the other factors that affect or define the SI in projects where there are three main parties from the federal , local government and private sector. In addition to that, the research explores the current available law and procedures in UAE related to PPP projects that might be used by others according to their project type and requirements.

Therefore, it is essential to investigate the currently applied procedure in large-scale, innovative PPP projects since there is a growing interest in this method to achieve the strategic goals of federal and local governments.

1.2. Research problem and scope

Large-scale projects in which there is an innovative aspect and a different management style than what is known, will face many difficulties, especially in the absence of legislation, laws and processes that define the responsibilities and tasks of each party and how to solve the problems and obstacles to obtain the final output according to the requirements of the different stakeholders based on their objectives in the project.

Innovative, large-scale PPP projects are affected by several different and significant factors that impact all project phases at different levels, unlike small and medium-sized projects, in which the number and impact level of the relevant factors are limited. The research topic focuses on the importance of effective SI in innovative large-scale PPP projects in the UAE; these types of projects require a high level of integration between all the stakeholders. Mainly they are based on each local government's priorities within their respective emirate along with federal government priorities.

Some stakeholders have to waive their own goals to achieve the nominal goal, which may not

be the same level of interest if implemented in a way that meets the requirements of a group without the other. To ensure the responsiveness of the stakeholders, it is necessary to manage their requirements at all stages of a project and strive to satisfy them because they have a significant impact on the successful implementation of a project and because each project is always linked to a wide range of issues, relating to all parts of the government, either directly or indirectly, and due to the existence of federal and local laws, the management of such projects may face difficulties due to different laws and requirements, as federal projects are implemented in all emirates of the country that require approval and harmonization with the various requirements of the Emirates, and on the other hand, projects implemented by local governments often require A set of approvals at the federal and local levels due to the existence of common factors such as lands, services and infrastructure that connect all the emirates of the country with each other.

The problem addressed in this study is twofold: First, as will be shown in the literature review section, relatively little has been written about PPPs projects in local government, SI and the factors that affect and defines SI, considering that these projects depend heavily on the relationships between the parties and the extent of their integration. Specifically, by looking at the project management literature, one can recognise that stakeholder management is considered as an essential player in projects, as is often mentioned in articles. However, Sutterfiel, Stroud and Shivers-Blackwell (2006) point out that there is a lack of research in the field of stakeholder management process as it applies to stakeholder theory. On the other hand, Brugha and Varvasovszky (2000) note increasing references to the stakeholder and the use of stakeholder analysis in management as well. Similarly, Stakeholders of PPP projects cannot be ignored for their significant influence to determine whether a PPP project is realised (World Bank Group, 2016b).

Moreover, there is a need to investigate and identify groups of success factors for future PPP projects and stakeholder integration to create a framework that can be used in the future for large-scale, innovative PPP projects. This, in turn, could provide the project manager with methods to manage stakeholder effectively throughout a project's phases, with fewer risks and issues arising, in the UAE, especially after the establishment of a procedures manual for partnerships between federal entities and the private sector by the Ministry of Finance (2017).

Secondly, the management of PPP projects depends on a set of inputs and outputs in the environment in which the project is implemented. The classifications and types of contracts may be approved and standardized by all, but the series of procedures are not uniform and are designed according to the needs of the state or the entity concerned with the project. The lack of procedures and laws to manage these projects causes a kind of mistrust among investors, in addition to the absence of a mechanism for distributing tasks and benefiting from experiences in the project.

In UAE, The PPP procedures manual concerns PPPs between federal and private entities and can be applied at the local level in the emirates. However, the nature of the projects of each emirate is different, especially those which are in a common border area. Therefore, it is essential to know what the success factors of projects are and the role of managing SI in their success. It has standards and requirements for obtaining approvals from federal authorities, whether with regard to financial, technical or legal matters, and in comparison with the Dubai government, which has a series of other procedures, which are limited to its emirate and the requirements for implementing these projects, as there are differences in the powers of approvals and project management in addition to the subordination of the project itself.

In light of the differences in laws and the chain of procedures and approvals, these projects

face many obstacles, so it has become important to study the projects implemented in the Emirates that do not have laws and legislation to study the possibility of benefiting from other laws and experiences by looking at the reasons for the success or failure of these projects.

The scope of the thesis was identified in terms of project type, project size, local and federal government engagement in the project, timeframe, project status and issues exploring SI.

The researcher limited this research to large-scale PPP infrastructure innovative projects which are sponsored by the private sector as BOT contracts. The stakeholder groups of the project mainly represent the federal government, the local government and the private sector, having a different level of power and interest, as per the stakeholder analysis. Also, the status of the project is the planning to execution phase where it has exceeded the planned timeframe.

1.3. Research aim and objectives

The research aimed to investigate and explore the impact of SI in delivering successful innovative large-scale PPP infrastructure projects in Northern Emirates by proposing a PPP framework that can be adopted by the local government to ensure the successful integration of stakeholders on innovative infrastructure projects. (primary and secondary stakeholders)

To achieve the aim of this study, the following objectives were identified:

1. Provide a comprehensive review of existing literature relating to SI, PPP, large-scale projects and innovation management.
2. Identify the sources of misalignment between different stakeholders in innovative infrastructure PPP projects and propose solutions that can be adopted to address the misalignment.

3. Propose an appropriate framework that can be adopted by the local government to ensure the successful integration of stakeholders on innovative infrastructure projects.
4. Ascertain key PPP success criteria that can be used by the local government to achieve a successful stakeholder integration during the delivery of innovative PPP infrastructure projects.

1.4. Research questions

The main question of the research is: **‘How does the level of SI impact on delivering successful, large-scale, innovative PPP infrastructure projects?’**

To obtain an accurate answer, the researcher developed four sub-questions that need to be taken into consideration to explore the current situation:

1. What are the leading causes of innovative, large-scale PPP project failure?
2. What are the difficulties explicitly related to local governments for delivering innovative, large-scale PPP projects in the northern emirates?
3. What is the role of the constitution and laws in large-scale PPP projects?
4. What defines the level of SI?

1.5. Research strategy

The researcher followed a specific research strategy based on the nature of the case study to ensure the achievement of the study's objectives, which are discussed in more detail in Chapter 4. The implemented strategy is illustrated below briefly, and it includes three main phases, the literature review, the study approach, and data collection.

Literature review

In order to understand the impact of stakeholder integration on large-scale PPP projects, it was necessary to review the previous publications in this area. Therefore, a comprehensive literature review was conducted with the specific purpose of understanding the theoretical perspectives on stakeholder integration and its impact on large-scale projects, project management, PPP projects, stakeholder management, innovation, and BOT contracts.



Figure 0-1 Literature review topics

This review assisted the researcher with various concepts aspects related to SI and facilitated the analysis and interpretation of the case study by considering the existence of federal laws and the similarity with such projects in the UAE.

Research approach

A single case study approach has been selected as the most appropriate to achieve the research objectives. Single case study research is frequently carried out to advance the understanding of the problem or phenomenon being studied (Scholz and Tietje, 2002). The selected case helped in gaining in-depth knowledge of the topic under investigation in addition to exploring different factors that might affect managing these types of projects. The chosen case with its problem is unique because it represents the local government process and procedure of managing projects. It is considered one of the most critical projects in the last fifteen years in this emirate in terms of affecting different pillars of emirate and country vision.

Data collection

Data collection was conducted through different means, namely, structured interviews and semi-structured interviews with the concerned representatives at various levels within the UAE and abroad, participant observation involving being in the setting under study as both observer and participant and secondary data related to the project under the research and analysis of the related documents. The source of the collected data included strategic plans, operational and business plans, minutes of meetings of the associated committees and other correspondence, e-mails with internal and external stakeholders, project drawings, newspapers, reports, and videos.

1.6. Research significance and contribution to knowledge

The expected contribution of this study will be significant in the UAE in the field of large-scale PPPs, both theoretically and practically; it will provide empirical evidence and support to fill the gap of the lack of studies on SI in the public sector to manage innovative PPP projects.

On the theoretical level, the contributions of this research to the body of knowledge can be summarised in three areas, First of all, this study contributes to research in the field of PPPs second, in the field of SI in project management and, finally, in the field of innovation. For management theorists and academics, the SI theory will assist with providing a framework in managing different SH and tools that can be used in different type of projects.

On the applied side, the study will yield a comprehensive set of guidelines on the process of managing SI in large-scale, innovative PPP projects in the northern emirates in aligning with the project management procedures.

Most importantly, a full understanding of the SI impact on PPP projects in the UAE context

can help as a frame of reference for other countries in the region; especially in the context of the Middle East, wherein, to the best knowledge of the author, no similar work has yet been embarked upon in the area of SI.

1.7. Outline of chapters

This thesis is divided into seven chapters. This chapter introduces and defines the research problem and rationale: the need for and role of active SI in delivering successful, innovative, large-scale PPP projects. This chapter also includes the thesis aim, objectives, research questions and research scope, and it concludes with the potential academic and practical contributions associated with this study and the structure of this thesis. The remaining chapters are organised as follows:

- Chapter 2: Literature Review (large-scale, innovative PPP projects) – This literature review chapter focuses on project types related to the study, such as innovative projects, PPP projects and large-scale projects, to explore and identify their characteristics and other related success factors starting by defining what PPP is according to different governments or authorities around the world, such as the World Bank. Also, there is a comparison made of the success factors from different perspective and industries. The success factors were compared from among more than ten information sources, including one that included a group of articles from 1999 to 2013. It also includes a summary of common success factors related to study topics as well as essential terms in PPP that are related to the study, the BOT contracts, and associated risks for these types of contracts in infrastructure projects.
- Chapter 3: Literature Review (managing projects and stakeholder management) – This chapter provides a review of the literature relevant to project management and stakeholder management. Also, it covers the relationship between the selected topics.

In this chapter, project management and stakeholder management were defined through research on the success factors for each of them in addition to a review of Freeman's stakeholder theory from the mid-1980s, which shows what is involved in projects and how they can be analysed through the use of different tools and the role of these in adopting and diffusing innovation in projects. The chapter connects the success factors for projects management, stakeholder integration and innovation to derive the most influential and shared set of factors.

- Chapter 4: Research Methodology – In this chapter, different methods of research were defined, and the methodology of this research was chosen sequentially in connection with the purpose of this research. This chapter discusses the methodology used for this research by addressing the research philosophy, approach, strategy, design and case study, as well as grounded theory. The researcher used a case study method for different reasons, the most important of which was exploring how SI affects PPP and carrying out an in-depth analysis of a complicated issue (SI's impact on northern emirate PPP projects) to generate categories (a theory) in order to explain the phenomenon of the success of PPP infrastructure innovative projects by taking into consideration all the inputs and outputs of the data that were identified in this chapter, along with the sample ethical considerations and the research limitations of this study. Also, this chapter defines the primary criterion of case selection, such as Dubai Law No. 22 of 2015 and the MOF financial guide regarding Cabinet Resolution No. 1/1 (f) of 2017, to select the project in terms of cost, time and project approvals, in addition to the researcher criteria, which consist of three main components, including sub-elements. The first and essential elements were the size and nature of the project, the second element was the project outputs, and the third element was the current project status and phase.

- Chapter 5: Case Study background and results – In this chapter, the constitution of the United Arab Emirates and laws related to PPP projects were considered and compared to the emirate related to the case study, in addition to the UAE’s ranking in the indicators of global competitiveness and the importance of infrastructure in the progressing the UAE’s ranking in relation to all country projects. Also, this chapter provides an explanation of the nature of the project, its scope, its cost, and its timeline. Also, this chapter contains the interpretation and coding process of the data in order to identify the main findings and results.

- Chapter 6: Discussion of the results and the proposed framework – This chapter presents a comprehensive discussion of the findings and the relationships between the study topics as the results are interpreted in light of the research questions and discussed in conjunction with the literature review. Also, in this chapter, the researcher discusses the proposed framework for stakeholder management in PPP projects based on the case study analysis, the literature reviewed and its implementation guidelines. Also, this chapter discusses framework validation based on government experts’ recommendations.

- Chapter 7: Conclusion and Recommendations – This presents a summary of the main findings, the research implications and limitations, the recommendations for further work in the UAE context, and the original contribution to knowledge made through this research.

Figure 1-2 presents in summary form a pictorial overview of the research strategy.

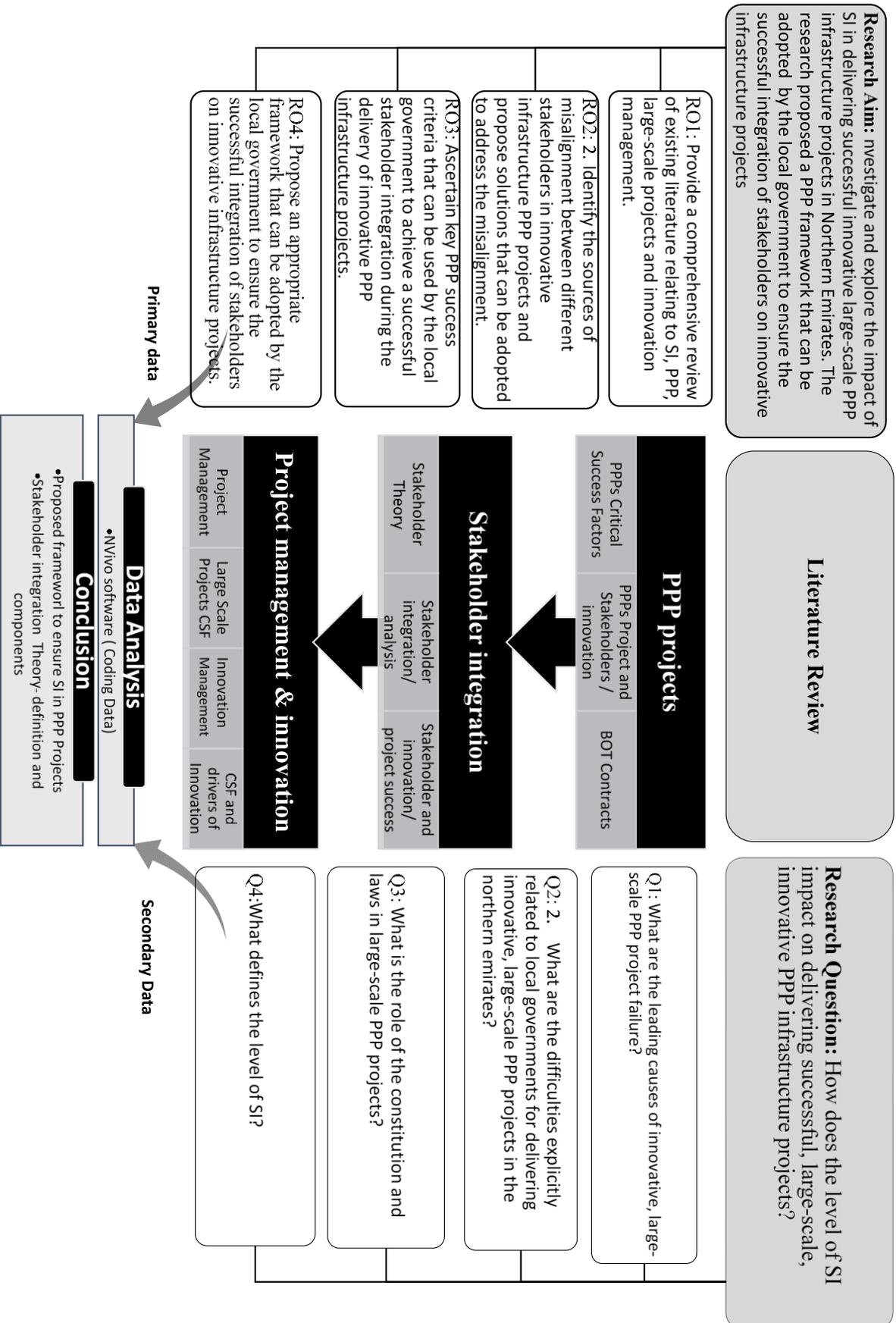


Figure 0-2 Research Strategy

Chapter 2: Review of large scale, innovative PPP

Projects

As the aim of this study is not to empirically test existing theory, the research design of this thesis adopts a qualitative approach using a constructivist grounded theory methodology. Creswell states that building empirically grounded theory requires a reciprocal relationship between data and theory. Data must be allowed to generate propositions in a dialectical manner that permit the use of a priori theoretical frameworks, but which keep a framework from becoming the container into which the data must be poured (Creswell, 2014).

This study does not ignore the existing literature on the various concepts involved in the areas of research interest of this thesis. The existing literature forms the data used in the study. This means that the thesis uses all the existing literature to guide the researcher in driving the initial propositions or codes about the nature of how these concepts are formed.

The literature review in this thesis covers the areas of PPP, stakeholder integration, innovation and project management in this order to form the guiding theoretical principles, according to which the new emergent model is based. Accordingly, the following literature review is intended to rationalise the inclusion of the concepts and relationship to the research questions, the literature gaps and the research methodology used in the study. This literature review chapter focuses on the project types related to the study, such as innovative projects, PPPs project and large-scale projects, to explore and identify their characteristics and other related success factors.

2.1. PPP projects

In this section, the concept of Public-Private Partnerships (PPPs) is explored by providing a detailed discussion on its origin, definitions, primary attributes, and various models. Before exploring the depths of public-private partnership (PPP) projects and the different success factors affecting them, it is helpful to look at what PPP is all about.

PPP is considered an important tool in financing, developing, and managing various public infrastructures. According to Anvuur and Kumaraswamy (2006), it is a term used to describe the multiple forms of partnerships that might emerge between the public and private sectors. More so, PPPs, as indicated by Robinson *et al* (2010), are developed for the purpose of financing, developing, constructing, and effectively managing public infrastructures. These long-term partnerships, which can possibly last up to 40 years (Smyth and Edkins, 2007), are designed to benefit both the public and private sectors while also promoting risk-sharing between them (Zitron, 2006; Alonso-Conde, Brown and Rojo-Suarez, 2007). The main aim of the long-term contracts in PPPs is to enable loan repayments by the private sector (National Audit Office (NAO) 2011) while also providing the public sector with an opportunity to acquire experience, technology and skills from the private sector to improve the management of funds and attain quality satisfaction of the infrastructure and the services it develops (HM Treasury, 2000).

The World Bank Group (2017) has noted that there is no widely accepted definition of the term ‘public-private partnership’, although the PPP Knowledge Lab defines it as a long-term contract between a private entity and a public party. The contract is established for the provision of a public asset or service, where the private party bears significant risks and management responsibility.

There are some other definitions of PPP, one of which is given by Ma, Li, Jin and Ke (2019), who refer to PPP as ‘the procurement approach where the project is executed with a broader span of contractual relationships between the public and private sectors to provide an asset and a service. It is a procurement model to deliver public infrastructure and service crossing various industries, including transportation, water treatment, energy, environment, health, and education’ .Similar to what is entailed by NCPPP (2012), this definition indicates that there are several contracts covered by PPP, which range from operation outsourcing to full privatisation (Li and Akintoye, 2003). Despite this, there are contradictions regarding the correlation between PPP and privatization. According to Grimsey and Lewis (2009), there is a difference between PPP and privatisation, considering that the public sector is not directly involved in privatization’s ongoing operations while it is primarily responsible for PPP.

Despite these broad definitions of PPP, there are also some narrow, ones such as that of the Canadian Council for Public-Private Partnerships (CCPPP, 2011), which refer to PPP as a cooperative alliance between the public and private sectors that capitalises on the parties’ expertise, which is key in fulfilling the public’s needs. It also includes the notion that privatisation can be used in PPPs when public assets are fully divested. Table 2-2 below presents different definitions of PPP from various sources, such as the national governments and academia.

Table 0-1: Definitions of PPP

Author	Definitions of PPP
World Bank Group (2018)	PPP is a ‘long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance’.
Jomo, Chowdhury, Sharma and Platz (2016)	PPP does not have a clear and widely acknowledged definition, thus there are numerous conceptualisations by different authors. The definition of PPPs depends mainly on the degree of asset ownership and capital expenditure by private partners.
Grimsey and Lewis (2005)	PPPs are arrangements wherein there is the involvement of private entities for the development, design, construction and management of infrastructure. The outcome of a PPP project is a contract that stipulates the private party provide services based on public infrastructure.
The Canadian Council for Public-Private Partnerships (CCPPP, 2011)	A cooperative alliance between the public and private sectors is capitalised on via the parties’ expertise, which is crucial in fulfilling public needs. It also includes the notion that privatisation can be used in PPPs when public assets are fully divested.
Wang, Xiong, Wu and Zhu (2018)	<p>In defining PPPs, its key features must be identified:</p> <ol style="list-style-type: none"> 1. PPPs as a durable cooperation, represented by the long-term contractual relationship between public and private sectors that can last up to 25 to 30 years 2. Full participation of private sectors in significant phases of PPP projects (i.e. designing, building, operation, and maintenance) which involve huge capital expenditure 3. Partners share risks, costs, benefits, resources and responsibilities, among others 4. PPPs are a complicated process

	5. PPP projects include mutual goals that fuel the alliance between the public and private sectors
Forrer, Kee, Newcomer and Boyer (2010, p. 476)	PPPs are defined as ‘ongoing arrangements between government and private sector organizations in which the private sector organization participates in the decision-making and production of a public good or service that has traditionally been provided by the public sector and in which the private sector shares the risk of that production’.
US Nation Council for Public – Private Partnerships (NCPPPP, 2012)	A contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility.
Organisation for Economic Cooperation and Development (OECD) (2012, p.18)	Public-Private Partnerships (PPPs) are long term contractual arrangements between the government and a private partner whereby the latter delivers and funds public services using a capital asset, sharing the associated risks.
Akintoye <i>et al.</i> (2016, p.2)	PPP can be described as a contractual agreement of shared ownership between a public agency and a private company, whereby they pool resources and share risks and rewards, to create efficiency in the production and provision of public or private goods.
Zou and Yang (2016, p.19)	PPP is a risk-sharing relationship between the public and private sectors, which aims to bring about a desired public policy outcome; it involves the public and private sectors in cooperation to provide infrastructure and services.

The definitions in Table 2:1 describe PPPs in various valid ways; however, in this study, the definition provided by the World Bank Group is utilised. It refers to PPP as a ‘long-term

contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance'. In this definition, the key attributes of PPPs are indicated, thereby making it suitable to use for this research, considering how it enables a better and more in-depth understanding of PPP.

While there is no widely acknowledged definition of PPPs, there are certain features of PPPs that have to be taken into account (Jomo, Chowdhury, Sharma and Platz, 2016). As noted by Rakić and Rađenović (2011), various attributes characterise PPPs. These include the following:

First, there is a cooperative relationship between the public and private sectors, which has long existed in infrastructure development and management. However, the motives and interests of the partners have significantly changed. This cooperation is a long-term contractual relationship that can exist for up to 25 to 30 years.

Second, the parties are bound by a contract that defines the different project phases and the sharing of investments and responsibilities between partners. The contract also sets the final output specifications which the partners are expected to perform and accomplish.

Third, in terms of the construction phase, the public partner will set the maintenance and service quality standards while the private partner assumes the risk. The public partner pays the private partner for the construction and operation of the infrastructure.

Finally, the infrastructure is returned to public sector ownership after the contractual period has expired.

Meanwhile, remuneration is linked to performance. PPPs do not usually include service

contracts or turnkey construction contracts, which are considered public procurement projects. They also do not cover the privatisation of utilities as there are limited roles for the public sector here. There is already an increasing number of countries developing and coming up with their own definitions of PPPs, which are tailored to their respective laws and institutional and legal aspects.

For example, the Philippines (2018), as seen in its Public-Private Partnership Center website, has defined PPP in broad terms – a contractual agreement occurring between the government and a private firm, which is for financing, designing, implementing and operating infrastructure facilities and services that are usually provided by the public sector. It also covers the allocation of risks involved for parties and seeks to minimise the costs while realising the developmental objectives. The project can also be structured in a manner where the private sector acquires a reasonable rate of investment. Also, PPPs are seen to provide both monetary and non-monetary advantages for the public sector. They can address limited funding resources for the local infrastructure or a country's developmental projects for the public sector. Such kinds of setup allow allocation and the use of federal funds for other local priorities. They also serve as a mechanism for distributing project risks to both the public and private sectors. PPPs are also created for both sectors to improve and develop their efficiency and project implementation processes in delivering services to the public. This government believes that PPPs emphasise value for money, as they focus on reduced costs, faster implementation, better risk allocation, improved services and potential generation of additional revenue. It is also essential to take note of the Philippines' (2018) emphasis on the different elements of PPP, which include the following:

- A strategic mode of procurement
- Acceleration of infrastructure provision and faster implementation

- A contractual agreement between the public and private sectors
- Outcome orientation
- Shared risks and resources
- Value for money

Public-Private Partnership (PPP) projects vary in different parts of the world, as found in the literature search. One of these studies is by Vinogradov and Shadrina (2018), who looked into the cases of EU and Russia, where they view PPPs as collaborative projects containing imperfect information for the parties involved. Typically, public procurement contracts take on asymmetric information problems but have a tendency to limit project feasibility. This implies that some projects might not be profitable enough to ensure the participation of private parties. However, a partnership can improve possibility, which justifies how PPPs are a form of proper public provision and are different from procurement. The types of contracts, the contributions of both partners, and specific partnership elements should be considered in PPPs.

According to van den Hurk (2018), PPPs are applied to keep investments off the governments' annual accounts, although their use for infrastructure provision has not been established in terms of delivering value for money. Based on such a rationale, the author attempted to link motivation to specific modes of practice in the Belgian region of Flanders. In this area, it was observed that the “ application of value for money assessment tools, central coordination mechanism, and a long-term PPP policy strategy was missing” (van den Hurk 2018, p.274). The use of PPP in an ad hoc way was hailed as granting governments leeway in closing partnership deals. This resulted in the fragmentation of both knowledge and practices – making it difficult for reforms to foster learning processes and resulting in a critical stance towards PPPs.

Ameyaw and Chan (2013) underscored how the PPP procurement approach allows the development and management of public infrastructure and services by stimulating and fuelling private capital, management expertise and creative commercial skills in the Ghanaian government's development and management of water supply services. The authors highlighted the "plethora of risks in this industry due to how complex and dynamic interactions are between the municipal and central governments are; the public movements, private water operators, and international donors that pursue their objectives" (Ameyaw and Chan 2013, p. 152). To increase awareness of risks that can reduce the possible benefits of PPPs in Ghana's water supply sector, a literature survey and case study were used. The findings include 40 risk factors categorised into eight categories: " weak regulatory and monitoring regime, financing, absence of risk allocation mechanisms, inexperience in PPPs, public opposition, delayed and non-payment of bills" (Ameyaw and Chan 2013, p. 152).

Meanwhile, Melville (2016) observed that PPPs are widely used in delivering critical infrastructure projects in developing countries before being utilised in developed markets. However, the success of developed markets is not easily transferred to or manifested in developing markets, while the usefulness of the contract framework under PPPs is questionable. Several questions can also be posed, such as the ability to develop a country to support successful PPP procurement. Because of these, Melville (2016) explored PPPs in Chile and its experiences in procurement and found that complex contractual structuring, robust institutional support and sophisticated financing hinder PPPs as a tool for several developing countries. The author also concluded that developing countries require domestic or local involvement in PPP consortiums, either via domestic ownership or in domestic or foreign construction partnering. That said, local involvement is regarded as the closest possible option to ensure the development of local construction and engineering companies in

the region. The commitment can also mitigate the possible adverse outcomes of an infrastructure market that may be dominated by foreign influence.

2.2 Differences between PPP and Traditional Public Procurement

PPPs are significantly different from traditional public procurement procedures. One of the differences between the two is the source of funding for the public infrastructure. Since the PPP is an alternative method to traditional public procurement, the private sector shoulders the complete financing of the infrastructure (Smith 2009). With this different funding approach under PPP arrangements, the roles of the public and private sectors consequently change. According to Eaton and Akbiyikli (2009), the public sector becomes a service specifier from being a service provider while the private sector becomes a service provider from being an asset provider. The changes in the roles of the partners are due to the set desired outcome that is identified by the public sector, which enables the private sector to select and implement the most appropriate input and design (Wall and Connolly, 2009).

Another difference between PPP and traditional procurement is contract duration. As indicated by Burger and Hawkesworth (2011), traditional procurement lasts shorter compared to PPPs, considering that the latter is a long-term contractual partnership between the public and private sectors, which can extend to 30 years or more. Moreover, risk allocation differs between traditional procurement and PPOs. According to Smith (2009), risk allocation in PPP projects is complicated and includes several requisites, such as the analysis and distribution of a wide range of risks. On the other hand, the risk allocation model utilised in traditional procurement is simple. In the table 2-2 below, a summary of the differences between PPP and traditional public procurement is presented.

Table 0-2: Comparison between PPP and traditional public procurement

Major Attribute	Type of Procurement	
	PPP	Traditional Procurement
Financing	Entirely funded by private entities	Completely funded by the public sector
Role	Public Sector – service specifier Private sector – service provider	Public Sector – service provider Private Sector – asset provider
Contract duration	The long-term contract can last up to 30 years or beyond	Shorter contract period
Risk Allocation	Complicated risk allocation model, with private sector shouldering the significant risks	Straightforward risk allocation model. The government shoulders most of the risks

2.3. Different models of PPP

As indicated by UNESCAP (2008), the models of PPP can be classified into five general categories, which are: (1) Supply and management contracts; (2) Turnkey projects; (3) Affermage/Lease; (4) Concessions; and (5) Private Ownership of Assets.

There are different types of PPPs contracts like: BOO (build, own, operate), BOT (build, operate, transfer), DBFO (design-build, finance, operate) and BOOT (build, own, operate, transfer). The most widely used of these is BOT (Osei-Kyei and Chan, 2015), below are list of models and their definition

1. BO Model (Build and Operate): A model that is granted in perpetuity in which the private sector performs the financing, construction and management of the

infrastructure with no time limit.

2. BOT Model (Build, Operate and Transfer): The concession has a time limit wherein the private sector finances and builds the infrastructure. After the concession has ended, the project ownership becomes public.
3. BTO Model (Build, Transfer and Operate): Even before the operation, the project owner has already become public. After the completion of the construction, the private sector rents the project to the public sector.
4. BBO Model (Buy, Build and Operate): A private entity buys a specific public infrastructure to manage when the repairs and expansion of the infrastructure have been completed.
5. DFBO Model (Design, Finance, Build and Operate): The design, financing and construction of the infrastructure are taken over by the private sector under a long-term lease. Said sector also operates the facility during the term and transfers it to the public sector at the end of the lease term.
6. WAA Model (Wraparound Addition): The private sector extends the infrastructure that is publicly owned and operated. After the completion of the operation, the infrastructure is held together by the public and private sectors. A public organisation stands as the public sector partner in a PPP project. In contrast, the private sector is composed of different private organizations, mainly focusing on engineering, architectural, legal and financing services. These firms then form a Special Purpose Vehicle (SPV) or a Special Purpose Company (SPC), which is responsible for delivering the actions indicated in the project (Robinson *et al.*, 2010). According to

Chowdhury, Chen and Tiong (2011), the SPV is a component in the PPP structure as it represents the different contractual and financial agreements between all parties. As shown in Figure 2:1 below, the PPP structure is a web of interrelationships between the SPV, the shareholders, the lenders, the operators and the construction contractors.

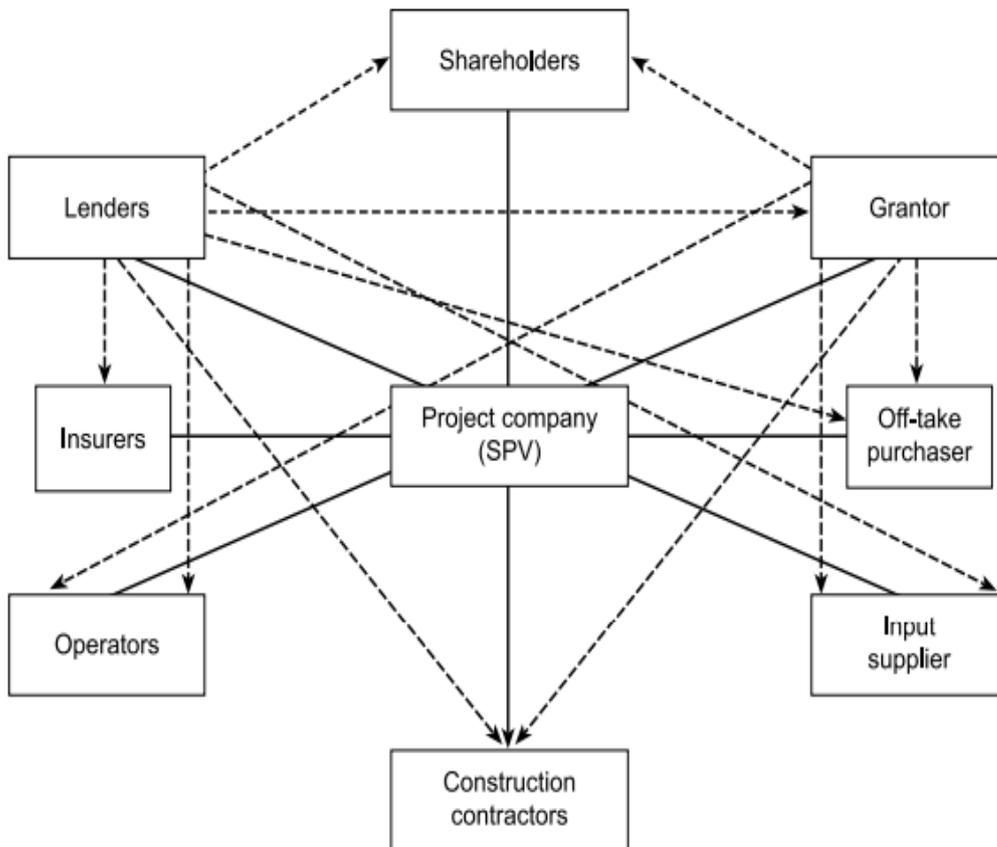


Figure 0-1 Basic PPP structure (Chowdhury, Chen and Tiong, 2011)

2.3. PPP Critical success factors

Different critical success factors (CSFs) can influence the success of projects, especially in PPP projects. It is essential to investigate these aspects as the factors can affect the implementation of PPPs. Also, PPPs and their related projects have different components and even stakeholders that can affect the performance and implementation of the plans. Apart

from defining what PPPs are, it is helpful to also investigate what these success factors are. Abdou and Al Zarooni (2011) investigated the critical success factors (CSFs) of the PPP model in the healthcare industry and projects in Abu Dhabi prior to acknowledging how PPPs have been instrumental in attaining value for money in the public services offered. Well-maintained CSFs also increase a project's success rate. With the aim of developing a preliminary list of possible CSFs for healthcare projects procured under the PPP in the UAE environment, a comprehensive literature review was conducted. The results showing the critical success factors found are illustrated in the table 2-3 below.

Table 0-3 Critical success factors for healthcare PPPs (Abdou and Al Zarooni 2011, p.7)

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

Osei-Kyei and Chan (2015) conducted a review of academic journals from 1990 to 2013 to identify the critical success factors of PPPs, which have become a major research interest in the world. The researchers found that increased interest of PPP CSFs has been at its peak since 1990. The results cited the most identified CSFs as (1) risk allocation and sharing, (2) strong private consortium, (3) political support, (4) community or public support, and (5) transparent procurement. Political support and strong private consortium were also hailed as

the most important critical success factor among PPPs in the UAE (Dulaimi *et al.*, 2010).

PPP projects, as indicated by Dulaimi *et al.* (2010), are influenced by different critical success factor, in addition to those factors that shape traditional procurement methods. It is further revealed that there are CSFs in PPP projects in some countries that are not relevant in other countries, such as how knowledge transfer is not a CSF in UK PPP projects but is important in some countries including the UAE where knowledge transfer is highly considered by the public sector especially in the localization of future work. Another factor deemed associated to the success of PPP projects is the country's politics and the quality of governance. In the UAE, political support plays an integral role in the country's pursuit of successful PPP initiatives, alongside other equally essential CSFs which include risk allocation, strong private consortium, available financial market, effective technology transfer, stable economy, savings and need for finance, favorable legal framework, etc.

Based on the information gathered from the three case studies presented in the study of Dulaimi *et al.* (2010), it is noted that political support is a top success factor for PPPs in UAE, specifically in increasing stakeholder confidence in this type of projects where there is lack of legal framework and local experience. Aside from political support, a strong private consortium is also indicated as another CSF for UAE PPPs.

On the other hand, Almarri and Abu-Hijleh (2017) looked into the CSFs needed for the implementation of PPPs in transitional economies, using a comparative case study between the UAE and the UK. The results from the questionnaire data collected and the comparative analysis made indicate that both the UAE and the UK showed greatly significant similarity in nine PPP practice trends in CSFs. These factors were 'commitment of public and private parties, appropriate risk allocation, committed and competent public agency, transparent

procurement process, strong private consortium, competitive procurement process, political support, detailed cost/benefits assessment, and good governance’ (Almarri and Abu-Hijleh 2017, p.21). Certain differences were also found in these countries, which are ‘local financial market, macro-economic conditions, and favourable legal framework’ (2017, p.21).

By reviewing the CSF of PPP projects, it became clear that there are several common factors despite the different nature of the projects, and this indicates the existence of constant main factors that affect the success of the PPP projects, among which many are related to stakeholders such as knowledge, experience, project management mechanism and tools as shown in Table 2-4 Below.

Table 0-4 shows the Comparison of critical success factors

Critical Success Factors (CSFs in PPP)	Author	Industry/ Country
1. Comprehensive and business viability of project feasibility study	Abdou and Al Zarooni (2011)	Healthcare industry in the UAE
2. Clear project brief and client outcomes		
3. Proper integration of public and customer/end users’ needs		
4. Adequate/technical correctness of design and specification		
5. Proper project control systems during different project phases		
6. A well prepared Environmental Impact Statement		
7. Appropriate risk allocation		
8. Effectiveness of governmental approval process		
9. Effective communication/coordination between project participants		
10. Strong private consortium and design/engineering teams		
11. Clear roles and responsibilities of different stakeholders		
12. Commitment to success		
13. Shared authority/consensual decision-making		

14. Open communication and trust among project stakeholders		
15. Unifying a specific vision and developing a culture of partnership		
16. Proper dispute resolution mechanisms		
17. Political stability and support		
18. Credit rating of investors		
1. Risk allocation and sharing	Osei-Kyei and Chan (2015)	
2. Strong private consortium		
3. Political support		
4. Community or public support		
5. Transparent procurement		
1. Political support	Dulaimi <i>et al.</i> (2010)	UAE
2. Strong private consortium		
3. legal framework and local experience		
1. Commitment of public and private parties to appropriate risk allocation.	Almarri and Abu-Hijleh (2017)	UAE and UK
2. Committed and competent public agency transparent procurement process		
3. Strong private consortium		
4. Competitive procurement process		
5. Political support		
6. Detailed cost/benefits assessment		
7. Good governance		
1. Equitable risk allocation	Muhammad and Johar 2018	Housing PPPs in Nigeria
2. Stable political system		
3. Reputable developer		
1. Action against errant developer	Muhammad and Johar 2018	Housing PPPs in Malaysia
2. Consistent monitoring		
3. House buyer demand		

2.4 Challenges of implementing PPPs

One of the main success factors of PPPs is stakeholder management. However, the results from the study by De Schepper, Dooms and Haezendonck (2014) indicate that PPPs make the stakeholder environment more complex to manage because of the increasing value of the stakeholder context and its dynamics. Due to this complexity, the allocation of stakeholder responsibilities between the public initiator and private consortium becomes challenging, as it

occurs along with balancing the reactive and proactive responses to stakeholder claims.

Another challenge for PPPs is when consortiums lack suitable knowledge and skills, as it was found to be the most important factor that causes PPP projects to fail (Dulaimi *et al.*, 2010).

On the other hand, Almarri (2018) looked into the nuclear energy programme of the UAE, which was part of a strategic move to lower the carbon levels of the regions and to meet future energy demands. Such an undertaking required research on building and operating a research reactor (RR), which is expensive. Consequently, Almarri (2018) considered collaboration between the government and private parties through a PPP to maximize the potential benefits of the RR project. Using semi-structured interviews and grounded theory method, the study indicated that ‘ineffective project initiation work is a main causal condition affecting the success of PPPs in research reactors, while the governmental and political interventions were regarded as the intervening conditions; and the local or regional justification and viability served as the contextual conditions’ (Almarri, 2018, p.1).

Koppenjan (2005) studied the challenge of forming PPPs in the Netherlands, as they were stagnating. The author used nine case studies on establishing partnerships for comparative analysis and three patterns were identified. These patterns comprise the following:

1. Successful formation of partnerships leads to enriched projects.
2. There was no support in the early interactions of ambitious proposals.
3. Stagnating contract negotiations are the result of ineffective market consultations and unilateral public planning.

The stagnation of PPPs was also found to be caused by a lack of interaction. Due to such challenges, the public and private parties failed to reach common agreement and understanding, or develop mutual trust and project content. The absence of conscious and

systematic attempts in managing and arranging interaction processes for the formation of PPPs was also related to the uncritical organisation of goals and an incapability to realise trade-offs and generate support (Koppenjan, 2005).

On the other hand, Dulaimi *et al.* (2010) identified the different variables contributing to the failure of PPP, which include poor communication between private partners, demands on management time, lack of credibility and, and high risk, among others.

Another challenge or problem when it comes to implementing PPP projects is the lack of proper or comprehensive guidelines for PPP projects for many countries, including the UAE. For instance, an empirical study by Singh (2010) identified that many PPP infrastructural projects in India had experienced time and cost overruns for various reasons, with one such reason being the lack of a comprehensive guidelines for managing PPP projects. There were no clear guidelines on various management aspects, whether it be coordination between the sponsoring authority, contractor and other stakeholders, or management of technical risks (e.g. excavation, site investigation and others). In the Philippines, it was highlighted that there is the lack of guidance when it comes to the structuring of BOT-PPP projects, which makes government agencies responsible for these projects to appraise project proposals from the implementing agencies (NEDA, 2009). Similarly, an empirical study by Ismail and Harris (2014) suggested that PPP projects experienced varying problems partly due to the lack of government guidelines and procedures on public private partnership projects. A similar finding was also highlighted in the study by Islam, Nepal and Skitmore (2019) within the context of Turkey. Their research indicated there is a lack of proper guidelines or procedures for managing PPP projects throughout the entire set of project phases, which caused cost overruns in power plant projects. (Islam, Nepal, and Skitmore, 2019).

Even though many countries have implemented national PPP initiatives without legal frameworks, some such as the UAE and Saudi Arabia did create a legal enabling environment for protecting public and private sectors against legal issues in cases of difficulties and risks by developing their own PPP laws and guidelines (Baxter, 2018). Specifically, Dubai recently implemented the Dubai PPP Law, which aimed to increase PPPs in the emirate. This particular law provides a framework for the government agencies entering into PPP contracts in the emirate, as highlighted in key target objectives, including encouragement of the private sector in investing in development projects in the emirate, easing the financial risks and burden on the public budget, and to allow the government to execute strategic projects more effectively. However, Baxter (2018), based on his learning from the 2018 Dubai MENA PPP Forum, argued that this law provided cumbersome clauses and stipulations that could be a challenge for a smoother execution of PPP projects in the emirate and in the country. More so, this particular law is applicable solely within the Dubai jurisdiction. There is no national or federal PPP law in the country.

2.5. PPP projects and stakeholders

In the context of PPPs and project management in general, stakeholders play an essential role. Watt (2016) found a project was considered successful if the objectives were accomplished and exceeded the expectations of the stakeholders. Stakeholders are described as individuals who care or have a vested interest in a project. They are viewed as the people who are active in the work of the project or have something to gain or lose from the project outcomes. The figure 2-2 below shows the typical stakeholders of a particular project, as provided by Watt (2016):

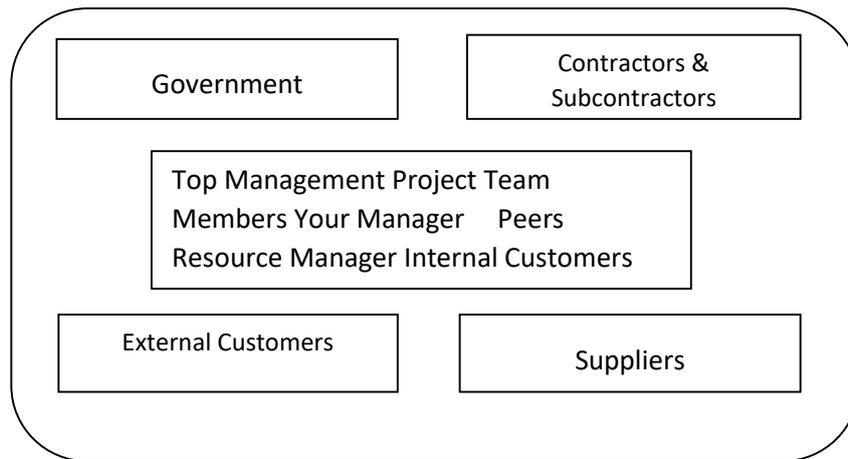


Figure 0-2: Particular stakeholders of a project (Watt, 2012)

Some familiar stakeholders are top management, such as the president of the company, the vice president, the directors and the division managers. The project team is another essential stakeholder, and it is composed of people dedicated to the project, such as the project manager. Peers, resources managers, internal and external customers, the government, contractors, subcontractors and suppliers also form part of the stakeholders (Watt 2016).

Indeed, stakeholders are part of a project that should be managed for its success. Upon seeking the differences and distinction between public projects and projects in other sectors, Gasik (2016) found a greater complexity in managing public projects than in other sectors. The results highlighted stakeholder management as being the most complicated area in public project management, alongside procurement and communications management. It is, therefore, essential for the public sector to develop processes and measures for managing stakeholder projects, including projects aimed at particular sectors. Those responsible for public project management must also be trained differently from those in the private sector.

Similarly, Cuppen *et al.* (2016) highlighted that external stakeholder management has grown as a vital component of governing risk in specific projects. In contributing to the literature on risk governance, the authors provided insights into the public engagement found in planning

and policy studies within the project management field. They presented ‘Q methodology’ as the method for stakeholder analysis, as it allows anticipation of unforeseen stakeholder issues and concerns. The method can also kick off the participatory process with external stakeholders. After doing so, the researchers concluded that Q methodology, when used in the stakeholder management process, can help to reveal perspectives that are helpful for the governance of risks and the identification of opportunities. In this manner, successful and socially-weaved projects can be created.

Stakeholders can also influence the development of performance indicators of a particular project. Toor and Ogunlana (2010) investigated the perceptions and significance of key performance indicators (KPIs) based on the perspectives of various stakeholders in the Thai construction industry. Specifically, these stakeholders were clients, consultants and contractors. Researchers found that traditional measures of the iron triangle – on-time, under-budget and based on specifications – were no longer applicable in measuring the performance of substantial public sector development projects. The performance indicators that are becoming more important are safety, efficient use of resources, effectiveness and the satisfaction of stakeholders, and reduced conflicts and disputes. Such findings mirror how a “mix of both quantitative and qualitative performance measurement on large-scale public sector development projects” is already been used in the modern construction setup of projects – as recognised by the stakeholders themselves (Toor and Ogunlana, 2010, p. 228).

In the report by Akintoye and Kumaraswamy (2016) entitled CIB TG72 Research Roadmap, stakeholders represent a major component in PPP development, and asserts that governance of PPP projects necessitate project planners and managers to carefully identify and prioritize all stakeholders over each of the stages of the PPP, from planning to the development and execution. On top of identification and prioritization of stakeholders, PPP governance

necessitates effective relationship management throughout the network of stakeholders. Identifying, prioritizing, managing and engaging stakeholders across the different phases of PPP projects is considered to be an important performance indicator and/or critical success factor, where ineffective management of stakeholders could derail successful PPP projects. For instance, in Indonesia, the lack of integration and coordination among the stakeholders in the public sector was found to be a key issue hindering successful PPP implementation (Akintoye, Mathias & Kumaraswamy, 2016).

2.6. PPP projects and innovation

Innovation is an important aspect of projects, which affects or can be affected by other dimensions in a project. However, there is a lack of literature about innovation in the field of PPP. As Lember *et al.* (2014) note, there is no conceptual clarity of innovation in the mainstream PPP literature, and the term ‘innovation’ is rarely defined in the context of PPPs. The empirical evidence of innovation in PPPs is, therefore, sporadic and usually controversial. There is also a lack of delineation between change and transformative change, which results in uncertainty if a change in PPP projects is caused by the normal evolutionary processes in the market.

In the context of the above limitations and shortcomings of knowledge, the literature concerning innovation in the context of PPP is presented here. An example is the case study by Wagner and Antonucci (2009) on the ‘ImaginePA Project’, which was hailed as the first large-scale public-sector ERP implementation. The implementation of enterprise resource planning (ERP) in this project was explored, as it integrated more than 50 different agencies in Pennsylvania. Interviews with over 20 individuals were conducted over three years to identify and describe the issues, the success factors, the implementation strategies and the

lessons learned in public sector ERP implementation. The authors found critical differences between ERP public and private sector experiences, as summarised in the table 2-5 below.

Table 0-5: Key differences between public and private sector ERP implementation experiences (Wagner and Antonucci, 2009)

	Public Sector	Private Sector
Culture	<ul style="list-style-type: none"> ▪ High level of complexity ▪ Complex political system ▪ Fragmented power system ▪ Adversity to risk due to required public transparency ▪ The political composition of many government agencies in the US changes frequently affecting project leadership and objectives, creating a challenge for maintaining a large-scale ERP implementation focus and top management commitment. 	<ul style="list-style-type: none"> ▪ Consistent leadership ▪ Unified defined goals and vision
Organizational Structure	<ul style="list-style-type: none"> ▪ Fragmented ▪ Consists of many departments and divisions. Each having their own manager, business rules, competing organizational organisational goals and processes. 	<ul style="list-style-type: none"> ▪ Primarily integrated ▪ Consists of many departments and divisions with various managers, integrated business rules, unified organizational organisational goals and processes.
Top Management Commitment	<ul style="list-style-type: none"> ▪ Difficulty obtaining and maintain top management commitment ▪ Political composition(leadership) changes frequently 	<ul style="list-style-type: none"> ▪ Moderately difficult to obtain top management commitment; , however, once obtained, it is easier to maintain
Identify Appropriate Process Owners	<ul style="list-style-type: none"> ▪ Difficult due to fragmented departments and agencies. 	<ul style="list-style-type: none"> ▪ Easier to identify integration of activities among organizational organisational functions.
Project Team	<ul style="list-style-type: none"> ▪ Large team 	<ul style="list-style-type: none"> ▪ Small team
Budgeting and Allocation	<ul style="list-style-type: none"> ▪ Complex ▪ Funds stem from donors, taxes, members 	<ul style="list-style-type: none"> ▪ Defined
Availability of best business practices	<ul style="list-style-type: none"> ▪ Some extension exist ▪ Some procurement policies based on political demands rather than cost reduction 	<ul style="list-style-type: none"> ▪ Defined for most industries ▪ Demand aggregation and cost minimization minimisation drive procurement practices.
Customer identification	<ul style="list-style-type: none"> ▪ Difficult to identify , almost non-existent 	<ul style="list-style-type: none"> ▪ Well defined ▪ Established methods to attract “new” customers

Other essential findings in the research by Wagner and Antonucci (2009) indicate that Pennsylvania's ERP implementation is close to the general implementation method of the private sector. There was only minor customisation and tailoring to the public environment, as influenced by the private sector's experiences. In terms of technology, a lack of experience with enterprise-wide applications was noted. The only technological effort pointed out was the effort to ensure every member of the project had a standard desktop. This implies that there were exceptional levels of dependence on consultants in the phases of planning and implementation. As for the process side, several processes in the public-private sector were, surprisingly, modelled on 'best practices', as supplied by the ERP vendor. This is said to be how 90% of Pennsylvania's processes involve procurement with loosened rules for the state's governance of procurement practices.

Godenhjelm and Johanson (2016) investigated the effects of including stakeholders in public sector projects. Delivering public services in collaborative agency networks led to an increasing use of projects in managing policy and service delivery. The researchers aimed to advance understanding of the collaboration between stakeholders and their effects on innovation. A content analysis of 275 European Union-funded projects was used, with a focus on stakeholders' influence on creating project innovations. The results of the study underscored how projects could serve as hubs that can release valuable information, while a few projects generated innovations. Godenhjelm and Johanson (2016, p.1) also underscored the roles played by "project stakeholder network, knowledge dissemination and project influence, and sources of advice" in predicting project innovations.

2.7. BOT contracts

A PPP project also involves other essential terms, such as BOT projects. The World Bank Group defined BOT projects as the ‘typically used component to develop a discrete asset than a whole network, which is generally new or greenfield in nature’ (2017, ara. 2). However, some refurbishments can be involved. In BOT projects, the project companies or operators often acquire their revenues via a fee charged to the utility or government, rather than charging tariffs to consumers. BOT projects are also called ‘concessions’ in common law countries, examples of which are toll road projects. Noor *et al.* (2014) defined the BOT contract as a revolutionary means of project and construction financing, which includes a public-private partnership or PPP. Several countries use the BOT contract as a mode of funding for construction projects, as it serves as a mode of financing for construction projects for the public to be realised with public infrastructure services. They also presented the different features of BOT and the essential components involved in it, including the following:

- The public sector in BOT projects allows private companies the right to develop and operate a system or facility for a ‘project period’ in a public sector project;
- The operator finances, owns and constructs the facility or system, and commercially operates it for the project period after the facility is transferred to the authority;
- It serves as the typical structure for finance projects, but there are no revenue streams from the outset as it is related to the new build. Therefore, lenders are left anxious about making sure that project assets are ring-fenced in the operating project company while ensuring risks in the project are assumed and submitted to a suitable actor. The operator often serves as a particular purpose vehicle and is, therefore, prohibited from performing other activities;

- Revenues in BOT projects are usually acquired from the so-called ‘offtake purchaser’.
Examples of these are governments or utilities which buy project outputs from the project company;
- The project company acquires financing for the project and obtains the design and construction of the works while operating the facility during the concession period;
- The project company is recognised as a particular purpose vehicle, where shareholders usually include companies with construction or operation experience. Such a company also covers input supply and ‘offtake purchase capabilities’. The project company is also essential for shareholders with experience to be included in managing appropriate project types, such as working and dealing with diverse partners – considering certain risks surrounding a BOT project. The so-called ‘offtake purchaser/utility’ are anxious that those key stakeholders stay in the project company for a specific timeframe as the project can be awarded based on their expertise and financial stability;
- The project company will collaborate with the construction and operation of the project based on the requirements of the concession agreement. The off-taker has to recognise the identity of the construction sub-contractor and operator;
- In a power project, a project company is often anxious about ensuring a secure affordable source of fuel. It can imply entering a bulk supply agreement for fuel. The supplier may have the same profile as the purchaser under the power purchase agreement – the state power company;
- Revenues from the operation phase are intended to cover operating costs, maintenance, repayment of debt principal, financing costs, and returns for the shareholders of the particular purpose company;
- The lenders provide non-recourse or limited recourse financing. Because of this, they will bear any residual risk with the project company and its shareholders;

- The project company often assumes several risks. Because of this, the company might be apprehensive about making sure that the grantor is protected from threats. It is also common for a project company to be indemnified from the government or commitments made by the government, which are incorporated into the 'implementation agreements'.
- To lessen the residual risk, the lenders insist on passing the project company risk to other project participants via contracts such as operation and maintenance contracts and construction contracts.

2.7.1 Risks and BOT

Risks were often regarded as common themes and components discussed in the context of BOT. Tiong (1990) highlighted financing, political and technical risks as something that should be studied and carefully considered in BOT projects for smooth project implementation. These findings were supported by the growing trend of governments in developing countries to put significant public investments (especially infrastructure projects) into the private sector. This implies that governments are tapping the private sector to finance the projects' anticipated revenues as security and are then becoming dependent on the direct sovereign assurance of the project debt. This has served as the primary reason for the increasing number of governments adopting the BOT approach alongside the private sector to operate plants and transfer ownership to the government after a certain period. With this kind of setup, Tiong (1990) suggested that financing, political and technical risks should be identified, and techniques should be developed to ensure commitment and success.

Waziri (2016) explored the risk assessment efforts of BOT projects in Nigeria, looking at how the government faced difficulties in meeting huge infrastructure demand and improvement of services levels. Such a challenge led to the shift to BOT as a more innovative procurement process than the conventional one. However, the use and application of BOT

procurement have been unsuccessful in several countries, including African ones, due to weak and ineffective risk identification and management. These have led to several project failures. With such a rationale, Waziri (2016) looked into the critical factors of BOT projects from the perspectives of key stakeholders in Kaduna, Abuja, Lagos and Port Harcourt. Structured survey questionnaires were distributed randomly to government officials, developers and lenders, and concessionaires. Through descriptive statistics, the results indicated that the “overall change in government policies, unfavourable general business condition, and project company default” were the topmost risk factors (Waziri 2016, p.47). Of the different risk categories, political risk was ranked highest and development ranked the lowest. Such research outcomes have led to the creation of “effective proposals, design, construction, operation, and maintenance of infrastructure development” to mitigate risks with high impacts on projects (Waziri 2016, p. 47).

2.7.2 CSF of BOTs

Certain success factors of BOT and its uses have been discussed in the literature. One is Borzouei’s (2013) research, which emphasises that BOT is one method of financing that can be used for government projects that lack funding. Apparently, there are different factors to be looked into for BOT implementation to be successful. These were mainly discussed by Borzouei (2013) as follows:

- Government support – BOT projects become successful through the support of the host government. Valuable lessons can be acquired in this sense, such as the project having an appropriate mechanism to identify the regulation of road morbidity rates and a reasonable rate of return of investment (ROI). It is also essential to have an experienced, fair and competent public official in the project, alongside a strong consortium. More importantly,

the government should not be corrupt.

- Project risks should be divided between the parties to the BOT contract.
- Use of experienced and robust consortium – this begins with choosing the right shareholders and investors, especially the sponsors of the project.
- Care for priority projects – priority projects can be selected out of necessity. This would prevent governments from supporting some projects that take place at the same time, which would make it challenging to follow BOT.
- Political, economic, and legal stability – BOT needs a stable political and economic environment despite the high levels of risk present. Political stability is essential for BOT projects, where political risk insurance and the government cannot be regarded as a replacement for a stable political environment.

On the other hand, Yang, Nisar and Prabhakar (2017) have looked into the different critical success factors (CSFs) for BOT projects in China, with the intent of helping organisations attain project success. Initially, the researchers considered Qiao *et al.* (2001) as influential in their research considering how they presented an effective CSF framework for a BOT in China, which is shown in Figure 2:3.

This particular framework by Qiao *et al.* (2001) showed that the critical success factors include a wide range of key facets involved in BOT projects, and that such critical success factors characterize a mutually exclusive set of factors that could be of great use in developing a comprehensive framework for CSF BOT projects in China. More so, Qiao *et al.*'s framework described the criticality and the characteristics of the critical success factors in facilitating competitive strategies useful for BOT projects, which include 13 components – (1) appropriate project identification, (2) stable political and economic situation, (3) attractive financial package, (4) acceptable toll or tariff levels, (5) reasonable risk allocation, (6)

selection of suitable subcontractor/s, (7) management control, (8) technology transfer, (9) successful preliminary evaluation phase, (10), winning BOT contracts, (11) successful construction phase, (12) successful operation phase, and (13) successful transfer phase. According to Qiao *et al.*, the first 8 components of the framework are considered as independent variables, while the latter five are the dependent variables. Arrows shown in Figure 2:3 indicate the direction of the hypothesized impact, which further reflect causality between the components. For instance, project identification was indicated to have causal importance to the successful preliminary evaluation phase of the project, while management control does have causal impact for a successful operation phase. Despite the potential contribution of the framework to future BOT projects in China, the authors, however, stated that the framework is conceptual in a sense that it may need to fine-tune the different critical success factors. This is due to the fact that BOT contracts, globally, not just in China, is still in its relatively new state in terms of its application especially in China; hence, the potential of BOT contracts not fully understood or accepted by investors, governments and other stakeholders managing such contracts. More so, its relatively new state in terms of application in many countries could have implication on the accuracy of project planning in choosing critical success factors (Qiao *et al.*, 2001).

support and guarantee, choosing an excellent project, a strong project consortium and project technical feasibility. Other factors highlighted were multi-benefit objectives, good governance, a well-organised public agency, technology transfer and social support – the least important ones. The researchers concluded also that some of the CSFs might be different for the private sector when compared with the public sector.

Table 0-6 CSFs as refined by Yang, Nisar, and Prabhakar (2017)

Refined CSF List		
No.	CSFs	Source
CSF1	Government support and guarantee	Kanter (2010); Qiao <i>et al.</i> (2001); Stonehouse <i>et al.</i> (1996); Zhang <i>et al.</i> (1998)
CSF2	Reasonable risk allocation	Grant (1996); Qiao <i>et al.</i> (2001)
CSF3	Picking up the good project	Qiao <i>et al.</i> (2001)
CSF4	Thorough and realistic cost-benefit assessment	Brodle (1995); Hambros (1999); Qiao <i>et al.</i> (2001)
CSF5	Stable political situation	Qiao <i>et al.</i> (2001)
CSF6	A favorable legal framework	Boyfield (1992); Stein (1995); Tiong (1996)
CSF7	A strong project consortium	Birnie(1999); Jefferies <i>et al.</i> (2002); Li <i>et al.</i> (2005); Tiong(1996)
CSF8	Stable macroeconomic environment	Qiao <i>et al.</i> (2001); Tiong (1996)
CSF9	Project technical feasibility	Qiao <i>et al.</i> (2001); Tiong (1996); Zantke and Mangels (1999)
CSF10	Transparent and competitive procurement process	Gentry and Fernandez (1997); Jefferies <i>et al.</i> (2002); Li <i>et al.</i> (2005)
CSF11	Sound economic policy	Tiong (1996)
CSF12	A good contractor	Qiao <i>et al.</i> (2001)
CSF13	Multi-benefit objectives	Grant (1996)
CSF14	Good governance	Boyfield (1992); Stein (1995)
CSF15	Social support	Frilet (1997)
CSF16	Well organised public agency	Li <i>et al.</i> (2005)
CSF17	Shared authority between public and private sectors	Kanter (2010); Stonehouse <i>et al.</i> (1996)
CSF18	Condition of existing infrastructure	Tiong (1996)
CSF19	Technology transfer	Qiao <i>et al.</i> (2001)
CSF = critical success factor		

This section reviewed BOT contracts that have become one of the common forms of PPP agreement in the UAE, and in other parts of the world. One key discussion in this section concerns the risks associated with BOT contracts, and the fact that risks should be sufficiently taken into account in project planning and management of BOT contract projects.

This is consistent with the current research's focus on success of PPP projects in the UAE, especially those agreed through BOT contracts. More so, a review of critical success factors in BOT contracts was also reviewed in this section. Major findings in this review indicated that exploration of the critical success factors for BOT contracts had already been carried out by past studies, but investigation on BOT contract critical success factors in the UAE is limited and lacks sufficient clarity. Several studies though have explored critical success factors of BOT contracts in other countries such as in Nigeria and China, for example, . Qiao *et al.*'s study (2001).

2.8. Public sector large-scale projects

Public sector projects are projects that are undertaken, funded, or managed by one or more federal, state, regional or local public organisations, which include all government agencies, for example, ministries, municipalities and central offices. These public entities are responsible for delivering infrastructure, goods and services for the government itself or its citizens. Public sector projects vary according to different factors such as project budget, scope, time, number of stakeholders and level of complexity (Patanakul *et al.*, 2016; Gasik, 2016).

A large-scale government project is defined as a project that has a planned budget of over \$100 million. Some of these projects can also be classified as 'megaprojects', defined by the United States Federal Highway Administration as 'projects that cost more than \$1 billion, or projects of a significant cost that attract a high level of public attention or political interests because of substantial direct and indirect impacts on the community environment and budget' (Capka, 2004).

The large-scale projects of either government or private organisations are greatly affected by

different challenges in performance. Such an aspect was considered by Patanakul *et al.* (2016), particularly government projects, which were claimed to be not managed well, even if project teams followed established management principles. The researchers identified significant government attributes for projects and programmes and ways they could be used to improve performance based on an analysis of 39 public projects that were carried out in the US, the UK and Australia. The findings highlighted six key characteristics, seventeen practical recommendations and six research propositions. The six critical features of government projects were as follows:

1. Pursuing non-financial target benefits;
2. Having a long product service life;
3. Dealing with multiple stakeholders;
4. Being a large and complex megaproject;
5. Being susceptible to the political environment and its dynamics; and
6. Following a mandated project management process (Patanakul *et al.*, 2016).

Patanakul *et al.* (2016, p.456) presented the table 2-7 shown below, providing practical recommendations for managing large-scale government projects in terms of project characteristics.

Table 0-7: Recommendations for managing large-scale government projects (Patanakul *et al.*, 2016)

List of recommendations drawn from the cases		
Large scale project characteristics	Recommendations*	Evident in case number
Pursuing non-financial Target benefits	<ul style="list-style-type: none"> • Focus on benefit management throughout the project life • Define target benefit such that it is specific, attainable and comprehensive in nature • Establish and agree upon a methodology for evaluating target benefit 	2,4,5,6,7,9,15,18,19,20,24,27,28,31,32,34,39
Product service life	<ul style="list-style-type: none"> • Focus on robust and flexible product design with the consideration on future needs 	3,12,25,28,35
Long term utilization	<ul style="list-style-type: none"> • Establish effective quality management process 	16,28,31,35

Multiple stakeholders	• Develop technology adoption strategy	3,4,19,34
	• Engage stakeholders according to their influence on project performance	4,8,9,15,17,18,23,27,28,36,37
	• Establish cross-organization cooperation and agreement	2,4,5,9,15,28,36
Complexity	• Aware of size and complexity	1,4,12,13,28,29,30
	• Modularize project into subprojects	10,12,27,28,29,30,32,34,38
	• Utilise integrated master schedule to coordinate project activities	1,2,29,30,36
Political environment	• Ensure the alignment between project and current legislation	9,11,27
	• Ensure the alignment between project and strategies of the government agency	9,19,27,30
	• Provide more authorization to project manager such that he or she can properly respond to political stakeholders who have various agendas.	17,19,20
Formal Processes	• Establish project management processes for managing government projects	1,3,4,5,7,9,19,24,28,29,30,31,32,34,36,37,38
	• Ensure the proper utilization of the process	1,4,5,6,7,8,9,17,19,23,24,28,29,31,33,36
	• Enhance project governance by assigning and empowering senior responsibility owner	1,2,3,4,5,6,9,12,19,24,31,32,34,36,38

Recommendations are from the case evidence and from the list of auditors' suggestions to improve performance.

Large-scale projects can be distinguished according to certain features. One of these is complexity. Lu *et al.* (2013) emphasised the value of measuring complexity in projects, which is recognised as an integral part of project management. Specifically, their research looked into the task and organisation (TO) perspective to propose a measurement model of project complexity. After identifying the TO measures and mapping the attribute settings of ProjectSim software, 12 hypotheses were developed. The hypotheses were tested using the Shanghai World Expo construction project, with the intent of identifying the ‘synchronous relationship between hidden workload and project complexity’ and also to validate the proposed method (Lu *et al.* 2013, p.610). The researchers’ 12 hypotheses were tested and supported. Specifically, the results in the task complexity category showed that the “higher the complexity of the task and the relationship among tasks, the more hidden workload exists” (Lu *et al.* 2013, p.620). As for the organisational complexity, researchers concluded that the “higher the degree of centralization and technical errors, the higher the amount of hidden workload” (Lu *et al.* 2013, p.620). Such findings underline the development and use of modelling the dynamic emergence process as an effective method of measuring project

complexity with hidden and direct works.

Large-scale projects are considered to make massive contributions to society. For instance, Jiang *et al.* (2018) noted that large-scale projects involving infrastructure have essential strategic positions in an economy and for social development, especially in developing countries. Also, these kinds of large-scale projects are becoming larger and more complex, as reflected in the occurring problems and issues in their lifecycles. Among these problems are technological issues and environmental and socio-economic impacts. Using the Three Gorges Project (TGP), the world's biggest hydroelectric station, as the case study, Jiang *et al.* (2018) searched for patterns of scientific research on specific large-scale infrastructure projects. They found the need for policymakers and project managers to work with academia to allocate and publish resources in future project management practices.

Large-scale project standardisation has also been explored, after the examination of similar industrial plants of leading companies. Standardisation in this context relates to all activities making two similar plants almost identical to each other. Such a topic has been focused on in the research by Nekoufar (2011), where standardisation concepts and backgrounds were introduced. At the same time, standardisation techniques are considered replicable in big industries like power, steel, cement and petrochemical plants. Hence, they are applicable in the said industries. Nekoufar (2011) emphasised that the standardisation of large-scale sectors can be beneficial as it can make them more manageable and scalable. Other advantages include cost savings, time reduction and improved quality.

Any large-scale project faces specific issues and problems. Kennedy *et al.* (2011) described large-scale projects in developing countries as being aimed at leveraging the potential of cities as growth engines. Specific processes and activities covered in large-scale projects have

also been highlighted to refocus on particular challenges in urban sustainability. Some of the challenges mentioned were fuelling land speculation and exacerbating urban sprawl, increased environmental health risks, the reorientation of the employment patterns and the dislocation of local populations.

Meanwhile, in terms of the transportation infrastructure projects, Cantarelli *et al.* (2010) focused on the issue of significant cost overruns that can threaten the overall viability of a project. The causes of such problems are explained according to four categories: technical, economic, psychological and political. Among these categories, political explanations were seen to be dominant for cost overruns. Examples of political issues based on the literature found were a cognitive bias of people, private information, cautious attitudes towards risks, manipulation of forecasts and deliberate cost underestimation (Cantarelli *et al.* 2010, p.11). Patanakul (2014) also explored specific issues in large-scale projects, mainly involving information systems (IS) or information technology (IT) in the public sector. These issues can lead to poor performance. Managing large-scale projects is said to be challenging among project managers, but the challenge is more significant in public sector projects because of the involvement of several stakeholders. At the same time, large-scale public projects are challenging because of the need to manage several diverse types of relationships. Because of these, several projects in the public sector ended up having poor performance ratings. Patanakul (2014) investigated the management of selected large-scale IS/IT projects in the public to collate the common problems that lead to poor performance. About 14 projects from the US, UK and Australia were studied. The results indicate that common problems encountered were linked to “system design and implementation, project management and governance, and contract management” (Patanakul 2014, p.21).

Rudolf and Spinler (2018) studied the engineering and construction industry’s large-scale

projects after effective supply chain risk management issues arose. There was also a lack of effective methods in meeting the particular requirements of large-scale projects as the typical delivery model in these industries. The authors used secondary data reviews and surveyed project managers in multiple industries to develop “contextualized risk taxonomy for engineering, procurement, and construction projects” (Rudolf and Spinler 2018, p.336). The results in the study showed different risk portfolios from generic projects, where there was a remarkably high inherent risk exposure in massive projects as shown in table 28.

Notably, the behavioural risks were noted to be crucial. There was also an underestimation of risks at the beginning phases of large-scale projects.

Table 0-8: Classification of projects/characteristics (Rudolf and Spinler, 2018)

	Type of Project/Industry					
	In-house R&D	Small construction	Large construction	Aerospace/Defense	MIS	Engineering
Need for interpersonal skills	Low	Low	High	High	High	Low
Importance of organizational structure	Low	Low	Low	Low	High	Low
Time management difficulties	Low	Low	High	High	High	Low
Number of meetings	Excessive	Low	Excessive	Excessive	High	Medium
Project managers supervisor	Middle management	Top management	Top management	Top management	Middle management	Middle management
Project sponsor present	Yes	No	Yes	Yes	No	No
Conflict intensity	Low	Low	High	High	High	Low
Cost control level	Low	Low	High	High	Low	Low
Level of planning /scheduling	Milestones only	Milestones only	Detailed plan	Detailed plan	Milestones only	Milestones only

Overall, this section of the chapter reviewed the existing literature on large-scale public sector projects, which reveals varying problems and challenges in the overall management and execution of the projects that are similar to PPP challenges and CSF. Public-sector large-scale projects can vary depending on the scope and nature of the project, and that each of the projects could have varying characteristics. One such characteristic is that most of the large-scale public-sector projects have multiple stakeholders, which requires engagement of

stakeholders based on their influence and interests in project performance. This is compatible with the key focus and research problem of this study regarding the relevance of stakeholder involvement in project management of large scale, innovative PPP projects in the UAE.

2.9 Large-scale project success factors

Different factors can be investigated and considered for the success of large-scale projects. Stakeholders have an essential role in large projects in general. Using the sentiment and confidence analysis techniques based on the historical analysis of documents, Puroo and Desouza (2011) looked for clues to project progress and the challenges of large-scale projects through a stakeholder perspective. The potential clues found for the success of large-scale projects were (1) assessment of overall project progress, (2) changes in stakeholder roles, (3) an understanding the formation of stakeholder networks and (4) triangulation of information available to different stakeholders (Puroo and Desouza 2011, p.9).

Communication is regarded as one of the success factors of huge-scale projects. The study by Tai, Wang and Anumba (2009) focused on communication in the Chinese economy and its industries, wherein issues and challenges were explored. The roots of communication challenges in the Chinese sector were a “lack of a good communication mechanism, weak organisational structures of construction teams, lack of uniform standards for construction information, and lack of support for advanced communication technologies” (Tai, Wang and Anumba 2008, p.136). Because of this, the researchers further highlighted the essence of communication and its role in large-scale projects, such as the mechanism that links an organisation’s members with attaining common goals. Communication is also regarded as the “core of management’ and ‘identifying factor of management efficiency” (Tai, Wang and Anumba 2008, p.137). The absence of communication, therefore, means the absence of

management.

After identifying the challenges affecting the performance of government projects, Patanakul *et al.* (2016) proposed specific characteristics of large-scale government projects that teams should pay attention too. These included “pursuing non-financial target benefits, having a long product service life, dealing with multiple stakeholders, being a huge and complex megaproject, being susceptible to the political environment, and following mandated project management process” (Patanakul *et al.* 2016, p.461). Looking at these implications would alert managers to developing effective strategies to ensure project success.

Toor and Ogunlana (2009) performed a study on a large-scale construction project in Thailand. Part of the purpose was to identify the critical success factors (CSFs) in construction projects in the region. About 76 questionnaire surveys and 35 interviews were conducted among project managers, line managers and deputy managers in selected construction firms. The results revealed that factors related to project planning and control, project personnel and the involvement of clients were critical to the success of large-scale construction projects. The participants were also concerned about the awarding of bids to the right contractors and designers, the mutual understanding of the stakeholders on project goals, adequate communication and sufficient resources.

Szentes (2005) focused on large-scale construction projects in Nordic countries and identified the different success factors from an extensive list of potential ones. Combined experiences and interviews were performed during a workshop attended by project managers, directors and specialists. The outcomes of such interviews were then compared with previous relevant literature and organisational aspects such as management skills and culture or attitudes that ensure open and effective communication were found to be crucial success factors.

Competence, availability of resources and having a project board with a defined purpose and agenda were also regarded as essential in project risk management.

Based on the above review, it can be proposed that there are various critical success factors that can be of great help in performance management of large scale projects in the public sector. There is no standard set of critical success factors for large scale projects, considering that projects vary depending on the scope and nature of the project. More so, it is suggested that there is limited exploration of the critical success factors of large scale projects in the public sector specifically within the UAE context; hence, the gap in the literature for UAE project managers when it comes to the critical success factors of large scale projects under PPP (BOT contract) agreements.

2.10. Innovation

In recent years, many studies have addressed the issue of innovation and how it can be a part of the organisation. For the purpose of the research, the definition of innovation must be understood to find and analyse the main factors that affect innovations in organisations that must be focused on by the management to invent a new product or process. There are various definitions of innovations. Most of them describe innovation as a new idea, product or procedure that has been developed as a better solution that meets new, different segment requirements or existing market needs. Innovation is ‘a process of turning opportunity into new ideas and putting these into widely used practice’ (Tidd, Bessant and Pavitt, 2005).

According to Damanpour (1991), innovation comes about in different ways, either radically or incrementally, through products and services or processes, administratively and finally, via technical innovation. Innovation is different from invention. However, many people cannot correctly differentiate between the terms: Innovation is a new process. When a new product is

designed from scratch or developed from its current status to sustain end-user satisfaction and filled needs, it can be either a process or product, and it is not restricted to a period of time or place. An innovation that has been arrived at a long time ago, where individuals perceive it as a new product or process, is still an innovation for them. On the other hand, inventions are the creation and discovery of a new product or a process. If a new process or the product is introduced into the market, then it becomes an innovation (Ibrahim and Fallah, 2005) According to Garcia and Calantone (2002), a new thing that remains in the labour office rather than moves from there into production to create economic value is considered an invention.

2.10.1 Innovation process

Innovation is a continuous process that is initiated when there is an opportunity for developing a market or service invention. Utterback (1974) states that the process of innovation consists of three phases:

- 1- Generation of the idea, problem-solving or development
- 2- Implementation
- 3- Diffusion

The first phase is the generation of an idea that involves a mixture of various information, which might include information about a need, a market and accessible technology to satisfy the requirement. In addition, this phase considers problem-solving, which includes designing alternative solutions to meet new goals after addressing the problem. The second phase is the implementation of a new idea or solution: this phase consists of manufacturing processes and tooling, and requires the market start-up to bring a new idea or solution to the market for a different segment. The last phase is the diffusion of innovation, which takes place after the

innovation is introduced to the end-users.

Pierce and Delbecq (1977) state that the innovation process consists of three main stages: (1) initiation, (2) adoption and (3) implementation.

The initiation stage is the need to change and gather data according to particular requirements while in the adoption stage. The organisation decides to commit and acquire resources for it to be implemented and developed by the innovators for the use by the individuals. On the other hand, Wilkening (1963) views adoption as a process whereby the decision-maker passes through an initial awareness of innovation to adopting and creating an attitude toward innovation, to accept or resist the innovation, and then implementing the new idea as validation of the decision of acceptance and adopting. Figure 2-4 shows the adoption process by (Wilkening,1963).

In another significant study, Gopalakrishnan and Damanpour (1994) pointed to two different main stages of the innovation process, the initiation and the implementation. Gopalakrishnan and Damanpour (1994) support the point that the adoption phase occurs between the initiation and the implementation. The justification for their analysis is that the organisation become aware of the innovation in the initiation phase and starts to act towards it, either to accept or to reject the innovation, unlike the implementation stage, where the organisation chooses to fund and sponsor the innovation to satisfy and fill the needs of individuals after using it.

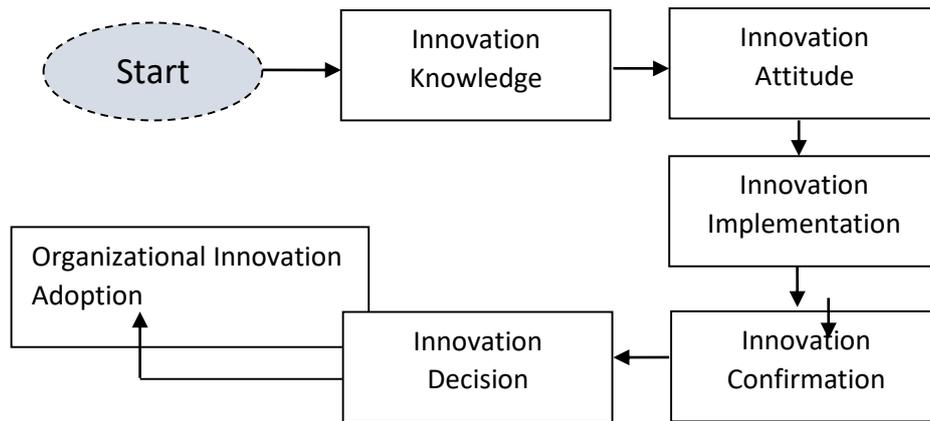


Figure 0-4: Innovation adoption process by Wilkening (1963)

2.10.2 CSFs and drivers of innovation

As studies and research have shown, organisational innovation tends to build and develop new or improved productions and processes. Both are influenced by internal and external drivers since these drivers influence the decision-makers and the policies. The concept of drivers may vary from one organisation to another according to the surrounding environment, internally and externally. One may see a lot of common drivers in different articles. Also, one finds other drivers that are not mentioned in any other article. These drivers drive organisations to move forward towards innovation, and the absence of these factors weakens the chance of innovation, although not necessarily cancelling it.

It has been demonstrated that drivers for innovation can be classified into three main categories: problems, constraints and opportunities (Rosemann,2013).

1. Problem-driven innovation

Innovation driven by a problem is the primary source of innovation. The process, called process improvement, is a concern or need to change the status quo to solve an issue.

Problem-driven innovation leans towards innovating new products, processes, or business models rather than fixing a problem in the currently available product or process.

2. Constraint-driven Innovation

Innovation driven by a constraint illustrate cases in which the constraints limit the organisation's ability to undertake or perform the same tasks. These constraints force the organisation to identify and implement different ways that the status quo requires to achieve the goals. These constraints can be macroeconomic developments or organisational-internal development. These constraints must be adopted by the organisations.

3. Opportunity-driven Innovation

Innovation driven by opportunities describes innovations that are based on the knowledge of the existence of opportunities by and the realisation of the possibility to take advantage of such opportunities, unlike problem-driven innovations or constraints.

Innovation driven by an opportunity describes cases in which innovations are borne out by opportunity.

The critical problems with the categorisation are that the drivers mentioned above did not identify their source, whether internal or external. In other words, the author considers it as generic drivers of innovation. Therefore, the drivers must be correctly identified.

A better explanation for innovation drivers is demonstrated from their source. Internal drivers are things or situations that occur in the organisation itself, and under the control of it. In general, internal drivers are concerned with an organisation's capabilities, human resources, process and methodology, and organisation culture and financial management, while external drivers include situations that have occurred outside the organisation, such as economic

conditions, social trends, political influence, environmental issues and demographic change.

Kamal (2006) listed the potential factors for innovation adoption in the government sector after studying 11 adoption models. These factors positively influence decision-makers in the organisation's drive towards innovation.

The author divided the drivers into three categories:

1. Internal factors, which are indicated by perceived technology and organisational factors
2. External factors, indicated by external factors
3. A combination of internal and external factors, presented by support and collaboration factors

Xie *et al.* (2013) examined ten hypotheses for small and medium-sized enterprises to test factors affecting innovation performance. The result shows that there is a positive relationship between innovation performance and innovation environment, management system, finance, R&D and technology capacity. Also, it was found that the relationship between innovation and policy environment is negative, as shown in Figure 2-5

Their ten hypotheses were for the following critical success factors:

1. Financial capital: one of the essential resources for the organisation to start, operate and grow
2. R&D intensity: activities that form new knowledge for the organisation and become the basis of change
3. Technically qualified staff: the capability and competence of the human resources which will produce and run the innovation
4. Technology information: access and insight into the latest technological developments

5. Business strategy: the strategic management in the organisation emphasises the channelling of resources towards innovation between the internal and the external environment
6. Innovation networks: the external linkages and interactions
7. Management capabilities: organisational ability to deploy the available assets to perform specific tasks to improve performance
8. Entrepreneurial orientation
9. Intellectual property protection: the protection of the rights system in organisations
10. Government policies: government policies encourage organisations directly or indirectly to undertake innovations

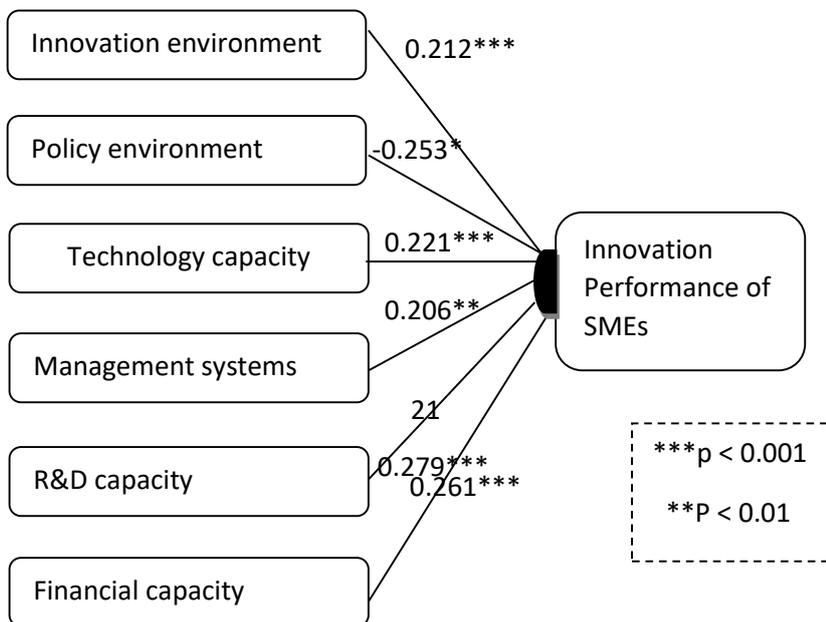


Figure 0-5: Results of regression analysis by Xie *et al.* (2013)

According to Xie *et al.*, there are several drivers for innovation, and they are not limited to a certain number, as the situation varies from one organisation to another. Also, the effect of these drivers varies from one to another according to its importance in the culture of the

organisation. Despite the importance of these drivers for innovation, the absence of one of them does not mean that innovation will stop. However, the chances of innovation may be less, or difficulties and challenges may have to be faced; therefore, there will be more reliance on other drivers.

2.10.3 Conflict management and innovation

Conflict management has been extensively studied by using the different methodologies of research. Up to now, several studies have explored the relationship between conflict and innovation. The results show that conflicts affect innovation positively or negatively in the organisation (Vollmer, 2015; Isaksen and Ekvall, 2010; Tjosvold, Wong and Wan, 2010; Ayuso, Ángel Rodríguez and Enric Ricart, 2006; Song, 2006; Afzalur Rahim, 2002), and its effect on the presence of other factors such as justice (Tjosvold, Wong and Wan, 2010), climate (Ayuso, Ángel Rodríguez and Enric Ricart, 2006) and top management teams (Chen, Liu and Tjosvold, 2005).

Vollmer (2015) examined studies about conflict and innovation from 1998 to 2010, showing that most of the studies (19) occurred between 2000 and 2009. However, the number of studies from 2010 to July 2012 was 13, which indicates a growth of research in this field. Further, Vollmer (2015) found that many studies analysed the relationship between innovation and different types of classical conflicts, such as task and relationship conflicts. Also, he discovered that six studies hypothesise a direct correlation between the two constructs, and the evidence shows that task conflict impacts positively on innovation. Some have claimed that there is a moderate level of task conflict. On the other hand, three studies provide evidence that there is a negative influence of relationship conflicts on innovation; in other words, the relationship between conflict and innovation is not significant. However, two studies found a mediated relationship between classical conflict and innovation.

In fact, most of the organisations experience different kind of conflicts, which impact negatively on the development of a healthy relationship among them. These conflicts have various impacts on the relationships; they can be positive by providing opportunities to the organisations if the conflicts have been handled constructively (Tjosvold, Wong and Wan, 2010). Conflicts occur due to incompatible goals, activities, and preferences, and to manage these conflicts, it is essential to recognise the type of conflict (Afzalur Rahim, 2002).

According to Isaksen and Ekvall (2010), conflict types can be divided into task conflict, emotional conflict, and process conflict.

In an organisational relationship, partners strengthen the capability to innovate by providing useful information, discussing new ideas and possibly improving the market and making investments. But not all relationships motivate. In a study on conduct by Tjosvold, Wong and Wan (2010), it was shown that corporative management of conflict in inter-organisational relationships could help organisations to innovate and develop a strategic advantage. Isaksen and Ekvall (2010) point out that there are two kinds of tension within an organisational climate: debate and conflict. Debate provides a healthier and supportive environment for creativity, while conflict provides a negative and suppressed environment for creativity. Therefore, management should create a climate that encourages the right level of debate to innovate and an exchange of different viewpoints.

Considering all the studies, it seems that conflict has either a positive or negative impact on innovation. What is required is to investigate more how to change the impact of conflict from negative to positive to ensure the successful delivery of innovation. What is the type of innovation conflict between stakeholders in inter-organisational projects?

This section reviewed the existing theoretical and empirical literature on the concept of

innovation, including innovation process and challenges and critical success factors of innovative projects. One key highlight in this review is the importance of proper management of innovative projects and its subsequent processes or phases. Innovative projects in the public sector require identification and integration of varying interests of stakeholders through collaborative management, which could have some degree of implications on the success of such projects.

2.11. Key problems from the reviewed literature

This chapter has provided a systematic review of the idea of Public-Private Partnerships, including concepts such as BOT contracts, and the critical success factors of PPPs and BOTs. Based on the review, there were some key problems identified in the literature that guided the development of the problem statement and motivated the author to carry out this current study:

- There is limited exploration of the critical success factor framework for BOT projects within the UAE context. Many of the empirical studies that have explored the critical success factors of BOT projects and sought to introduce a critical success factor framework focused on other countries, such as China, Nigeria and others.
- The literature review highlighted that one of the key problems causing risks and failures of projects is poor management in large scale projects. Moreover, there is limited empirical research exploring the project management challenges and risks of large scale projects that could inform the development of a critical success framework and/or PPP management guidelines.

- There is limited exploration of the critical success factors of innovative, large scale BOT-PPP projects within the UAE. There is no current national or federal framework or legal document about PPP implementation, with local PPP law such as the Dubai PPP Law being enacted only within the Dubai Emirate. However, comments from some experts have indicated that such laws have cumbersome stipulations that might confuse investors and cause potential problems with implementing PPP projects.

2.12. Chapter summary

This chapter has reviewed the concept of public-private partnership projects, including the different models of PPP – e.g. build-operate-transfer (BOT) contracts. The review also discussed the different critical success factors that can impact on the success rates of PPP projects, as well as the challenges in PPP implementation. The review examined the importance of stakeholders in PPP projects, innovation within PPP projects, and the role and advantages of BOT contracts. Based on the review of the literature, there were key gaps in the literature or key problems identified informing the objectives and problem that this current study aims to address. Key gaps in the literature include limited exploration of CSF framework for BOT projects in the UAE, lack of investigation efforts on the project management challenges and risks associated with UAE large scale projects, and limited exploration of the critical success factors perceived by stakeholders of large scale, innovative BOT-PPP projects in the UAE.

The literature shows that there are several common factors that affect the success of PPP projects despite the different outputs of these projects and their environment, such as :risk allocation and sharing, (2) strong private consortium, (3) political support, (4) community or public support, and (5) transparent procurement (6) effective communication (7) legal

framework and local experience, and (8) proper integration of public and customer/end users' needs. Also, there are common CSFs of innovation and government and large-scale projects field that affect the success of PPP, which indicates the importance of remedying, studying and including these factors within the procedures and tools for managing PPP projects.

Chapter 3: Review of managing projects and stakeholder management

3.1. Introduction

The main objective of this current research study was to explore the importance of stakeholder integration, and its impact on the success of innovative, large-scale PPP projects in the UAE. The previous chapter provided a review and discussion of the basics of public-private partnership projects. In this chapter, the aim is to conduct a review of existing literature on the management aspects of such projects. The review included analysis of both the empirical and theoretical literature on the concepts of project management, especially stakeholder management. The chapter started with the development in the literature of project management, including the definitions and conceptualizations of project management, and the trends in the schools of thought on project management. The chapter also reviewed the different success factors of project management and project planning. A review of the concepts of stakeholder management and integration was also carried out, as well as assessment of how such concepts are critical to the success of a project, especially in PPP projects.

3.2. Project management

A considerable amount of literature has been published on project and project management in terms of definition, methodology and process. Also, there is a large number of published studies describing knowledge related to project and project management, for example, cost management, time management, resource management, total quality management and leadership. The literature also has emphasised the importance of project, programme and

portfolio management practices to organisations and the significant growth in the adoption of project management disciplines to accomplish work in different sectors and industries as project management is designed to make better use of existing resources.

There is some confusion in relation to the concept of projects and project management.

According to the Project Management Institute's (PMI) Project Management Body of Knowledge, a project is defined as follows: 'A temporary endeavour undertaken to create a unique product, service or result' (PMBOK 2017, p. 13). The definition of project management is the application of a collection of tools and techniques to direct the use of diverse resources toward the accomplishment of a unique, complex within time, cost and quality constraints. The project management approach is relatively modern; it is considered to link the methods of restructuring management and adapting related management techniques (Atkinson, 1999).

In other words, project management is an application of knowledge, skills, tools and techniques to project activities to achieve the requirements of a project. It is accomplished through the implementation and integration of the processes of project management, which are initiating, planning, executing, monitoring and controlling and closing (Lewis *et al.*, 2007; Kerzner, 2009; Apm.org.uk, 2019; Pmi.org, 2019). Project management knowledge comprises ten areas: integration, scope, time, cost, quality, procurement, human resources, communications, risk management and the newly added area of stakeholder management (Pmi.org, 2019).

A team or group can undertake different projects, and for it to succeed, a project should be adequately and efficiently managed. Before proceeding to the critical factors identifying the success of a project, it is essential to understand what 'project management' is. Prabhakar

(2009) notes that project management is a specialised management branch that progressed for the coordination and control of some multifaceted activities in the modern industry.

Businesses in the 21st century have an increased range of activities under project management techniques due to the fast-paced changes in the business environment. The nature of the business environment also has implications for how projects are managed. Thus, projects are open systems as they exist in an open environment and must respond to the changing dynamics of situations, which requires projects to be more adaptive than ever.

The Project Management Institute (2019) defines project management as the ‘application of knowledge, skills, tools, and techniques to project activities, to meet the project requirements. The organisation defines a project as something temporary but has defined the beginning and end in defined scope, resources, and time. Meanwhile, the Association for Project Management (2019) described project management in its goal to produce an end product, which will lead to changes beneficial to the organisation, as covered by the project. Project management also includes initiation, planning and control of the various tasks needed to deliver a product.

The growth of project management can be summarised in several stages according to specific topics in each period, such as roles and responsibilities, organisational structures, delegation of authority and decision-making, and especially corporate profitability. But by the 1990s, the view within PM had changed, where the companies began to recognise the importance of project management, as shown in table 3-1.

Table 0-1 Changing views on project management (Frame, 2003)

Past view	Present view
<ul style="list-style-type: none"> • Project management will require more people and add to the overhead costs. 	<ul style="list-style-type: none"> • Project management allows us to accomplish more work in less time, with fewer people.
<ul style="list-style-type: none"> • Profitability may decrease. 	<ul style="list-style-type: none"> • Profitability will increase.

-
- **Project management will increase the amount of scope changes.**
 - **Project management creates organizational instability and increases conflicts.**
 - **Project management is really ‘eye wash’ for the customers benefit.**
 - **Project management will create problems.**
 - **Only large projects need project management.**
 - **Project management will increase quality problems.**
 - **Project management will create power and authority problems.**
 - **Project management focuses on sub optimization by looking at only the project.**
 - **Project management delivers products to a customer.**
 - **The cost of project management may make us non-competitive.**
- Project management will provide better control of scope changes.
 - Project management makes the organization more efficient and effective through better organizational behavior principles.
 - Project management will allow us to work more closely with our customers.
 - Project management provides a means for solving problems.
 - All projects will benefit from management.
 - Project management increase quality.
 - Project management will reduce power struggles.
 - Project management allows people to make good company decisions.
 - Project management delivers solutions.
 - Project management will increase our business.
-

As can be seen from Figure 3-1 project management is based on factors that measure its success, such as quality, time, scope, cost, and stakeholder management. Frame (2003) lists PM constraints: time, cost, and performance. But in the case of a project to be accomplished for an external customer, there is a fourth constraint: customer relations. Similarly, the UK Association of Project Management in the APM Body of Knowledge book considers some of the PM actors mentioned above in defining the PM process.

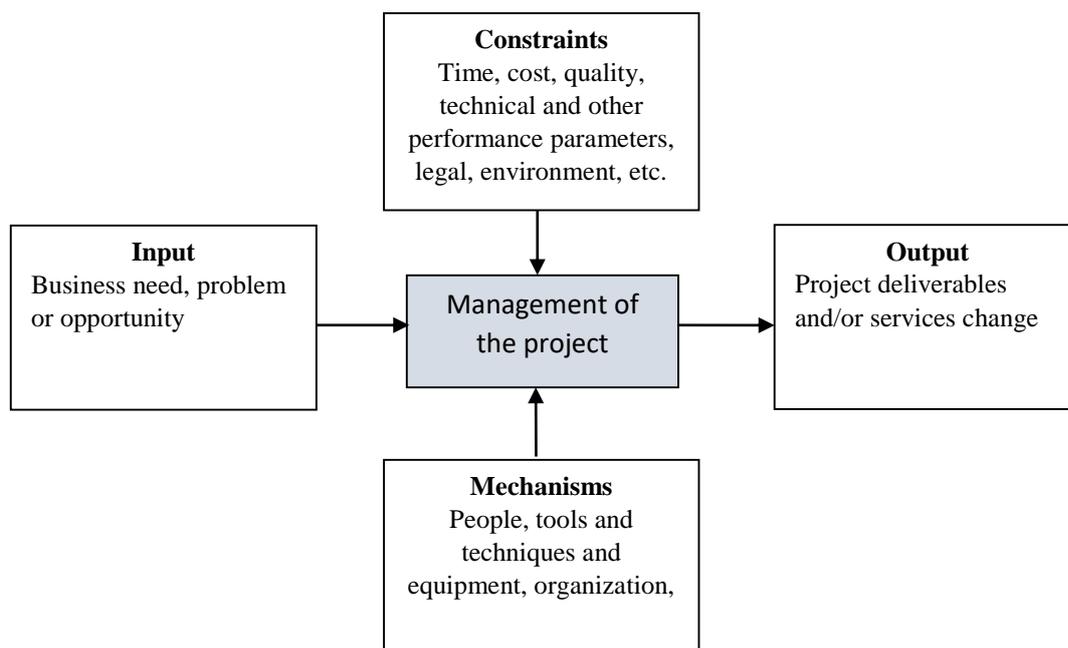


Figure 0-1 The project management process

Atkinson (1999) draws our attention to additional factors as necessary criteria against which to measure the PM success by shifting the focus of measurement from particular process-driven criteria, the Iron Triangle to the Square Route as can be seen from the table 3-2.

Table 0-2: Square route to understanding success criteria by (Atkinson, 1999)

Iron Triangle	The information system	Benefits (organization)	Benefits (stakeholder community)
Cost	Maintainability	Improved efficiency	Satisfied users
Quality	Reliability	Improved effectiveness	Social and
Time	Validity	Increased profits	Environmental impact
	Information-	Strategic goals	Personal development
	Quality	Organizational-learning	Professional learning,
	Use		Contractors profits
			Capital suppliers, content project
			Team, economic impact to
		Reduced waste	Surrounding community

Initially, the Iron Triangle was the quintessential framework used in the past for measuring success. Though many of the studies in the past identified the importance of the success criteria presented in the Iron Triangle, some also emphasized that there should be other success factor besides the cost, time and quality that are equally important. The Square Route includes the Iron Triangle and other important success factors, making the former a more inclusive framework than the latter. The Square Route model, as according to Atkinson (1999), is a good model for understanding project management success as it also measures not just the typical cost, time and quality measures but also the resultant system of the project and the stakeholder and organizational benefits. As shown in Table 10, the information system involves measuring key factors like maintainability of the product/system, the reliability and validity of the system, and information quality. On the other hand, long-term benefits to the organization, according to the Square Route, measures factors as determinant to project success, including improvement in the efficiency and effectiveness of the organization, improved profitability and increased organizational learning. More so, the

inclusion of the stakeholder benefits in the Square Route involves measuring factors such as user/customer satisfaction, impacts to the environment and society and others (Atkinson, 1999).

One important contribution of the Square Route model is to measure project management success through the inclusion of stakeholder benefits, in which project managers have to take into consideration the varying interests and demands of stakeholders expected for a project to succeed. Inclusion of stakeholders' interests are also highlighted in many performance evaluations tools already available and are accessible for project managers to utilize. For instance, the balanced scorecard has been useful as a multidimensional approach to measure performance and monitor improvement (Kazi, Radosav, Nikolic, and Chotaliya, 2011).

Leveraging the balanced scorecard in project management involves measuring key performance indicators grouped into four dimensions – financial, stakeholder/customer, process, and learning and growth. In terms of financial indicators, project managers can identify and make use of key financial indicators to measure performance of project management, including costs, profit or benefit maximization, and others. For stakeholders, benefits to stakeholders, stakeholder interest management, resource availability and others are also used as key success performance indicators. Process-related indicators such as risk and change management and learning & growth indicators like lessons learned database, quality and defects minimization are also some of the indicators for measuring the performance of project management (Vasudevan, 2017). The dimensions measured in Square Route to a degree are similar to the Balanced Scorecard approach to project management performance evaluation. For instance, financial indicators measured in the balanced scorecard are also measured in the Square Route framework – e.g. cost is measured through the Iron Triangle,

while profit maximization is measured under the organizational benefits dimension of the Square Route.

Similarly, Frame (2003) highlighted project management activities and core processes such as planning, organising, directing and controlling several resources for short-term objectives, which have been created to complete specific goals and objectives. It is also the application of knowledge and skills, alongside tools and techniques for project activities to accomplish the project conditions and requirements. Sometimes, the term ‘project management’ is used to label an organisational approach to ongoing operations or projects.

3.3. Project management process

A successful project is comprised of numerous elements working together to accomplish the project goals and intentions. Project teams also look at the different criteria and factors that determine the success of managing projects. Alias *et al.* (2014) highlighted that critical success factors (CSFs) refer to inputs to project management practice that can directly or indirectly bring project success. They are composed of several components that should be synchronised to guarantee on-time project delivery. With such a rationale, Alias *et al.* (2014, p.67) developed a conceptual framework that determines and highlights five variables for project success, which are the following:

- Project management action – Focused on the planning, communication and effort systems, and seeks to develop a suitable organisational structure. It also covers management and the control of sub-contractors’ works.
- Project procedures – These processes include procurement and tendering methods and strategies.

- Human factors – The social factors focused on the client’s experience, nature, size or organisation, ability to make decisions and orient, and define roles. It also involves how the client emphasises low construction costs and the high quality of construction or quick construction, and the contributions to both design and construction.
- External issues – They refer to issues outside the organisation, such as economic, political, social, technological advancements and physical aspects.
- Project-related factors – these factors pertain to the types, size, nature and complexity of a project.

Radujković and Sjekavica (2017) argued that project management success has been an interesting topic and issue from both scientific and practical viewpoints. Upon examining the factors discussed and explored in the literature, the authors developed a framework with three categories that can significantly influence the success factors of projects: (1) elements of project management competence (C1), (2) aspects of organisation, and (3) aspects of project management methodologies, methods, tools and techniques. The first category is focused on the project manager and project members’ technical, behavioural and contextual competencies. It also includes the project manager’s and team members’ coordination. Meanwhile, the second category is focused on the elements of an organisation, particularly organisational structure, culture, atmosphere, and competence. Lastly, the third category is made up of six parts: the “project management methodologies, project management software, project management tools, decision-making techniques, risk assessment tools, and information communication technology support tools” (Radujković and Sjekavica 2017, p.609). These factors can be best recalled in Figure 3-2 below.

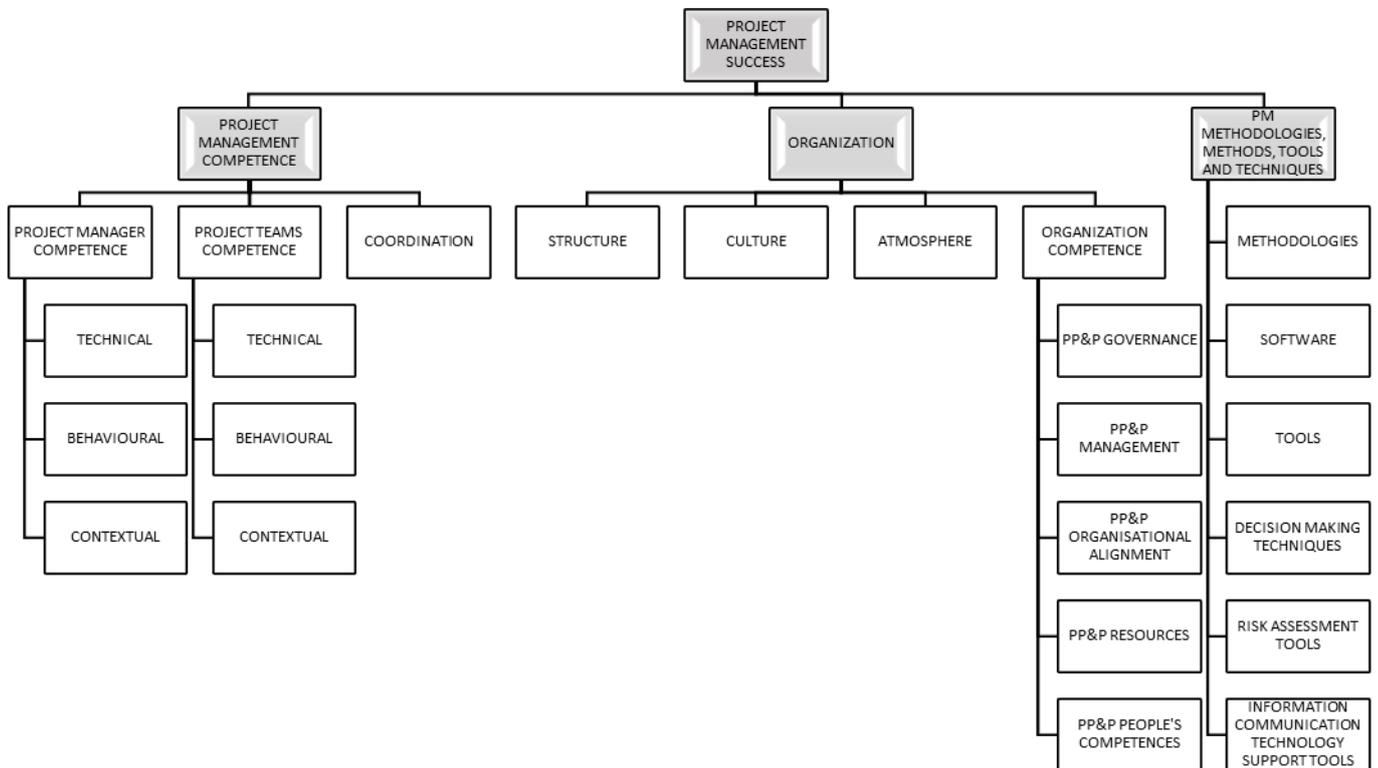


Figure 0-2 Project Management Success Factors (Radujković and Sjekavica, 2017)

Another essential publication identifying the critical success factors of projects and its management is that by Alotaibi and Al Nufei (2014, p.329), which used a critical appraisal of secondary data on project management. The results of the review revealed the essence of the roles of project managers and the project team, alongside their compliance with rules and processes, the quality of the services provided by the subcontractors, and the support of the senior management. These were regarded as crucial for the overall success of projects and their management. But as time changed, the critical factors also change; hence, this is why Alotaibi and Al Nufei (2014) cited other elements and factors that should be taken note of. These are the factors that concern the size and the value of the project, the uniqueness of the project activities, project life-cycle, density, and the urgency of the project network. Other factors are related to the project manager, such as the ability to delegate authority, ability to

trade-off, to coordinate, competence, commitment, perception of role and responsibilities.

Different factors affecting the environment have also been cited as they can make the project challenging or help guide effective implementation. Such factors are “political environment, economic environment, social environment, technological environment, nature, client, competitors and sub-contractors” (Alotaibi and Al Nufei 2014, p.329).

Straightforward suggestions and recommendations concerning what makes up a successful project were also noted as key steps, such as (1) identifying the business case, (2) defining the project, (3) closing the project, and (4) learning lessons (Little, 2011). Other notable suggestions were offered by Palmer (2018) in the online project management magazine.

These include smart people, smart planning, open communication, careful risk management, and strong project closure.

3.4. Project planning phase and success factors

Planning in projects is an essential and crucial part of the entire process. Planning marks the beginning of any project before it can be implemented. Therefore, it is essential to identify what planning as a phase in project management is all about, alongside the different factors that can affect its success. Thus, a project cannot be done without planning; more so, a project will not be completed without planning measures. It is, therefore, essential to understand what these concepts are about.

According to Watt (2012), project planning is regarded as the ‘heart of the project life cycle’, where it tells the direction and means of going in that direction. It is the phase where project plans are detailed and the project schedule is created. The plan helps the project team in the processes of implementation and closure. At the same time, project planning aids in managing time, cost, quality, changes, risks and other possible issues. Planning also aids in

controlling staff and external suppliers to guarantee on-time project delivery within the identified budget and timeframe.

Watt (2012) also pointed to project planning as the most challenging stage a manager can encounter, considering the educated guess needed concerning the staff, resources, budget and equipment required for the completion of the project in the long run. Other essential activities required in the planning stage are related to communication and procurement. Besides these, the primary purposes of planning in projects include (1) establishing business requirements, (2) establishing costs, schedule, list of deliverables, and delivery dates, (3) establishing resource plans, and (4) acquiring management approval to proceed to the next stage or phase. More importantly, the following are considered as the fundamental processes for planning projects:

1. Scope planning – this specifies the in-scope requirements for the work breakdown structure (WBS) of the project to be created and facilitated;
2. Preparation of WBS – this involves breaking down the project into tasks and sub-tasks;
3. Development of project schedule – this covers the listing of the entire programme for the activities and also consists of detailing the sequence and implementation;
4. Resource planning indicates the person who will perform the work or duty at a specific point in time, and if any special skills or attributes are needed to complete the project tasks;
5. Budget planning – this specifies the budgeted cost to be incurred in the project to ensure completion;
6. Procurement planning – this focuses on acquiring or negotiating with vendors outside the company via subcontracting;
7. Risk management – this involves planning for potential risks while considering optional

contingency and mitigation strategies;

8. Quality planning – this covers the assessment of quality criteria to be used for the project;
9. Communication planning – this pertains to designing a communication strategy involving all project stakeholders.

Meanwhile, Loudon (2012) noted that the project planning process is based on the completed work during the initiation process. It can refine the project objectives and the activities to be completed in a project. The main output of the planning process is called the ‘project plan’, which refers to the complete document outlining the approaches and measures undertaken for the completion of a project’s objectives. Once approved, the project plan serves as the baseline of the actual project performance and as the reference point for the whole project. Clearly, the project plan defines the project scope and describes what the project is and what it is not. One needs a WBS to define the scope, as mentioned earlier. A WBS is a hierarchal decomposition of all the required work and it is needed to complete the project. It also presents manageable breakdowns of the project, as in the example of employing a new clinical practice, which includes categories like reviewing evidence, documenting practices, testing and verifying practices, training staff, and disseminating the practice. Each of these categories can also be subdivided into specific tasks. So, staff training can be divided into identifying trainees and sending them invitations, conducting the training, and documenting the training.

Different factors can contribute to the success of projects. One is project planning. Naeem *et al.* (2018) looked into the effects of project planning on the success of projects, with the mediating role of risk management and the moderating role of culture. Hypotheses were formed and survey questionnaires were acquired from 100 project managers. By analysing the relationship regression and correlation techniques, the findings of the study were that

there was a positive relationship between project planning and project success. Effective project planning can enhance project performance, which can lead to successful projects. It is also essential to consider the risk management process as it can contribute to various elements of project success – confirming the positive association between project risk management and project success. Risk management aids in the exploration of new ideas by minimising the risk impacts on the project and can accomplish the project goals. Even more so, planning for the analysis and management of risks proactively improves the adaptability, flexibility and robustness of a project. Again, these help to bring in successful projects.

Project managers and teams must, therefore, work hard to ensure effective and efficient planning to ensure the success of planning. Serrador (2012) reviewed articles to locate the link between planning and project success in different industries, such as technology and construction. Some of the conclusions served as the core findings, such as the following:

- Pressures and challenges are present in the project environment and can reduce the time spent planning, rather than increasing it.
- The levels of planning completeness are positively linked with project success (especially in the construction industry).
- Planning is correlated with project success – both in project efficiency and overall project success.

Construction projects are complex and require effective planning methods and processes. In the study by Al Hawarneh, Bendak and Ghanim (2019), dynamic planning was proposed as an option for the construction site layout design process. An improved model was developed, where the least potential costs in the relocation, dismantling and setup of temporary facilities could be generated in a site layout. A realisation in the study was that construction safety

served as the most critical planning aspect, along with cost in the site layout design process.

Another industry studied was the prefabrication housing production (PHP), by Li *et al.* (2018), wherein critical success factors (CSFs) were studied and revealed, particularly in the planning and control of PHP projects. The authors identified 23 factors from the literature review, pilot studies and in-depth interviews conducted with experts in the construction industry. At the same time, the questionnaire survey was administered to contractors, designers and manufacturers in China. The results showed that the top five CSFs in the PHP industry were as follows:

1. Designers' experiences of PHP;
2. Manufacturers' experiences of PHP;
3. The ability of the project manager to solve problems;
4. The maturity of the techniques used in the detailed design phase; and
5. Persistent policies and incentives.

Li *et al.* (2018) also categorised 23 CSFs through exploratory factor analysis, which include (1) technology and method, and which played a dominant role; (2) information, communication and collaboration; (3) external environment; (4) experience and knowledge; and (5) the competence of the project manager. These findings are helpful to project designers and managers as criteria for effective planning and control of PHP and to facilitate successful implementation.

Indeed, the planning phase can refine the objectives of a project, which are acquired or developed during the initiation phase. It also covers the planning steps needed to accomplish the said objectives and identify certain activities and resources further. After the goals are recognised, they should be articulated, with a detailed and in-depth scrutiny of each

recognised goal. Through such examination, the understanding of the objectives can change. But often, the act of describing something precisely provides a better understanding of what the team is looking at or envisioning. Such kinds of articulation serve as the basis for developing the project requirements. A well-articulated plan means that objectives can be concretely described or measurable in some terms. It also identifies ways of how to accomplish such goals (Watt, 2012).

3.5. Stakeholder management

Among major organisations, stakeholder management is seen as an essential discipline that can produce results that are repetitive and predictable. The methods which are used today in project stakeholder management are analytic and usually require automated tools. Over time, both practice and study have been considered as two methods in which project stakeholder management is implemented. The practices in project stakeholder management that have been evident since ancient times form the framework and techniques that we use today.

Every business is changing its strategies to innovate continually. In this sense, project management is regarded as a disciplined process methodology that yields a high value in terms of budget, schedule and functionality. Working with different stakeholders on large-scale projects can be very challenging in terms of attitudes and expectations. Thus, project managers need to know and understand how to deal with and manage different stakeholders to be able to manage innovative, large-scale projects.

Looking at the project management literature, one can see that stakeholder management is considered as an essential part of projects, as has been mentioned in a considerable number of articles. However, Satterfield, Stroud, and Shivers-Blackwell (2006) point out that there is a lack of research in the field of stakeholder management process and research that applies

stakeholder theory. In contrast, Brugha and Varvasovszky (2000) note increasing referencing to the stakeholder and the uses of stakeholder analysis in management. Similarly, Littau, Jujagiri and Adlbrecht (2010) found that stakeholder trends and the consideration of stakeholder theory are increasing within project management research and practice.

Every project involves stakeholders who have huge impacts on the success of projects. To have a better understanding of stakeholder management, a definition of what a stakeholder is should be in place. Freeman (2010) identifies stakeholders as ‘any group or individual who can affect or is affected by the achievement of the organisation’s objectives’. This definition is considered as a classic one and the broadest definition in the literature. Vogwell and Everest (n.d.) define stakeholders as those who have a stake or interest in a project: they will be affected by and benefit from it. Stakeholders are individuals or groups affected by an entity or task directly or indirectly (Sutterfield, Stroud and Shivers-Blackwell, 2006). Based on the definitions, stakeholder management is an iterative process that requires the project manager in a communication plan and a set of actions for the life of the project (Forman and Discenza, 2019). Stakeholders can be categorised as primary or internal stakeholders and secondary or external stakeholders.

3.5.1 Definition of stakeholders

Stakeholders refer to any individual or group that can affect or get affected by the materialization of an organization’s objectives (Freeman, 1984). Similarly, stakeholders pertain to individuals, groups and organizations that have interest in the processes and results of company and whom it depends for the attainment of its goals (Freeman, Harrison and Wicks, 2007). Also, stakeholders pertained to ‘individuals or groups that can affect the organization’s attainment of objectives or who are also affected by the achievement of an organization’s objectives’ (Freeman and Reed 1983, p. 91). Hence why stakeholders are

‘persons or groups that have ownership rights or interests in a corporation and its activities in the past, present or future’ (Clarkson, 1995, p. 106). Donaldson and Preston (1995) emphasized that stakeholders are defined by their legal or valid interest in an organization, which implies two things: (1) claimants or those with legitimate interests are known and identified; and (2) all the interests of the stakeholder groups have at least a degree of intrinsic value. The direct examples of these stakeholders are employees, managers, suppliers, customers, and shareholders, which are greatly involved in the value producing processes of the firm (Harrison, Freeman and Sá de Abreu, 2015).

Stakeholders play important roles in the success of businesses. For several years, creating long term and good relationships with stakeholders has become one of the focus of organizations. According to Benn *et al* (2016), value creation for stakeholders, not just for customers, must become the focus of organizations because of their significant influence on management actions and decision making. As posited by the stakeholder theory, success can result from advocating simultaneous focus on the legitimate interests of all involved and appropriate stakeholders (Driessen *et al* 2013). Thus, it is important to have knowledge and understanding about stakeholders in order to determine the significance of their influence and involvement in making decisions and developing strategies within organizations (Plaza-Ubeda *et al* 2010). Generally, there are a number of definitions of stakeholder. Benn *et al* (2016) discussed various definitions of a stakeholder which is discussed in Table 3-3 below.

Table 0-3: Definitions of a Stakeholder, Adapted from Benn *et al* 201

Freeman and Reed 1983	A stakeholder can be described as an individual or group of individuals who can affect the achievement of organizational objectives or vice versa.
Alkhafaji 1989	Groups of individuals to whom organizations are responsible for.
Thomson, Wartic and Smith 1991	Stakeholders are group of individuals in relationship with an organization.

Clarkson 1995	Stakeholders are individuals or groups that have or claim ownership, rights or interests in organizations and their activities in the past, present and/or future.
Hill and Jones 1992	Stakeholders are constituents with legitimate claim on firms.
Carroll 1993	By virtue of legitimacy, individuals or group of individuals can be considered as stakeholders wherein legitimacy can include power.
Mainardes <i>et al</i> 2011	Stakeholder is a term widely used in business, media and government in relation to academic circles with a number of proposed decisions.
Fassin 2012	Stakeholders are associated with strategic stakeholder management due to their impact on organizations through their actions and decision making.

The definitions highlighted in table are just some of the stakeholder definitions proposed and there are still a number of definitions from different literatures that can be explored.

However, in analyzing the definitions in the table, a common theme can be generated – stakeholder can be individuals, groups or institutions that affect organizational actions and decisions and can be affected by the achievement of organizational objectives. As highlighted by Matuleviciene and Stravinskiene (2015), having good and strategic relationship with stakeholders can contribute to profitability of organizations based on dependency on certain resources. This means that stakeholders are considered business partners who have influence over the future of organizations toward organizational success.

According to Jeffrey (2009), having meaningful engagement with stakeholders can add value to organizations by contributing to promoting their positive futures such that this strategy is considered justifiable in relation to money and effort towards achieving organizational success. Thus, it is important to have a better understanding on the influence of stakeholders on organizational success particularly in terms of project completions (Liang *et al* 2017). This suggests that stakeholders play important roles in the influencing success of projects and organizations.

In line with this, stakeholders can be classified as primary and secondary stakeholders. As explained by Benn *et al* (2016), primary stakeholders are those with direct relationship with organizations wherein their continuous participation are needed in order for organizations to survive. The same authors described secondary stakeholders as those who can influence and/or affect organizations but with limited engagement in organizational activities which are not essential for the survival of firms. Thus, stakeholders can refer to individuals or group of individuals who can affect and/or be affected by actions of organizations or entities can be impacted by the results of which they have at stake such as project stakeholders and third party stakeholders (Gaur 2013). As such, power and legitimacy are considered as the core attributes of the effective identification of stakeholders (Benn *et al* 2016).

Who are the stakeholders? They can be the owners, corporate managers, the local communities, the customers, employees and suppliers among others. Stakeholders are important to organizations in as much as stakeholders benefit from organizations as well. According to the stakeholder theory, managerial decisions must be made by taking into consideration the interests of all stakeholders in organizations (Benn *et al* 2016). Thus, taking stakeholders into account in terms of making corporate decisions and developing strategies has become a valuable strategic resource towards increasing competitive advantage (Plaza-Ubeda *et al* 2010). Therefore, stakeholder integration has become a valuable strategic approach in stakeholder management among corporations particularly in the modern time.

3.5.2 Classifications of stakeholders

Different classifications of stakeholders can be found in literature. But for this study, only the two core classifications will be discussed: external or internal.

3.5.2.1 Internal stakeholders

Carroll (1989) distinguished stakeholders as primary or secondary. Apparently, primary stakeholders are also called internal stakeholders. Primary stakeholders are those actors who are into direct and contractually-determined relationship with the company and the so-called contractual stakeholders. Clarkson (1995) as well used the term 'primary stakeholder' and 'secondary stakeholder', and defined primary stakeholders as 'those without continuing participation cannot make a corporation survive or sustain' (p. 106). Similarly, Gladden (2007) regarded internal stakeholders as those 'persons and groups who have contractual or legal obligation to the project team; and holds responsibility and authority in managing and committing resources based on schedule, cost and technical-performance objectives' (p. 153).

This group is basically composed of the shareholders, employees, suppliers, customers, the government, and communities, which can enforce taxes, regulate organizational activities, and afford infrastructure (Benn, Abratt and O'Leary, 2014). Managers are therefore essential in creating value for each stakeholder group for the relationship and stakeholder retention to continue (Clarkson, 1995). The group as well includes designers and contractors, apart from the people inside the project (Newcombe 2003).

3.5.2.2 External stakeholders

In the terms of Carroll (1989), the secondary stakeholders or external stakeholders combine actors located at the borders of the firm and who can be influenced by its actions without having any contractual connection. In a similar manner, Gladden (2007) expressed how external stakeholders as well refer to persons or groups having strong interest in a project but have no responsibility or formal contract obligation. Clarkson (1995) as well defines secondary stakeholders as those who affect or are influenced by the corporation, but do not engaged in transactions with the corporation and are not important for survival. This group belongs to the informal project stakeholder organization, such as competition, media, support

groups, and trade associations.

3.5.3 Justification for stakeholder management

The rationale for stakeholder management seeks to identify the levels where internal stakeholders permit external stakeholders to participate in the stakeholder management activities. It also involves the reasons and motivation of stakeholder management in the construction industry, which is based on the presented benefits of stakeholder management in the construction industry. Some of these advantages included improving the success of projects (Chinyio and Olomolaiye, 2010) and reducing risks of public opposition (Leung and Olomolaiye, 2010). On the internal side, (Chen, Hubbard and Liao, 2013) concluded, after studying PPP in China and the stakeholders' opposition towards such projects, that stakeholders were not involved in the decision-making process. The rationale of the internal stakeholder management is therefore important in identifying the level where external stakeholder will be involved or committed. Their participation levels as well affect their actions and responses towards PPP projects.

3.5.4 Roles of project partners in stakeholder management

Project partners have important and relevant roles to portray in stakeholder management. Some of these roles could be Molwus *et al.*'s (2014) findings, which indicated the need for project actors and internal stakeholders to collaborate together in managing external stakeholders, particularly in different phases of the project. Such finding highlighted that stakeholder management can be covered by different actors, based on the stage of the project, but not all internal stakeholders can get involved in all project phases. The clients were also found to be the best stakeholder in coordinating and managing stakeholders in all project phases. For De Schepper, Dooms and Haezendonck (2014), participation of external

stakeholders in the stakeholder management exercise is essential to the whole engagement exercises and activities. Bickerstaff, Tolley and Walker (2002) found the following as the key principles that enable effective stakeholder management:

- Inclusivity – Capacity to include citizens and the flexibility of the participation;
- Transparency – Extent where results of the participation process are clearly reported to the participants;
- Interactivity – Levels and types of interactions between the public authorities and the citizens; and
- Continuity – Level where participant process is enduring throughout the whole project.

3.5.5 Roles of project partners in stakeholder management

In the existing research literature on PPP, stakeholder management remains to be a key factor for successful PPP. In the CIB Research Roadmap Report by Akintoye and Kumaraswamy (2016), it was noted that one of the frequently overlooked fundamentals that contribute to the emergence of issues and challenges on PPP projects points to fact that PPP has become more complex compared to those traditionally-procured infrastructure. Because of the large scale and longer time duration for completion, uncertainties and risks are significantly greater in PPP projects. Taking into account the long duration for project completion, it is possible for the occurrence of major changes in the identified needs, the demands of the market and in the technology, which further have implications on the completed definitions, quantifications and specification of the user requirements during the planning stage of the project. Because of this, it is necessary to identify and prioritize the stakeholders across the entire phases of the project, and to have an effective and carefully designed stakeholder relationship management.

3.6. Stakeholder theory

In discussing stakeholder management, particularly in handling mega projects, stakeholder

theory presents the most relevant theory for implementing stakeholder management practices. The theory separates stakeholders from non-stakeholders by answering this question: which group of stakeholders requires attention (Mitchell, Agle and Wood, 1997)? As discussed by Jamali (2007), stakeholder theory offers a revolutionary way of organizing the organisational responsibilities of a company. The theory was made famous by Freeman in the mid-1980s. Stakeholder theory aids companies in organising these responsibilities by suggesting that shareholder needs will not be satisfied without satisfying the needs of the stakeholders to some degree.

Stakeholder theory is 'practical, efficient, effective, and ethical way of managing organizations' in a highly multifaceted and challenging environment (Freeman, Harrison and Wicks, 2007, in Harrison, Freeman and Sá de Abreu, 2015, p. 859). The theory was originally created by R. Edward Freeman in 1984, under business ethics and organizational management, which talks about morals and values in managing an organisation. Since then, the theory has become a major point of issue for studies related to business ethics and the sustainability of shareholders' wealth.

Stakeholder theory has evolved over time in different stages. According to Elias, Cavana and Jackson (2002), stakeholder theory developed into four different fields after its founding in 1963: corporate planning, systems theory, corporate social responsibility and organisation theory. The diversification of stakeholder theory was called 'classical stakeholder literature'. Firstly, Ansoff (1965) rejected stakeholder theory as the terms 'responsibilities' and 'objectives' were not similar as those under the theory. The stakeholder theory's formative stage was based on survival. By the 1970s, different stakeholder theory concepts emerged, such as Hussey and Langham's (1978) model for organization, its environment and the stakeholders, which are used for corporate planning process. In the aspect of systems theory,

Churchman (1968) can be cited, wherein the theory was aimed to address social issues in open systems. The systems model underscored participation and that problems must be defined by synthesis and analysis (Elias, Cavana and Jackson, 2002).

3.6.1 Perspectives of stakeholder theory

The stakeholder theory is also explained by different perspectives or its stakeholder model. This model, as shown in the figure 3:4 below, is made up of the normative perspective, instrumental perspective and descriptive perspective. The following section elaborates the three perspectives in detail.

3.6.1.1 Normative perspective

The normative perspective is regarded as the heart of stakeholder theory and usually inclined towards moral standards (Amaeshi, 2010). According to Donaldson and Preston (1995), stakeholder theory embraces that stakeholders have legitimate participation in corporate activity, based on the interest of the corporation and that they have intrinsic value. Therefore in a broad sense, stakeholder theory is managerial as it allows predictions to be made and makes recommendations that establish stakeholder management. As for Smyth (2008), the ethical consideration in stakeholder management is needed, instead of utilitarianism, where organizations manage stakeholders based on personal interest. The author suggested that more and ethical dimension should be highlighted, which implies that interests of the stakeholders can be addressed by nurture to eventually remove feelings of being insignificant or unaccepted.

Reed (2002) distinguished three basic normative stakes that reflects the realms of morality, ethics and legitimacy. Each of them can also be delineated in terms of obligations implied on certain stakeholder groups and are considered fair economic opportunity, political equality

and authenticity. Each of the said stakes are entrenched in a certain interest of the stakeholder, which can be justified by certain type of normative argument and based on particular status that the stakeholder has claimant. These details are shown in the table 3-4 below.

Table 0-4: The Normative Bases of Stakeholder Claims (Reed, 1999)

Relevant Interests	Normative Claim	Stake	Normative Realm of the Stake	Stakeholder's Status as Claimant
Influencing norms and policies of public interaction	Public interaction should be coordinated on the basis of legitimate law	Political Equality	Legitimacy	Citizen
Securing material needs, pursuing economic opportunities	Economic structures and practices should reflect a generalizable interest	Fair Economic Opportunity	Morality	Natural Person
Developing and sustaining individual and communal identity	Community members should live in accord with the norms and values of their chosen communities	Authenticity	Ethics	Community, Community Member

3.6.1.2 Instrumental perspective

The stakeholder model is also considered instrumental, wherein managing stakeholders must lead to attainment of business goals, such as profitability, growth and sustainability.

According to Damak-Ayadi and Pesqueux (2005), instrumental stakeholder theory was advocated by T.M. Jones in 1995 and holds the main idea on everything else being equal.

This implies that firms practicing or implementing stakeholder management will perform better as reflected in growth, stability and profitability, among others. Certain results could be acquired if certain behaviours are espoused or adopted. It also permits testing of connections between reaching business goals and managing stakeholders.

In order to acquire the desired goals, Amaeshi (2010) suggested that instrumental perspective examines and considers impacts of stakeholder management and predicts and describes

effects of the postulated behaviour. Instrumental perspective also intends to address what happens if certain or deliberate measurements between the cause of action and effects of the action are undertaken (Jones, 1995).

3.6.1.3 Descriptive perspective

The stakeholder model is considered descriptive where it offers language and concepts in describing corporations, such as how they work and the effects towards the wider environment. Donaldson and Preston (1995) underscored that the theory is what one locates at the core of cooperation and competition situations and each has intrinsic value. It also explores and elaborates the past, present and the future status and relationships of organizations and their stakeholders, based on scientific evidence. In particular as mentioned, the theory describes the methods and techniques used in managing stakeholders. For instance in construction projects, stakeholder management involve models, frameworks and processes in managing construction project stakeholders (Cleland and Ireland, 2007; Yang *et al.*, 2014).

According to the theory, a stakeholder can be identified by their attributes. The attributes of stakeholders are (1) stakeholder power, (2) stakeholder legitimacy and (3) urgency. A stakeholder can possess one, two or all of the three attributes. However, Ayuso, Ángel Rodríguez and Enric Ricart (2006) claim that the theory can only explain how to identify and engage stakeholders rather than align their interests to create and maintain long-term value.

3.6.2 Dynamics of stakeholder theory

Stakeholders can affect an organization of any type, industry or sector, which represents ecosystems of competing needs and expectations (Koplyay *et al.*, 2016). In this case, conflicts and progress emerges in the group, where real decisions are made within and outside the organization. Elias, Cavana and Jackson (2002) noted that the dynamics of

stakeholders are considered interesting attributes, considering how diverse stakeholders may change over time. For example, new stakeholders could enter, while some others leave or no longer wanted to be involved in the process. Freeman (1984) acknowledged the dynamics of stakeholders as in reality – stakeholders do change over time; including their stakes based on the strategic issue.

In discussing stakeholder dynamics, Mitchell *et al.*'s (1997) work should not be missed, as they proposed that stakeholders can be identified based on possession or attributed possessed of one more three relationship features – power, legitimacy and urgency. As presented and discussed by Elias, Cavana and Jackson (2002), Mitchell *et al.* (1997) underscored how a party to a relationship can acquire access to utilitarian or normative ways as they have power. Because of this, they can impose its will in the relationship. Under legitimacy, Suchman (1995) was cited, upon presenting a definition of the term, wherein legitimacy generally assumes that actions of certain 'entities are desirable, proper and suitable in some socially-constructed system of norms, beliefs, values, and definitions' (Elias, Cavana and Jackson 2002, p. 304). Mitchell *et al.* (1997) as well included urgency as one attribute of the stakeholder theory, which can be defined as degree where stakeholder calls for immediate attention. Including urgency as dynamic component to the process allows salience in the minds of the managers. Combining these attributes leads to a typology of stakeholders shown in the Figure 3-3 below.

Based on the above-mentioned typology, a stakeholder possessing only one of the three attributes is called 'latent stakeholders' and has low stakeholder resilience. If only one attribute is present in power, they are called 'dormant stakeholders.' If only characteristic is found in legitimacy, they are called 'discretionary stakeholders' and 'demanding stakeholders' if only one in urgency. If two attributes are present, stakeholder salience is

moderate and this will be called ‘expectant stakeholders.’ Among the said expectant stakeholders, those with power and legitimacy would be termed ‘dominant stakeholders’ and those with both power and urgency are labelled ‘dangerous stakeholders.’ In the case where three attributes are existent, they will be called ‘definitive stakeholders.’ As illustrated in the figure, stakeholders can shift from one class to another, depending on the increase or decrease of the salience of the stakeholders, which occurs by losing or adding one or more of the attributes. (Elias, Cavana and Jackson 2002).

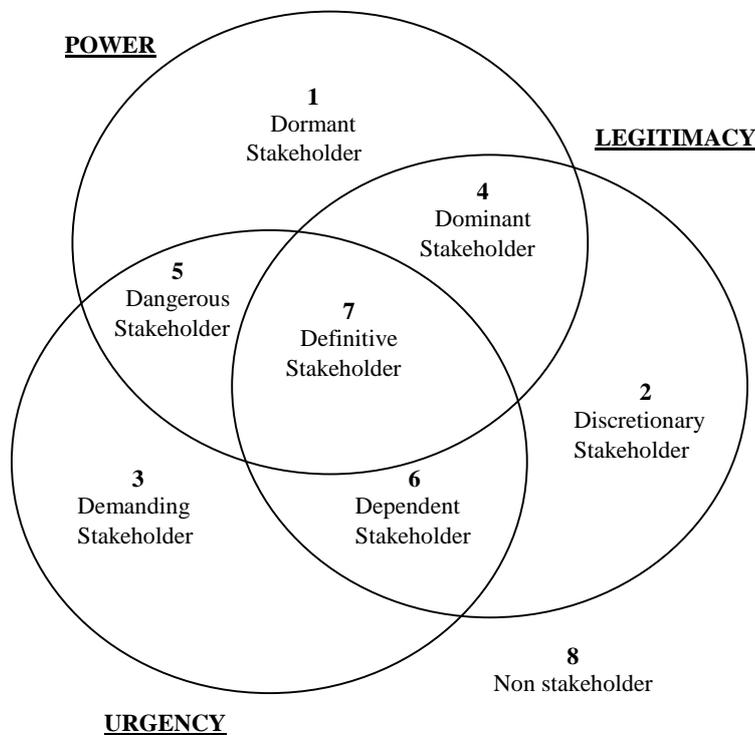


Figure 0-3 Stakeholder typology – One, two, or three attributes (Mitchell, Agle and Wood, 1997)

3.7. Stakeholder critical success factors and challenges

Stakeholder management has become a subject of interest in businesses in different fields particularly in project management. Different industries have different levels of adaptation of stakeholder management, many of which are highly adaptive while some have poor stakeholder management record such as in the construction industry (Plaza-Ubeda *et al*

2010). For example, the construction industry has been having problems in stakeholder management such as inadequate engagement of stakeholders, having unclear objectives, difficulties in identifying stakeholders and poor communication with stakeholders among others (Yang *et al* 2009). In addition, Quinlan *et al* (2013) identified the different challenges in the facilitation of stakeholder engagement including lack of information, lack of time and/or available skills, weak relational ties, issues on accountability, lack of legitimacy of stakeholder engagement activities and poor communication among others. Similarly, Motuapuaka *et al* (2015) identified challenges of stakeholder engagement to include time, lack of training and resources, lack of skills and talents, balancing multiple inputs and lack of understanding about stakeholders among others. From these studies, common challenges in stakeholder engagement and management include time, lack of skills and talents, poor communication, and lack of understanding on stakeholders.

Despite these identified challenges in stakeholder engagement and management, it is also important to understand stakeholders' critical success factors. According to Yang *et al* (2009), various sets of critical success factors have been suggested in different studies with regard to the aspect of stakeholder management. In the study of Yang and colleagues (2009), there were fifteen (15) critical success factors associated with stakeholder management including managing stakeholders with social responsibilities, formulating clear mission and objectives, appropriate identification of stakeholders, understanding of stakeholders' interests, exploring stakeholders' needs and constraints to projects, effective assessment of stakeholders' behavior, accurate prediction of stakeholders' influence, assessing stakeholders' attributes, analyzing conflicts and coalitions among stakeholders, compromising conflicts among stakeholders in effective manner, keeping and promoting good relationships, formulating appropriate strategies on stakeholder management, predicting

stakeholders' reactions for strategic implementation, analyzing change of stakeholders' influence and relationships during project process and communicating with and engaging stakeholders properly and frequently. On another note, the study of Eyiah-Botwe *et al* (2016) categorized critical success factors for effective stakeholder management in to seven (7) categories including stakeholder identification, stakeholder engagement, stakeholder assessment (classification and prioritization), implementation, monitoring and evaluation, pre-stakeholder identification, pre-conditions and continuous support.

Moreover, Azlan *et al* (2018) identified ten (10) critical success factors for the effective implementation of stakeholder engagement including effective communication, continuous consultation, understanding the underlying intentions and behaviors, implementing strategy plans, building and sustaining good relationships, analyzing the changes, mitigating risks, compromising conflicts, understanding project success and good project governance. As explained by the same authors, these critical success factors are important towards producing desired results. Similarly, Marleno *et al* (2018) noted that stakeholder critical success factors can be categorized into four factors including contractor (top management support, availability of resources, project team), owner (payment, slow decision making, unrealistic contract duration), designer consultant (completion of contract document, quality design, price compliance) and supervision consultant (technical capability, experience and sufficiency of human resources). From literature, common themes on the critical success factors of stakeholder engagement and management include clear objectives, appropriate identification of stakeholders, understanding of stakeholders' interests, effective communication and good project governance.

3.8. Stakeholder and project success

The success of a large and complex project is often measured by the iron triangle of TCQ (time, cost, quality), but these measurements measure the performance of the project rather than the success of it. A project can be delivered on time, within the budget and with high quality, but it may fail to satisfy the stakeholders. Therefore, the view of multiple stakeholders must be considered as a project success factor (Chandra, Wiguna and Kaming, 2012; Forman and Discenza, 2015; Turner and Zolin, 2012; Yang *et al.*, 2010).

Engaging stakeholders is essential to the success of projects (Chandra¹, Wiguna and Kaming, 2012), particularly in megaprojects, because being able to engage the right people in the right way can have a huge impact or difference to a project's success. Hence, managing stakeholders can be referred to as a process of managing the expectations of individuals or groups involved in a project to drive positive outputs. Therefore, stakeholder management is crucial in megaprojects because the identification and assessment of stakeholders involved in a project can have either a positive or negative influence on its success or failure. Turner and Zolin (2012) claim that project success can be measured by the perception of clients, users, the project team and other interested parties in a different way over different timescales. For example, project participants judge success on the completion of the project (project output), unlike the operators, who decide on the success of a project in the months after its ending, depending on its business achievements (project outcome), and some stakeholders will judge the success of it years after its completion by measuring the achievement of corporate objective and business development (project impact), such as investors and financiers. The project manager and team have to forecast the success of the project through the life cycles, although the success of the project could be adequately evaluated after months or years, according to the stakeholder. Likewise, Assudani and Kloppenborg (2010) and Sutterfield,

Stroud and Shivers-Blackwell (2006) advise re-examining and managing stakeholder interest through the project lifecycle process. Turner and Zolin (2012) suggest leading performance indicators help the project manager and team predict the success of a project to enable them to make decisions to direct the project's success as judged by stakeholders. Also, these indicators will show if the project goals cannot be achieved according to stakeholders willing to commit.

One of the critical elements in fostering a successful project is the ability of the project managers to effectively manage relationships among the involved stakeholders (Free Management E-books, 2014; Turner and Zolin, 2012). In an investigation into stakeholder influence on project success, Chandra1, Wiguna, and Kaming (2012) found that stakeholder psychological empowerment, impact and engagement have a significant influence on project success. This consists of processes that are required to identify the people, groups or organisations that can potentially have a significant impact on a project. Also, managing stakeholders encompasses analysing and setting proper expectations and developing 'appropriate management strategies for effectively engaging stakeholders in project decisions and execution' (Free Management E-books, 2014, p. 4), communication, and setting project objectives and project priorities (Yang *et al.*, 2010).

Furthermore, Assudani and Kloppenborg (2010) define three main actions that must be conducted by the project manager to ensure the success of the project: identifying and determining all and important stakeholders; building a relationship with stakeholders and managing their expectations; and ensuring effective communication with all stakeholders. The table 3-5 below illustrates the project success factors according to eight different types of stakeholder.

Table 0-5: Ways of judging project success over different time scales (Turner and Zolin, 2012)

Results Timescale	Project Output End of Project	Project Outcome Plus Months	Impact Plus Year
Investor or owner	Time Cost Feature Performance	Performance Profit Reputation Consumer loyalty	Whole life value New technology New capability New competence New class
Project executive or project sponsor	Feature Performance Time and cost	Performance Benefits Reputation Relationships Investor loyalty	Future projects New technology New capability New class
Consumers	Time Price of benefit Features	Benefit Price of product Features Developments	Competitive advantage Price of product Features Developments
Operators/users	Feature Performance Documentation Training	Usability Convenience Availability Reliability Maintainability	New technology New capability New competence New class
Project manager and project team	Time Cost Performance Learning Camaraderie Retention Well-being	Reputation Relationships Repeat business	Future business New technology New competence
Senior supplier(design and/or management)	Completed work Time and cost Performance Profit from work Safety record Risk record Client appreciation	Performance Reputation Relationships Repeat business	Future business New technology New competence
Other suppliers(goods, materials, works or services)	Time Profit Client appreciation	Reputation Relationships Repeat business	Future business New technology New competence
Public	Environmental impact	Environmental impact Social costs Social benefits	Whole life social Cost-benefit ratio

Additionally, Sutterfield, Stroud and Shivers-Blackwell (2006) suggested a stakeholder management strategy framework after analysing a United States Department of Defense project that was terminated as a result of ineffective identification and management of the project stakeholders. The framework illustrated in the figure 34 consists of nine steps. These steps enable the project/programme manager to elicit feedback on a regular base from the different stakeholders. Most authors point out the importance of collecting and analysing

stakeholder requirements throughout the project life cycle, a continuous feedback process and effective communication.

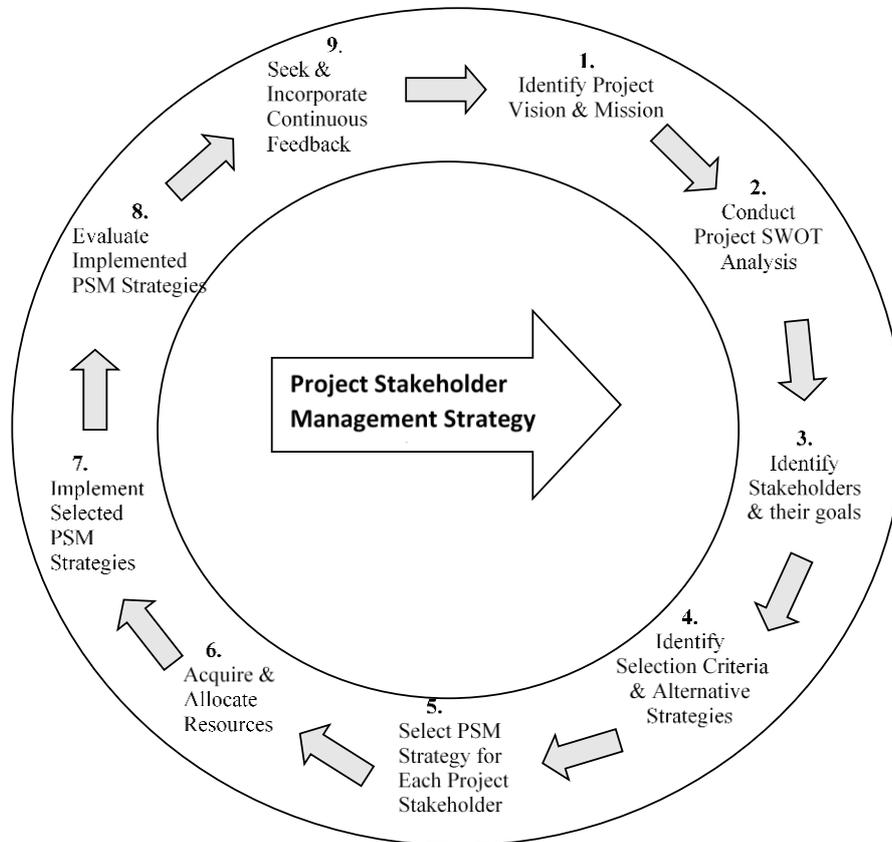


Figure 0-4 Stakeholder management strategy framework (Sutterfield, Stroud and Shivers-Blackwell,2006

3.9. Stakeholder analysis

Stakeholder theory is an essential framework that can guide the analysis of stakeholder management. This includes being able to balance the interests and power of each stakeholder and being concerned about maximising wealth, as well as having the ability to manage all people in an effective and unbiased manner and putting moral responsibilities at the highest possible level (Jensen, 2010; Orts and Strudler, 2009). Brugha and Varvasovszky (2000) and Vogwell and Everest (n.d) asserted that once the stakeholders are identified, it is necessary to

prioritise them by mapping out powers or interests in the project. As such, it is essential to have a better understanding of the values and issues of the involved stakeholders to enable a smoothly flowing project implementation.

Apparently, through the help of the power-interest matrix, project managers are able to assess and manage the roles of stakeholders in a project. It shows the interest of each identified stakeholder in achieving a project’s objective and the stakeholder power that might be used by them to influence the achievement of the project objective (Demir *et al.*, 2015). Based on the power-interest matrix, as shown in Figure 3-5, Ackermann and Eden (2011), Demir *et al.* (2015), and Vogwell and Everest (n.d) identified stakeholders’ positions on the grid which enable the project manager to understand how the relationship and communication can affect the project. Also, it shows the project manager the most appropriate actions that can be taken with the stakeholders.

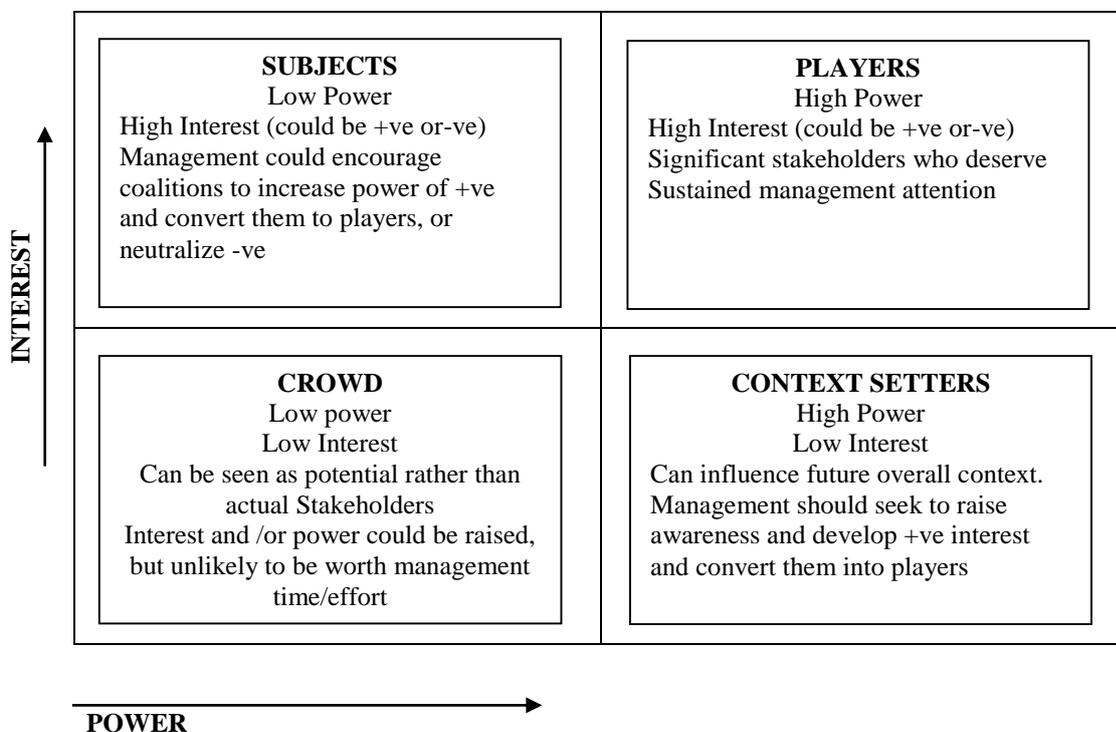


Figure 0-5 Outline of the stakeholder power-interest grid (Ackermann and Eden, 2011)

Therefore, stakeholder management has proven to be an essential aspect of project management because how stakeholders are managed can have huge impacts on a project's phases and outcomes. According to Moore (2011), actively managing the expectations of stakeholders can reduce the risk of project failure caused by unresolved issues. In this regard, the same author has suggested that the most effective tools and methods that can be used to manage stakeholders effectively include communication methods, interpersonal skills and management skills.

Stakeholder management means developing valuable relationships among involved stakeholders. As such, an emphasis on the role of project managers in creating an open and supportive environment for all interested parties is critical to the success of a project. This highlights how stakeholders should also have an opportunity to know the threats and the opportunities that can impact on the success of a project to allow them to develop effective strategies to promote success. Conversely, having a successful project means interacting and communicating with the stakeholders effectively with the aim of maximising resources and preventing risks that may be presented by conflicts of interest. In this sense, effective communication is needed. That is how project managers can effectively resolve conflicts and issues to reach a project balance. To monitor the effectiveness of communication throughout the project, key stakeholders and the project team must be adequately informed and motivated to promote active involvement. Regular communication is crucial to the success of any project and programme. In that regard, consistent communication processes create a valuable record of the project's life. Hence, stakeholder management is essential for enabling project managers to manage a diversified group to reduce risks and enhance opportunities.

3.10. Stakeholder integration

As the concept of stakeholder engagement and management become increasingly important in the modern business world, stakeholder integration has become a valuable part of organizations' strategic initiatives. Stakeholder integration refers to involving stakeholders in the decision-making process and strategic development within organizations (Plaza-Ubeda *et al* 2010). This is rooted in the principle of the stakeholder theory suggesting that organizations that operate grounded on having trust-based and cooperative relationships with their stakeholders will gain increased competitive advantage (Heugens *et al* 2002). Thus, as suggested by the same authors, stakeholder integration is a competitive strategy that contributes to gaining increased competitive advantage by building “close-knit ties with a broad range of internal and external constituents” (p. 38).

Stakeholder integration is an essential component for projects to succeed. According to Briola (2018), the essence of stakeholder integration in attaining project goals is its capacity to identify the needs and expectations of the stakeholders. Integration itself is directly connected with the concept of teamwork, which involves an optimum work environment – a common goal, respect among team members, team solidarity and cohesion that can promote effective performance and good project outcomes. The author also suggests that stakeholder integration should be considered in the communication process of stakeholders as it serves as a critical component to accomplishing effective integration. At the same time, stakeholder integration should be embedded in the management function. In the communication viewpoint, determining the number of linkages and relationship channels out of the total number of stakeholders is essential to identifying the complexity levels of the project.

As defined by Rueda-Manzanares *et al* (2008) cited in Plaza-Ubeda *et al* (2010, p. 419), stakeholder integration is “...the ability to establish positive collaborative relationships with

wide variety of stakeholders”. Thus, Plaza-Ubeda and colleagues (2010) noted the value of stakeholder integration as a strategic capability of firms related to effective stakeholder management and engagement. Similarly, Martin *et al* (2016) noted the relevance of stakeholder integration in new product development processes of firms towards their pursuit of achieving increased competitive advantage. As explained by the same authors, stakeholder integration can become a source of competitive advantage if it is implemented based on its drivers – stakeholder identification capability, stakeholder interaction capability and stakeholder input integration capability. In relation to this, Driessen *et al* (2013) asserted that in the modern business environment, the use of recent technological advancements has opened more opportunities towards the enhancement of stakeholder integration as a strategic capability. For example, the integration of information technology to business systems contributed to increasing ease of communication and interconnectedness among stakeholders (Driessen *et al* 2013). This suggests that adoption of emerging technological advancements can aid in enhancing stakeholder integration capabilities of firms towards opening more opportunities in gaining increased competitive advantage and achieving organizational goals.

Various stakeholders have different ways of influencing organizational behaviors and activities which makes stakeholder integration an important strategic capability. Interestingly, stakeholders can have certain influence on organizations in different business settings.

According to Delgado-Ceballos *et al* (2012), stakeholders can also have significant influence on firms’ environmental settings which means that there can be a positive link between stakeholder integration and proactive environmental strategies. As explained by the same authors, organizations’ ability to address their environmental impacts can be positively influenced by their resources and capabilities. This means that stakeholder integration capabilities can have positive influence on how firms develop and implement their

environmental strategies towards addressing environmental issues. As highlighted by Delgado-Ceballos and colleagues (2012), stakeholder integration capability allows firms to build collaborative relationships with wide variety of stakeholders towards finding effective and proactive solutions to environmental concerns. Similarly, Salem *et al* (2016) suggested that firms that are able to adapt behaviors that are in line with the interests of stakeholders and those that have the ability to promote stakeholder integration positively affects dimensions of competitiveness towards improvement. This suggests that there is a positive relationship between stakeholder integration and competitive advantage among firms.

Due to the increasing importance of stakeholder integration as a strategic capability in organizations, different stakeholder integration models have been developed and adopted over the years. Every model uses different indicators of stakeholder integration to measure its effectiveness in stakeholder integration.

In the work of Plaza-Ubeda *et al* (2010), the authors proposed the use of a theoretical model using three dimensions as indicators of the degree of strategic integration – knowledge of stakeholders and their needs and demands, interaction between stakeholders and the company and adaptational behavior of the company towards its stakeholders. This means that this theoretical model is based on the importance of resource, open attitude and willingness to change in promoting an accumulative process on gaining positive effect on performance. The main advantage of this proposed model is that the dimensions used have the potential to encourage practices of stakeholder integration based on promoting competitiveness of firms. However, this model is limited in the providing firms the ability to assess incidence of certain attributes of every stakeholder thereby limiting the possibility of distinguishing the effect of organizational strategies to each stakeholder on the level of integration (Plaza-Ubeda *et al* 2010).

In line with this, Salem *et al* (2016) have developed a hypothesized model of competitiveness as measurement model for stakeholder integration. Based on their study, the authors found that adopting a multidimensional approach to stakeholder integration capability can positively influence the three dimensions of firms' competitiveness namely satisfaction, image and profits. The main advantage of this proposed model is that it can positively be adopted in the environmental domain in pursuit of gaining increased competitive advantage based on satisfaction, profitability and brand reputation. The main limitation, however, is that testing the model suggested no significant relationship between knowledge of stakeholders and the dimensions of competitiveness which is in contrast to the findings in literature highlighting lack of knowledge of stakeholders as a main challenge in effective stakeholder integration.

On the other hand, the evolution of stakeholder integration concept contributed to the development of proposed models based on modern elements. In the study of Malaeb and Hamzeh (2018), the authors proposed a stakeholder integration framework in the lean perspective. According to Maleb and Hamzeh, the special purpose vehicle (SPV) represents the private sector in a public private partnership (PPP) that combines different stakeholders which means that achieving efficient integration of the involved stakeholders is the key to ensuring successful project delivery. Thus, a framework designed with a generated list of SPV characteristics reflecting stakeholder collaboration linked with critical success factors to measure level of SPV stakeholder integration can be considered as an enabler of successful and effective stakeholder relationship management. The main advantage of this framework is the adoption of a framework based on three foundations – organization structures, commercial frameworks and operating systems and processes – towards the realization of efficient stakeholder integration. This means that the integration of the lean factor in the

stakeholder integration framework can contribute to project success in terms of the integration criteria (Maleb and Hamzeh 2018).

In relation to stakeholder integration, Martin *et al* (2016) proposed a conceptual model of stakeholder integration in new product development. The authors have proposed a framework of capabilities that organizations need in order to implement effective stakeholder integration. The proposed model is based on the integration of stakeholder capabilities including stakeholder identification, stakeholder interaction and stakeholder input integration in the new product development process. The main advantage of this proposed model is that the adoption of stakeholder integration in new product development can contribute to fostering open innovation and development of approaches that can provide aligned incentives for all parties involved (Martin *et al* 2016). Yet, the main limitation of this proposed model is its focus on external stakeholders thereby limiting knowledge that can be gained from internal stakeholders in the new product development process.

Finally, Driessen *et al* (2013) proposed a stakeholder integration framework based on modern and emerging trends particularly the emergence and adoption of advanced technologies. In particular, this proposed framework was designed to provide understanding on the different mechanisms for stakeholder integration in the context of virtual stakeholder communication. According to Driessen and colleagues (2013), engaging in virtual stakeholder communication through the integration of communication based systems can likely result to meaningful and rich stakeholder dialogue that can contribute to enhanced stakeholder integration capability. Additionally, the integration of emerging technological advancements in the stakeholder integration framework can lead to reducing redundancies and high achievement of task related objectives (Driessen *et al* 2013). The same authors identified some of the systems that can be adopted for stakeholder integration including rewards systems, stakeholder

management systems and internal virtual communities and group decision making systems among others. The main advantage of this proposed framework is allowing for the cost efficiency in organizational processes and strategic implementation as benefits of engaging in virtual stakeholder dialogue. Apparently, the use of web communication platforms or other virtual stakeholder integration systems can contribute to cost efficient manner of stakeholder integration. Yet, the main challenge is that not all organizations are well equipped to promote successful preparation for virtual stakeholder integration strategic implementation (Driessen *et al* 2013).

Based on the analyses of the proposed models, it can be argued that the combination of the virtual stakeholder integration framework and hypothesized model of competitiveness is the most suitable for organizations in the general perspective. This is because organizations are now operating in the modernized and digitized global business environment which means that the virtual stakeholder integration framework integrated with the model of competitiveness is the most suitable in pursuit of achieving sustainable competitiveness. As highlighted by Zwikael *et al* (2012), stakeholder collaboration and engagement in the virtual setting is more complex and challenging particularly in lieu of virtual projects. This suggests that the development of a more comprehensive virtual stakeholder integration model is needed in order to cope with the uncertainties and leverage on opportunities posed by the virtual integration environment. Thus, bringing virtual stakeholder dialogue into organizations is a topic that must further be explored in order to promote innovation in stakeholder integration and stakeholder management (Driessen *et al* 2013). This suggests that stakeholder integration can be explored in relation to fostering innovation in organizations in pursuit of achieving increased competitive advantage.

Stakeholder integration can lead to both organisational learning and societal legitimacy, with

the aid of developed mutually enforcing relationships (Heugens, Van Den Bosch and Van Riel, 2002). It can be driven by factors categorised as push factors, such as the expected localised benefits and the pull factors or the anticipated gains for the stakeholders (Vaquero Martín, Reinhardt and Gurtner, 2016). But before delving deeply into the association between stakeholder engagement and integration in project management, it is helpful to identify the different stakeholders in project management. For example, Briola (2018) classified the stakeholders as follows:

- Executive stakeholders – They define the strategic needs of the project and often expect that the project goals will be met;
- Business stakeholders – They represent the business requirements and needs and even work with the project team to complete the project;
- Sponsors – They lead the project according to the business perspective;
- Project manager – He or she integrates and manages all the involved project stakeholders.
- Project team – Seamlessly works with the business stakeholders; and
- Other stakeholders – They are the rest of the stakeholders who could be part of the business or project areas of the project team.

Integrating and engaging the stakeholders offer several benefits that can be helpful to the completion of the project. As the Association for Project Management (2019) has discussed, engaging stakeholders in a project can be beneficial as it increases confidence and trust across the project community. The certainty and pace of progress are also increased while an understanding of the remaining resistance can become clearer. Integrating stakeholders can also lead to more robust and comprehensive risk management. There is also a better all-round awareness of different potential circumstances, such as sustainability compliance management, market development, innovation, and strategy. An integrated process model can

also improve sustainable value creation, with stakeholders' interests becoming transparent and, indeed, being better satisfied (Heitel, Kämpf-Dern and Pfnür, 2015).

The Global CCS Institute's (2019) lessons can also be considered as it highlighted how integrating stakeholder management within the project team can strengthen the multidisciplinary viewpoints of the organisation, while also creating cross-functional teams. In a technical project, stakeholder integration aids in taking the non-technical aspects into the process of decision-making. But then again, this kind of process calls for more coordination, planning and management. Meanwhile, stakeholder management and the communication function must blend with the projects and the management of projects for them be enabled to deal with several non-technical issues, including the massive variety of stakeholder perceptions and interests. Stakeholder management has also ultimately been hailed as instrumental in creating the conditions for other project functions, such as capture, storage and transport. Other than these, integrating stakeholder management can develop social skills and empathy, apart from technical knowledge and information. The technical experts receive training in presentation, conversation and ways to cope with emotional situations ultimately. This implies that stakeholder relations are not only determined by the quality of information but massively on how personal relationships are managed.

Part of planning a project is project engagement (PE), which involves an active exchange of information and viewpoints between the government, construction professionals, the non-government organisations and the public. These are part of the project stakeholders. PE was the main focus of Yu and Leung's (2015) study, which has been widely used for measuring public opinions and acquiring support for large-scale planning and development projects. It is essential to engage diverse stakeholders as it is considered an efficient path towards more acceptable project products and the empowerment of the public by giving them more

authority in the process of decision-making. After conducting focus group interviews with four different stakeholders (PE organizers, construction professionals, interest groups and residents), seven critical PE factors were identified and categorised into three dimensions. These are summarised in the table 3-6 below.

Table 0-6: Critical PE factors (Yu and Leung, 2015)

Dimension	Factors
Social	<ul style="list-style-type: none"> • governmental support • bottom-up consultation approaches
Project	<ul style="list-style-type: none"> • project characteristics • PE programme • project information and publicity
Stakeholder	<ul style="list-style-type: none"> • stakeholder identification • representative sampling

To achieve successful stakeholder integration, Briola (2015) also proposed that a project should be developed according to three critical success variables. These variables are enumerated and shown in the figure 3-6 below.

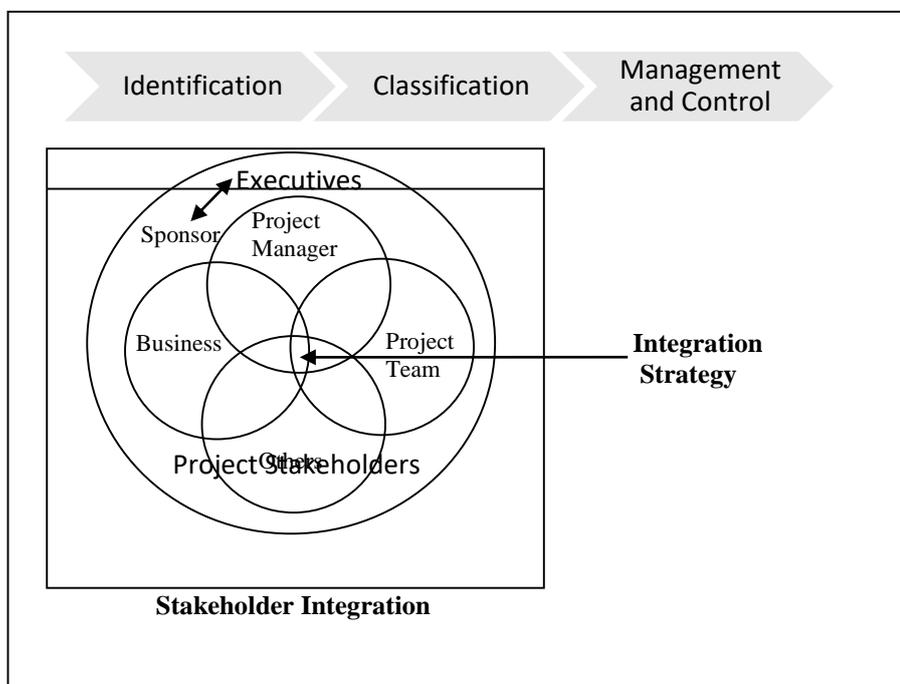


Figure 0-6 Variables of successful stakeholder integration (Briola, 2015)

- Identification – This refers to the detection of stakeholders, regardless of their degree of

involvement and influence in the project.

- Classification – This enables the design of the integration strategy of different stakeholder roles in the project execution. The design can frame the approach based on their roles, which simplifies management and control.
- Management and control – This is where stakeholders' commitment and compliance with activities are integrated and consolidated in the project, based on the classification. To manage this, effective communication management is essential to maximise stakeholder integration.

The Association for Project Management (2018) also offers the following as the fundamental principles of stakeholder engagement:

1. Communicate – It is vital to understand the people working and dealing with before aiming to engage and influence the stakeholders. This, therefore, requires communication and sharing information with stakeholders.
2. Consult early and frequently – The early stages of a project can still be unclear to the stakeholders, particularly in terms of purpose, approach, scope and risks. A regular and initial consultation must be conducted to ensure that requirements are agreed upon. Errors and issues should also be avoided or negotiated when needed. Decisions need to be acceptable to most stakeholders.
3. Remember that stakeholders are 'only human'. Such an adage makes it easy for one to accept that stakeholders do not always behave in a rational, reasonable and consistent manner. Hence, this is why the project team must be aware of and sensitive to human feelings and possible personal agendas. Understanding the core reasons of stakeholder behaviour can aid in assessing measures for the whole team to work well and sustain a productive relationship.

4. Plant it! – This suggests that a more conscientious and measured approach to engaging stakeholders should be encouraged. Careful planning should be conducted and carefully invested in before the engaged stakeholders can offer gains and benefits.
5. Relationships are key – Developing relationships leads to increased trust. If trust is present and existent in a team, the members will work together more comfortably and effectively. It is, therefore, essential to invest in identifying and establishing stakeholder relations to increase confidence across the project environment.
6. Simple, but not easy – Such an aspect highlights that conventional planning can improve project delivery, with the aid of foresight for anticipating hazards and taking timely and straightforward actions with stakeholders.
7. A part of risk management – Stakeholders are also considered influential and a risk management resource as they can also become sources of risk or opportunity.
8. Compromise – Establishing an acceptable baseline in diverging stakeholders' priorities and expectations is an initial step to compromise.
9. Understand what defines success – Project success can offer and mean different things to people, and a team should establish what the stakeholder community perceives as such.
10. Take responsibility – Engaging and integrating stakeholders is the responsibility of everyone, which requires the right communication and engagement approaches.

3.11. Stakeholders and innovation

Stakeholders play an essential role in delivering a successful project (Chandra¹, Wiguna and Kaming, 2012). Therefore, it is necessary to engage them in innovation projects to ensure their satisfaction and the success of the project in general. In recent years, a few authors have begun to explore the relationship between stakeholders and innovation (Ayuso, Ángel Rodríguez and Enric Ricart, 2006; Vos and Achterkamp, 2006; Lewis *et al.*, 2007; Ayuso *et*

al., 2011). Vos and Achterkamp (2006) argue that it is useful to have a classification model of stakeholders; it must describe what stakeholders are affected by or are interested in a project. Consequently, a stakeholder identification method was proposed; the method provides the procedures to have a complete overview of the parties involved by defining the roles and the phases that form part of the project. The proposed model consists of four main steps.

Step 1: The project should be defined well by stating clearly what the parties are involved in. In step 2, through brainstorming, it will be up to the participants to identify the potential parties to be involved in the project. Between steps two and three, an intermezzo takes place; at this stage, how the participants will be involved in the classification model will be explained. In step 3, the participants are asked to assign the potential parties to fulfil the various roles in the project. Finally, in step 4, all the identified parties will be indicated for each phase in the project by the participants; the role could be either to be involved, to be possibly involved, or not be involved in this phase of the project.

Vos and Achterkamp (2006) applied the proposed model to four organisations by interviewing participants from each of them and taking them through the procedures of the model. The results showed that in the collective brainstorms (step 3), the stakeholder lists were more embracing, and the method indeed was successful in identifying stakeholders in the innovation context, taking account of the problematic category of the passively involved.

Ayuso, Ángel Rodríguez and Enric Ricart (2006) reported two cases of Spanish companies which engaged in dialogue with the main stakeholder, enabling them to establish a relationship between stakeholders, which led to shifting the communication from a one-way to a two-way process, sharing the knowledge and transparent information and providing

feedback on both sides. What was followed by the two companies contributed to building relationships, which facilitated the access and the transfer of related information for sustainable innovation. Accordingly, the authors concluded that the integration of stakeholder knowledge and dialogue was a necessary capability to capture knowledge and transform it into innovative processes, products, services or strategies. See Figure 3-7 below

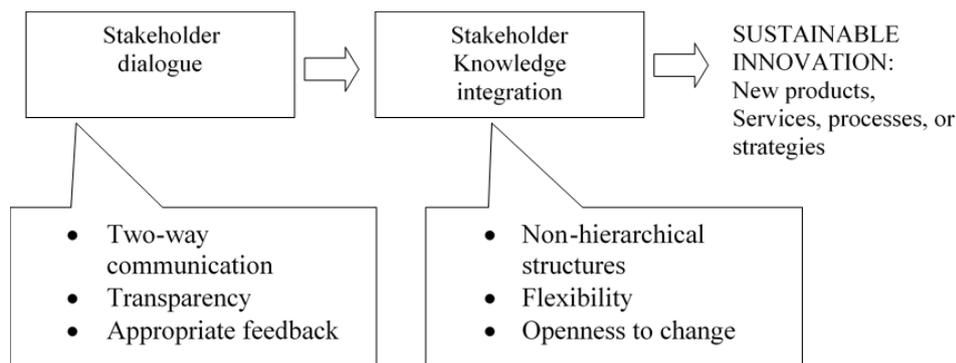


Figure 0-7 Dynamic capability underlying sustainable innovation (Ayuso, Ángel Rodríguez and Enric Ricart, 2006, p. 14)

Likewise, Ayuso *et al.* (2011) assert that dialogue with stakeholders also brings opportunities for creating innovative solutions, which are beneficial for both the enterprise and the stakeholders, and the existence of knowledge management affects innovation positively.

Figure 3-8 illustrates the hypothesised model. The result of the quantitative study that was conducted by Ayuso *et al.* (2011) showed that both internal and external stakeholders have a positive impact on innovation.

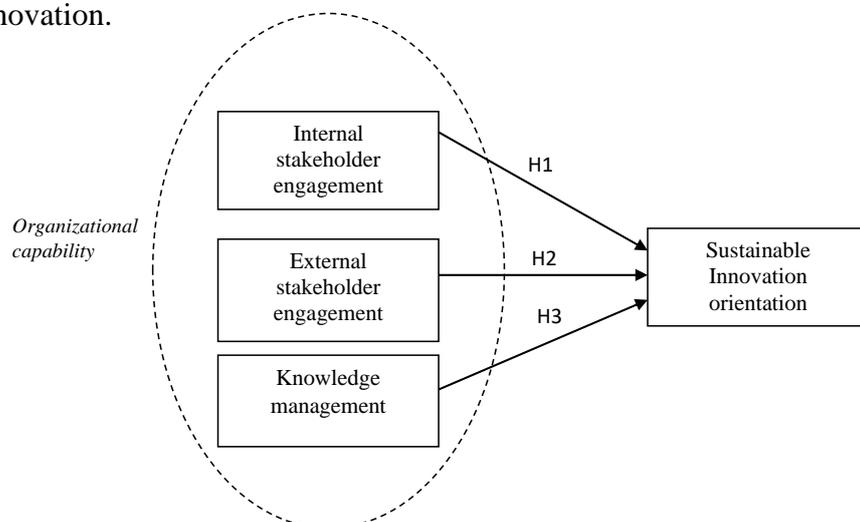


Figure 0-8 Hypothesised model for enterprise dialogue with stakeholders (Ayuso et al. 2011)

Similarly, Lewis *et al.* (2007) applied the proposed approach of how to innovate the business process based on stakeholder perception of a service provider company. The approach is divided into four stages: (1) engaging process stakeholders, (2) collecting process data, (3) explicating process knowledge, and (4) designing process innovations (see Figure 17). The first and second stages of this approach are similar to the approach of Ayuso, Ángel Rodríguez and Enric Ricart (2006), which emphasises the importance of two-way communication and engaging stakeholders in the innovation project process. Figure 3-9 shows the conclusion by Lewis *et al.* (2007) that enterprise performance depends on the efforts of involved stakeholders in managing an enterprise. Knowing how different stakeholders perceive the business process will help in solving the problems of an existing process and help innovate a new process.

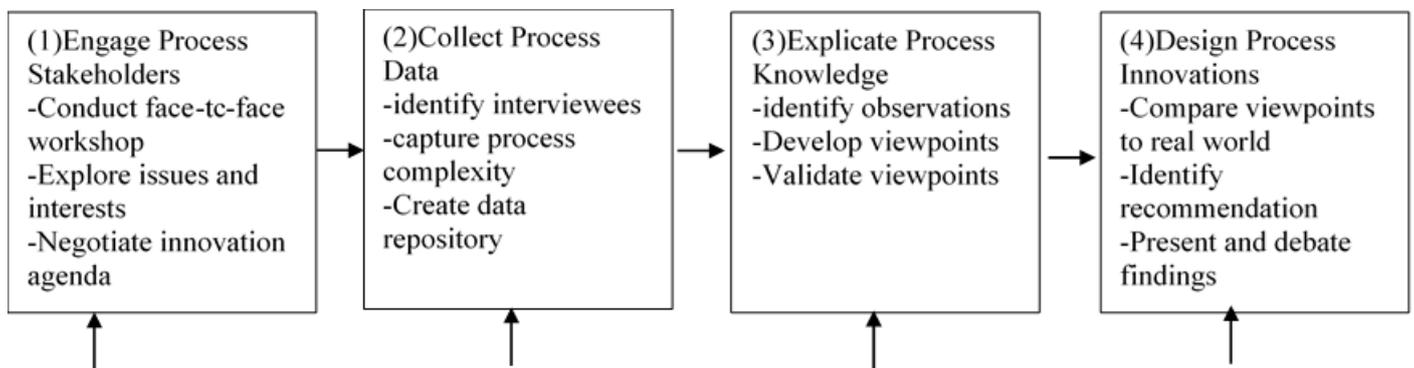


Figure 0-9 Perception-based innovation Approach (Lewis et al., 2007)

All of the studies reviewed here indicate a link between stakeholder engagement and innovation. The findings highlight the need for identifying stakeholders and engaging them in a project to ensure the knowledge transforms from internal to external stakeholders to gain innovative ideas and opinions. Furthermore, it was recommended by the authors to investigate more the issue of stakeholder engagement and how stakeholders affect innovation by testing the proposed approaches.

3.12. Conceptual framework

The main aim is to investigate and explore the impact of SI in delivering successful innovative large-scale PPP infrastructure projects in the Northern Emirates. Nevertheless, since the research is considering that SI could affect the delivery of successful projects, the PPP, BOT contracts, innovation and project planning phase CSFs were considered.

Therefore, from out of the literature the researcher developed a conceptual framework to be used to interpret the research findings in the Discussion chapter (Corbin & Strauss and Charmaz). The success factors were discussed based on the research strategy (Figure 1-2) and challenges associated with these projects, and from this it was concluded that there are several success factors that differ from one to another, but there are a set of common factors although they have been defined in different words but possess the same meaning.

Figure 3-10 shows that the success factors for each PPPs, BOT, Project planning and innovation differ, but they share a common set of factors related to SHs such as their skills, experiences, engagement, and other factors related to the qualities and skills of stakeholders. Hence the researcher proposes that these common factors, when collected and studied, will determine a set of factors that must be considered in managing SH in PPP projects, specially the two main parties in the BOT contracts. The SH factors are related to the skills, knowledge and tools that will be used by the two parties. Besides, there are requirements that must be met in complex projects, which consist of multiple SHs, and in addition to the requirements of infrastructure projects, which are large-scale projects that impact different groups of society and are linked to numerous less-complex projects which will impact on the success of achieving the strategic goals. Hence, some of these requirements are related to SHs.

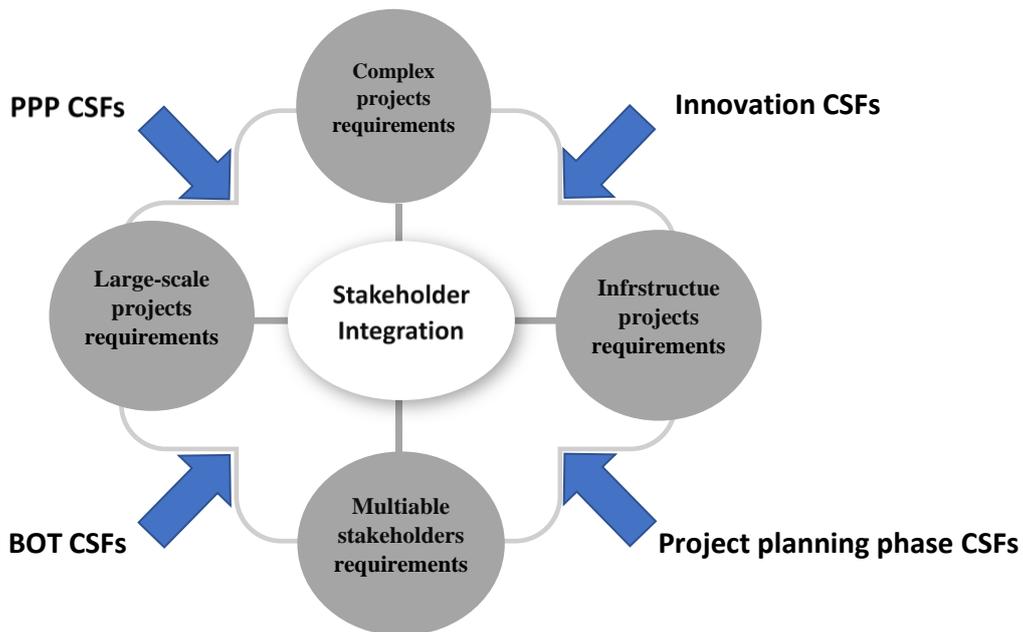


Figure 0-10 Conceptual Framework

The above conceptual framework shows that SHs play a crucial role in the success of PPP large-scale projects related to developing the infrastructure in an innovative way, so the success factors for these projects may differ among themselves. However, most of them are related to stakeholders and the extent of their integration in these factors, so when identifying and managing these factors it will be straightforward for the program manager or the project manager to achieve integration between stakeholders at different levels according to the project stage. This is likely to ensure the success of the project since such integration is linked to the different elements of success for each area.

Importantly, when linking the factors related to stakeholders in projects, the researcher will be able to define the integration of stakeholders and design a framework by taking into account all of the various success factors that will enable stakeholders to successfully manage the project. These factors will affect the selection process of stakeholders and the stakeholder management mechanism in the various stages of the project. In particular, they affect the

planning stage for innovative infrastructure projects.

3.13. Chapter summary

The chapter has analysed theoretical and empirical data on the concepts of project management, success factors of project planning and management, and concepts of stakeholder management. It reveals how the concepts are critical to the success of any project like the roles of the project teams and managers and their compliance with processes and rules, the senior managers' support, and the quality of provided services by the subcontractors also play an important role in project management. One important theme in this chapter was the criticality of involving stakeholders in project planning, since planning phase forms the most crucial part of the entire management process, taking into consideration varying interests and needs of SH during this phase. This is important because incorporating stakeholders' interests and needs into the overall project management was found to have positive implication on the success of the project. Indeed, there were varying tools and frameworks that can be useful for measuring success of projects, such as the Iron Triangle, the Square Route and others. However, there is a lack of conclusive application of a framework for measuring success specifically to public-private partnership projects; hence, motivating this current study to identify critical success factors as antecedents of PPP projects' success.

Chapter 4: Research Methodology

4.1 Introduction

The aim of this chapter is to determine the rationale for adopting a qualitative approach, a basic case study design and grounded theory as the most appropriate means to develop a conceptual understanding of the phenomenon of SI impact on PPP infrastructure projects in the UAE. According to Igwenagu (2016), having basic knowledge and techniques about carrying out research is vital to the success of completing research studies. Thus, understanding the fundamentals of research methodology is essential to carrying out research effectively.

Research is a complex undertaking, and so researchers need to be able to make the right research methodological choices. The research methodology has a profound impact on the way the research is designed, thereby affecting the research outcome (Askarzai and Unhelkar, 2017). This means that choosing the right research methodology must be in accordance with the type of research being carried out.

Accordingly, the research design of this study will adopt a qualitative approach based on conducting a single case study and applying a constructivist grounded theory methodology (Khan, 2014). The researcher will attempt to build and conceptualise new theoretical frameworks by using the methods of theoretical sampling, coding of gathered data from interviews, observations, case studies and secondary data analysis. Since the use of the case research method has increased its acceptance as a research approach and can be used to develop and investigate propositions and conceptual models. Indeed, case methods are commonplace in the literature in many subject disciplines, including project management

(Ponelis, 2015).

This section of the chapter explains the research design and related philosophy, approaches and methods used to for the thesis research study. Also, the researcher in section 4 of this chapter defines the final research design and the methods of collecting data for the thesis according to the review and elaboration of the chosen methodology.

4.2 Research philosophy (epistemology/ontology/axiology)

4.2.1 Epistemology

Epistemology research philosophy is concerned about ‘how we know and what we know.’ It also provides a philosophical grounding for deciding on what kind of possible knowledge and ways of ensuring its legitimacy and adequacy. According to (Biddle and Schafft, 2015), epistemology is said to be concerned with justifying claims about our knowledge and the things that people wish they can study. Validity, scope, and methods are some of the concerns of epistemology research philosophy. The research philosophy is considered to be essential, primarily because it influences the framing of research by researchers in their attempt to discover knowledge. Biddle and Schaff (2015) suggest that epistemology allows the researchers to look at the association between the object and subject being explored and how the relationship influences the research design. Epistemology research philosophy is considered vital because it aids in the establishment of faith that one puts in their data.

Epistemology research philosophy can be thought of as either objectivist, constructionist or subjectivist. With objectivist epistemology, it is assumed that reality exists outside and is independent of an individual’s mind. Research that is considered objectivist is said to be useful in the provision of reliable and consistent results. It also provides external validity-

meaning that the results obtained can be applied in other contexts (Biddle and Schafft, 2015). Subjective epistemology believes that reality can be expressed in symbols to fit the purpose of different individuals. Subjective epistemology's value is its concern in revealing how experiences from different people shape their perception of the world. Constructionist epistemology is said to reject the idea of the existence of objective truth. Meaning and truth are said to arise from engagements that people have with the reality in the world. In their research, Biddle, and Schafft (2015) state that constructionist epistemology is valuable in the generation of contextual understanding of a particular topic. It also states that the meaning of any topic is not discovered; instead, it is constructed. Constructionists assume that there is no valid interpretation of the understanding of specific topics exists.

4.2.2 Ontology

Al-Saadi (2014) describes ontology as the study of being. It can also be defined as the concept which is concerned with the existence and its relationship to cultural norms and social structures. It is used by researchers to help them recognize how certain they can be concerning object existence as well as their nature. Issues of ontology are concerned with questions concerning things that exist within the society. It is also the assumption that we make regarding nature reality and what exists. Social ontology is defined as philosophical considerations done in exploration, and that is concerned with the social entities' nature. Some scholar describes ontology as the shared understanding of various interest domains. This philosophical study examines the belief system of researchers concerning the existence and nature of being. Those using this form of research philosophy conceptualize the nature and forms of realities that they believe in.

A study conducted by Al-Saadi (2014) states that the concept of ontology is essential because it provides its users with an understanding of things that are constituted in the world. This

research philosophy helps in the determination of real nature as well as foundational concepts and the themes that constitute them. This research philosophy helps researchers in the examination of their philosophical assumptions. Philosophical assumptions are essential when trying to make sense of data (Al-Saadi, 2014). Ontology research philosophy starts by describing two positions, namely positivism and social constructionism (interpretivism). Positivism states that social phenomena have existences that are independent of the actors within it. Social constructionism states that social phenomena and their meanings keep on changing and being revised as a result of social interaction.

The different types of ontology and epistemology

- **Positivism and objectivism-** Positivism focus on the importance of evidence in searching the truth about specific things. There is a difference between facts and values hence making it possible to carry out value-free inquiry (Aliyu *et al.*, 2015). This means that researchers should distance themselves from the impacts that their findings have. The paradigm of objectivism involves the study of human knowledge, and its essence is derived from the acceptance of science nature. Knowledge around the world is said to originate from the experiences that human beings have.
- **Critiques to positivist thinking-** Since early twentieth objectivism and positivism paradigm have been subject to criticism. Positive thinking rejection was based on the fact that rules are derived from observations, then it is also possible that a forthcoming observation proves a concession to a current rule (Aliyu *et al.*, 2015). This led to the birth post-positivism.
- **Interpretivism and constructionism-** The two are in total rejection of the positivist and objectivist traditions. Interpretivism and constructionism suggest that knowledge can be produced by social world exploration (Aliyu *et al.*, 2015). The two paradigms are used in

studying natural science, but over time they have been termed unsuitable in social world studies because they do not capture reality accurately because different people have a different understanding of reality. Figure 4-1 presents Types of ontology and epistemology.

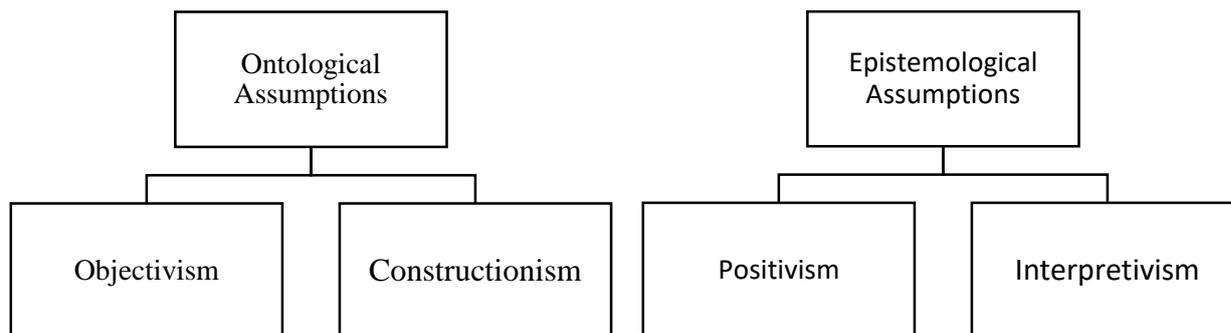


Figure 0-1 Types of ontology and epistemology

4.2.3 Axiology

Research conducted by Kivunja and Kuyini (2017) states that axiology is a philosophy of study that deals with the nature of values. It captures the value questions. It puts in the issue of values of being. This philosophy branch tries to provide clarification on whether you are trying to explain or predict the world. Scholars define axiology as ethical issues that have to be put into consideration while conducting or preparing a research proposal. It involves a clear definition and evaluation of concepts or both right and wrong behaviour in research. Axiology research philosophy asks the question, ‘what is the nature of ethical behaviours?’ The answers to this inquiry are guided by four ethical conduct criteria, morality, teleology, fairness and deontology (Kivunja and Kuyini, 2017). Deontology means the understanding of every action that is to be taken, possible consequences, and the intended benefits to the participants. Teleology can be defined as the theory of morality or the moral obligation to be pursued in human actions. Fairness requires the researcher to be fair while conducting their

study and ensuring that the rights of the participants are respected and upheld in all circumstances. Morality refers to the ethical values that should be endorsed by the researcher and the participants of research. The table 4-1 below shows the summary of the assumptions and their Characteristics.

Table 0-1 Assumptions by Kivunja and Kuyini (2017)

Assumptions	Questions	Characteristics
Axiological	What are the roles of values?	Researches acknowledge that biases are present and that research is value-laden.
Ontological	What is nature's reality?	Participants of a study see reality as multiple and subjective
Epistemological	What is the association between what is being researched and the researcher?	Researchers make an attempt to reduce the distance between themselves and what they are researching.

4.2.4. Research philosophy in this study

From the above review of epistemology, ontology and axiology, this thesis adopts interpretivism as the research philosophy, which is consistent with the study's qualitative nature. From an epistemological perspective, the study chose interpretivism mainly because the researcher assumes that the reality or the phenomena being studied can be most appropriately understood through subjective observation rather than standard quantification of data that necessitate establishment of a fixed instrument. In this way, the importance of stakeholder integration in PPP projects is believed to be best understood by examining individual perceptions, interpretations and experiences of this topic from their own standpoints, given that they often will have varying experiences of the phenomena or reality. Here, as the researcher carries out the study, there exists an interaction between the researcher and the study participants in exploring their thoughts, their experiences and perceptions from a naturalistic environment in order to attain knowledge about the phenomena or topic of

interest; which in this case is the importance of stakeholder integration in the management of PPP projects, and the success factors of such projects.

4.3. Research approach

This section of the chapter reviewed the common approaches to research. It also provided discussions on the justifications on the research approach adopted in this current study.

4.3.1. Inductive and deductive approaches

Soiferman (2010) suggests that this research design involves the process by which observations are used in the development of principles concerning certain subjects. The design is applied when subjects and specimens with similar characteristics and attributes are being observed and studied. The findings obtained from the observation are used to make general principles concerning the observed subjects. Such statements are then developed to become theories or laws of nature. This research design has been termed to be useful in obtaining observation-based information (Soiferman, 2010). It is considered to be the most common and natural form of making assumptions about subjects in the most logical way. It gives researchers an opportunity to gather ideas concerning a number phenomenon in real life. Figure 4-2 and 4-3 below illustrate the research design process based on inductive and deductive approach, respectively.

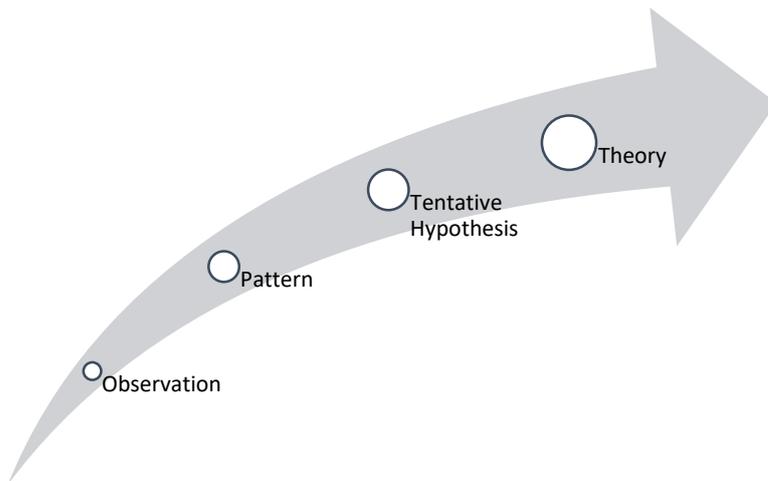


Figure 0-2 Inductive (qualitative) research design process

On the other hand, the deductive research approach involves moving from general to particular, and sometimes it is referred to as the top-down approach. It should be noted that it takes a general premise to deduce specific conclusions.

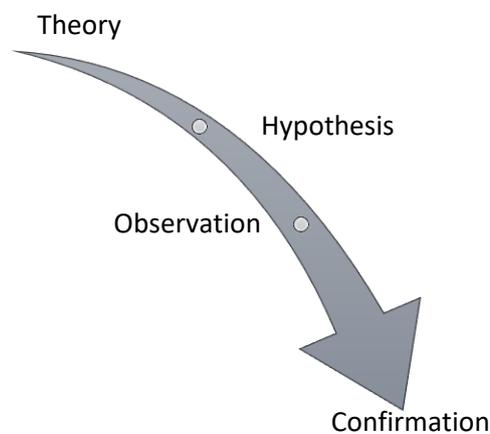


Figure 0-3 Deductive (quantitative) research design process

4.3.2. Comparing and contrasting Deductive and Inductive Research Approaches

Deductive research design translates into statistical analysis when researchers want to determine an association between what is known and what can be learned. It involves data collection and analysis by the use of quantitative strategies that require the researchers to

understand the association between variables by using inferential or descriptive statistics. Descriptive statistics are used by researchers when they want to estimate parameters of a particular population, while inferential statistics depend on descriptive statistics (Soiferman, 2010). A deductive research design makes it possible to have a visual representation of data using graphs, tables, and charts. It also allows researchers to use arguments, logic, and evidence to draw conclusions. This research design also provides for protocol control measures enabling researchers to anticipate as many threats as possible.

Inductive research design is an approach to finding answers to particular questions. In this design, researchers spend a lot of time in the field to try to observe and collect data, a process that can be complex and time-consuming. In this research design, conclusions keep on changing and evolving, depending on the amount of data collected. Inductive thinking and reasoning are usually employed because it allows researchers to move from a particular observation to making broader theories (Soiferman, 2010). While using an inductive research design, research begins with a specific observation, move to detect patterns in data that hence allows them to form a tentative hypothesis, and the results of the exploration lead to theories and making of general conclusions.

In his research, Soiferman (2010) has indicated that if the difference and similarities between inductive and deductive research approaches are to be clearly brought out, it would be essential to look at research intent, how to use literature, how to focus on the intent, how to collect data, how to carry out data analysis, the researchers' role, and how to carry out data validation.

- **Research intent** - In deductive research design, the intention of the research is to test theories using deductive reasoning so as to refute a hypothesis. The intent of research in inductive research design is to gather information from individuals and develop

theories and broader generalizations using inductive reasoning.

- **How to use literature** - For deductive research design, literature serves a vital role in the identification of study purposes as well as justifying it. It is used to inform the formulated hypothesis (Soiferman, 2010). It is usually more comprehensive than the literature used in inductive reasoning. For inductive research design, literature is used in providing pieces of evidence for the study purpose or to the underlying problem, and it is usually very brief as compared to that of deductive research design.
- **How to focus on research intent** - In deductive design, the intention of research focuses on closed-ended questions that test variables from the hypothesis. The hypothesis is tested in an attempt to refute or support relationship statements that are contained in the theories. In inductive design, the whole intention is to learn from the participants, and the questions involved are usually open-ended, and the researcher focuses on a single phenomenon for information gathering.
- **How to carry out data collection** - In deductive design, data is collected from numerous contributors from many research sites. Data is gathered by administering participants with the instruments of testing (Soiferman, 2010). Data is collected in terms of numerical that can easily be statically analysed. In inductive research design, researchers record words and images of participants as collected from the research site.
- **How to carry out data analysis** - For deductive research design, data is analysed using two statistical analyses: descriptive and inferential. Descriptive analysis compares scores (z-score, percentile ranks), indicate central tendencies (Median, mean, and mode), and spread of score (standard deviation and variance). The inferential analysis enables the researcher to compare the effects of variables on a single dependent

variable. The main purpose of this type of analysis is to assess differences in the relationship among variables. For the inductive research design, the analysis depends on the data type being collected and not only the research questions. The researchers observe patterns in data.

- **Researchers' role** - In inductive research design, the role of the researcher is to identify their stand on the particular subject depending on their experiences while in deductive research design, the role of the researcher is to maintain an objective approach to the research.
- **How do data validation** - While conducting any research, it is essential to establish the validity of data that is to be used (Soiferman, 2010). Data validity in deductive research design is independent of participants but is based on the procedure of data collection, which is influenced by external standards, for instance, statistics. The validity of data in an inductive research design depends on the accuracy of the final compiled report.
- **Factors to consider when choosing a research method** - Research carried out by Malhotra (2017) suggests that when selecting a research method, it is essential to match the approach with the research problem at hand. Deductive reasoning is suited for problems that require explanations to be made, while inductive reasoning is appropriate for problems that need further exploration to obtain a deeper understanding of particular concepts (Malhotra, 2017). The research method should also fit the target audience. Before selecting a research method, it is crucial to keep in mind who the target audience of the research is. Also, it is essential to relate the research approach with the experiences of past researchers. The approach selected must relate to the personal

experience of the researcher.

4.3.3. Abductive research approach

Empirical research conducted by Haig (2018) states that, unlike inductive and deductive research approaches, abductive design is able to explain, develop, and even change theoretical frameworks before, during, and even after a research process. This research design is said to move between inductive and open-ended research settings to more hypothetical and deductive attempts to verify hypotheses. It also entails a systematic combining approach to social sciences advancing.

Haig (2018) has indicated that this research strategy involves theory construction, which is derived from the social actor, accounts of everyday activities. Interpretivism is said to incorporate this research strategy to produce scientific accounts of social life. The Abductive approach has several layers that are attached to it, and when trying to move from one layer, one is required to lay down their daily account from life to technical. Abductive reasoning involves conclusion formation based on information at hand and what is already known by the researcher. The abductive research strategy looks to address the weaknesses of inductive and deductive research approaches. The deductive research approach has received criticism for lack of clarity in the selection of theory that is used in hypotheses testing. The inductive research approach is criticized because no empirical data is used in theory building. Researchers then incorporate the abductive research approach to overcome these weaknesses (Haig, 2018). Other than addressing the shortcomings in inductive and deductive research approaches, Abductive is similar to the rest in the fact that they are all applied in theory construction as well as making logical inferences.

4.3.4. Research approach of this study

Based on the review of the approaches to research, the current study adopted an inductive approach as its research approach. One reason for this is that inductive approach is mostly associated with qualitative research, which is the selected methodology and methods of this study. Furthermore, the inductive approach is fitting for this study as the intention of conducting this research is to learn or investigate the topic at hand based on the participants, and potentially develop broader generalizations on the importance of stakeholder integration in managing PPP projects, as well as establish a potential theory or framework on the success factors of future PPP projects in the UAE.

4.4 Review of research methodology

4.4.1. Types of methodology

Askarzai and Unhelkar (2017) noted that one of the most critical aspects of the research process is the research paradigm and the research methodology. Developing a clear understanding of the research methodology is vital for research to be successful. Consistent with this issue, it is essential to know the main differences between research methods and a methodology. Mishra and Alok (2017) explained that research methods refer to the techniques used in researching, whereas a research methodology refers to the approach wherein research problems are solved. Mishra and Alok noted that research methodology is the science of studying how research is systematically conducted.

Research methodology is defined as a research framework or guide on how research is conducted. This means that the research methodology describes the methods used systematically in carrying out the research. Ignewagu (2016) identified the advantages of research methodology to include: (1) advancing the wealth of individuals; (2) providing

appropriate tools for carrying out the research; (3) enabling researchers to develop critical and scientific attitude and disciplined thinking, particularly in relation to observations; (4) enriching the research process and providing a better understanding of the study and the subject being studied; (5) ‘Helps to inculcate the ability to evaluate and use research results with reasonable confidence and in decision making’ (2016, p.5); and (6) instil critical thinking, learning and reading.

Accordingly, choosing the right research methodology is grounded in the proper identification of the research problem. Creswell (2014) asserted that there are three commonly used research approaches that he categorises into qualitative, quantitative and mixed methods. Thus, researchers must be able to distinguish between the different kinds of research philosophies, research paradigms, methodologies and methods to ensure that they select the one most appropriate to their research problem. Figure 4-4 shows a summary of the alternative research frameworks, explaining the interaction between the three components that are involved in the research approach – philosophical worldviews, research designs, and research methods.

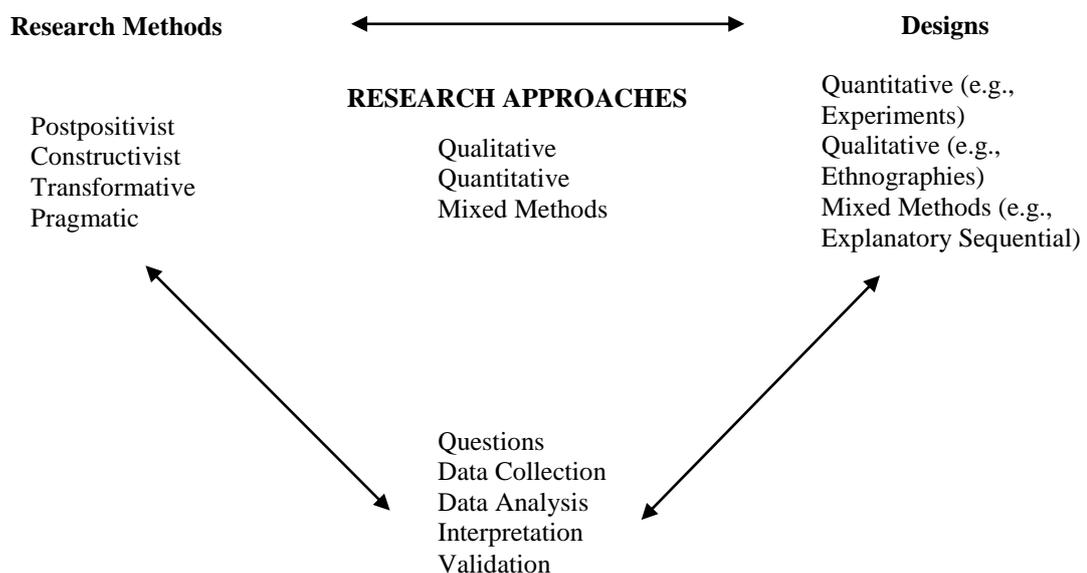


Figure 0-4 : Framework for research (Creswell, 2014)

As shown in Figure 4:4, research can be carried out using qualitative methodology, quantitative methodology or mixed methods. This suggests that the research problem can be used as grounds for selecting the kind of methodology used in underpinning the study. For example, addressing a research problem relating to improving employee satisfaction dictates the need to collect qualitative data to understand the phenomenon of employee satisfaction. Mishra and Alok (2017) highlighted that quantitative versus qualitative is one of the basic types of research, where studies based on quantity, statistics or extent are appropriately conducted as quantitative research whereas studies concerning a specific social or natural phenomenon that relates to quality or variety are appropriately conducted as qualitative studies.

Qualitative research can be described as an approach that involves exploring and understanding the meaning of a particular social or human problem (Creswell, 2014). Common qualitative studies are based on grounded theory, which means that this type of methodology follows a descriptive, narrative or phenomenological approach (Creswell, 2014). As such, collecting qualitative data is the nature of a qualitative research methodology, where the nature of the data can be described as textual, information-rich and in-depth or very detailed (Askarzai and Unhelkar, 2017). Thus, qualitative research methodology is used when there is a need to understand meanings or describe and understand experiences, ideas, values and beliefs. According to Askarzai and Unhelkar (2017), qualitative data is more commonly presented in words, images or sounds, and is mostly used for achieving a better understanding of factors related to human behaviour and social phenomena.

On another note, quantitative research methodology is used when the nature of the study involves the collection and analysis of numerical or statistical data to explain a specific phenomenon (Askarzai and Unhelkar, 2017). The quantitative methodology can use either

experimental or non-experimental research to influence research outcomes (Creswell, 2014). As such, the nature of quantitative research can be described as objective, where the phenomenon being studied is heavily reliant on statistical data and analysis (Askarzai and Unhelkar, 2017). According to Askarzai and Unhelkar, the main strengths of using quantitative research methodology include: (1) the findings can be generalised based on large sample sizes; (2) the results are accurate and reliable because they are based on precise quantitative data; (3) it is effective for analysing large quantities of statistical or numerical data; (4) data collection, is quick and cost-effective; and (5) data analysis is not complicated because the data is valid and analysis can be carried out faster through the use of statistical software. Despite these advantages, the main limitations of using quantitative research methodology include the limited results it provides for understanding human and social phenomena and knowledge required on statistics and statistical software.

Finally, mixed methods research methodology can be described as using a combination of qualitative and quantitative research methodologies. However, there are different definitions in the literature, as debated by leading methodologists, in line with focusing on methods, philosophy and a research design (Askarzai and Unhelkar, 2017). The main similarity in their definitions involves the integration of qualitative and quantitative research data in a particular research study (Creswell, 2014). Moreover, Wisdom and Creswell (2013, p. 1) defined mixed methods as referring to ‘an emergent methodology of research that advances the systematic integration, or ‘mixing,’ of quantitative and qualitative data within a single investigation or sustained program of inquiry’. This means that the basic premise of mixed-method research methodology is promoting a complete and more synergistic utilisation of data through integration as opposed to the separation of qualitative and quantitative data (Wisdom and Creswell, 2013). Therefore, a mixed-method research methodology is more appropriate for

complex studies and for expanding the evidence base (Shorten and Smith, 2017).

Based on the mentioned and discussed methodologies for research, the current study followed the qualitative methodology for various reasons. First, a qualitative methodology was chosen mainly because of its suitability in seeking answers to the inquiries relating to the experiences, perceptions and thoughts of participants with the topic and research problem. This is in appropriate for the chosen ontology and epistemology of this current study. Second, the study also adopted the inductive approach to research, as discussed in a previous section of this chapter, which is mostly associated with qualitative research methodology. Lastly, the qualitative methodology logically follows from the exploratory intent of this thesis research, which concerns exploring stakeholder integration impact in managing innovative, large-scale PPP projects and developing a framework of the PPP success criteria that can be influenced by stakeholder integration with the purpose of determining the appropriate PPP management processes for future public/government projects. Considering this study adopts a qualitative methodology, a further review of the qualitative research methods and the strategies used in qualitative research is provided in the following sections.

4.4.1. Qualitative research

In carrying out studies which seek to understand a specific human or social phenomenon which is the aim of the thesis, qualitative research is the most used approach because this type of research is the most appropriate mode of inquiry. Shank (2002), cited in Ospina (2004, p. 2), defined qualitative research as ‘a form of systematic empirical inquiry into meaning’. Qualitative research is a type of methodology that offers a kind of inquiry based on how others make sense of experiences to give meaning to a phenomenon (Ospina, 2004). In addition, Mohajan (2018) noted that qualitative research can be described as inductive, wherein the researcher generally explores meanings and insights regarding a situation. This

suggests that qualitative research is used in an attempt to gain a better understanding of the world and gives sense to experiences.

Similarly, Hancock *et al.* (2009, p. 7) asserted: ‘Qualitative research is concerned with developing explanations of social phenomena.’ Qualitative research is carried out to help in understanding the social world and why things are the way they are (Hancock *et al.*, 2009). In line with this, qualitative research is used to study human factors and social phenomena in their natural settings to make sense of them. As highlighted by Kielmann *et al.* (2012), qualitative research most commonly adheres to a constructivist view of the world, through which relative dimensions of reality are captured through naturalistic methods. Thus, qualitative research in the general perspective is a type of research that provides researchers with a broader view of the world by giving meaning to experiences within the natural settings of the phenomenon being studied.

Qualitative research is characterised by its objectives, which relate to the need to gather textual data as opposed to numerical data to address research problems. Bricki and Green (2019) noted that, generally, the aims of qualitative research relate to understanding certain aspects of human and social life, whereas the objective of quantitative research relates to measuring something. Therefore, qualitative research is appropriate when the study seeks answers to questions relating to meaning, experiences, beliefs, attitudes and behaviours (Hammarberg & de Lacey, 2016). Qualitative research may not be appropriate for studies seeking to measure or count certain variables.

Based on the descriptions and definitions of qualitative research, it should be noted that this type of research tends to be pragmatic, narrative and data driven. As highlighted by Morrison (2014), qualitative research is a multidimensional field that emphasises the importance of

studying natural settings through linguistic analysis. Therefore, qualitative research can best be understood as a form of social inquiry, focusing on how individuals make sense of their experiences and interpret the world they live in.

According to Hancock *et al.* (2009), the nature of qualitative research is focused on how people look at reality and how they take complexity into account by incorporating the real-world context. As such, qualitative research is concerned with providing developing explanations of social phenomena (Hancock *et al.* 2009). In line with this, Kielmann *et al.* (2012) asserted that qualitative research generally adheres to a constructivist view of the world, and, therefore, its key features can be described as being humanistic, holistic, interpretive and reflexive. Concerning this, Hancock *et al.* (2009) noted that qualitative research uses different data collection methods, including interviews, focus groups, observation, collection of narratives and open-ended questions in questionnaires among others.

4.4.2. Approaches to qualitative research

Khan (2014) noted that qualitative research can be found in any one of the three paradigms – positivist, interpretive and critical. Khan explained that a paradigm can be understood as a structure of ideas or suppositions that provide a pathway to seeing the world as to how it looks when its scientific aspect is related to its assumptions. Table 4-2 shows a summary of the differences between the three paradigms to guide researchers towards using the most appropriate framework to understand a particular inquiry.

Table 0-2 Differences between paradigms (Khan, 2014)

Positivism	Paradigm	Interpretivism
Reality is independent of human perception	Ontology	Multiple realities and multiple truths/reality are socially constructed and constantly changing.
Investigator and investigated are independent entities.	Epistemology	Researcher and object are interactively linked/findings are mutually created within the context of the situation which shapes the inquiry.
Quantitative	Method	Qualitative
To measure and analyse causal relationships between variables within a value-free framework.	Goal	Stress is on process and meaning.
Randomizations, blinding, highly structured protocols, and written or orally administered questionnaires with a limited range of predetermined responses.	Techniques	In depth and focus group interviews and participants observation.
Larger than qualitative sample/representative.	Sample Size	Small/purposeful/respondents with important information/not meant to be representative.

As shown in table 4:2 qualitative research in the positivist paradigm presents an objective view of the world, wherein human behaviour can be predicted and the cause and effect of behaviour can be measured, whereas the interpretivism paradigm views the world in the understanding of individuals based on their reality of the world in different contexts (Khan, 2014).

In line with this, there are some approaches to carrying out qualitative research. These approaches were developed to cater to the different types of qualitative questions and the full range of researching traditions among researchers worldwide. According to Hancock *et al.* (2009), the different approaches to qualitative research involve different sets of assumptions on diverse information or knowledge. In line with this, the most commonly used qualitative approaches include ethnography, grounded theory, phenomenology and case studies (Hancock *et al.* 2009; Astalin, 2013).

4.4.3. Phenomenology

The term phenomenology is often used to describe a specific type of research philosophy and set of approaches to qualitative research (Astalin, 2013). In the general sense, phenomenology can be viewed as the study of phenomena. As explained by Astalin, phenomena can be events, experiences, situations or concepts. As such, phenomenology is often used to describe or explore something that exists in the world we live in. According to Lester (n.d.), the primary intent of the phenomenological approach is to emphasise the specific and identify phenomena through how the actors perceive them in a given situation or event. Thus, Lester asserted that phenomenology is focused on the study of experiences from the perspectives of individuals. The phenomenological approach is grounded in the subjectivity and knowledge of individuals emphasising personal interpretation and perspective. As such, phenomenology is a qualitative approach that is part of the constructivist or interpretivist paradigm, thereby making it both a philosophy and a methodology (Qutoshi, 2018).

As highlighted by Qutoshi (2018), ‘...phenomenology is an approach to educate our vision, to define our position, to broaden how we see the world around, and to study the lived experience at a deeper level’. Therefore, Qutoshi suggested that the phenomenological approach is useful for describing as opposed to explaining subjective realities, beliefs, insights and knowledge.

4.4.4. Grounded theory

Grounded theory is one of the most widely used methods in qualitative research. It gives priority to data whereby the generation of theory is in accordance with the field of study. The development of theory starts and ends with the information that was collected and analysed systematically, providing opportunities for researchers to generate theories that are related to their specific subject matters (Mills, Bonner and Francis, 2006; (Halaweh *et al.*, 2008)

(Astalin 2013).

Nonetheless, grounded theory had been very influential for almost sixty years, especially for its use in exploring areas or phenomena that have received less attention and exploration (Jeggels, 2009). It has already been used to make contributions to expanding the organisational research literature, as well as in other areas, such as nursing, education and military matters (Martin & Turner, 1986; Alilu *et al.*, 2017; Foxworth, 2012). Grounded theory pertains to a research methodology that is focused on generating theories which are ‘grounded’ in data that were thoroughly and methodologically gathered and analysed (Noble & Mitchell, 2016).

According to Astalin, grounded theory is a type of qualitative research that allows theory or theories to emerge from the collected data. Glaser and Strauss (1967) argued that researchers must be able to start collecting and analysing data without looking for existing literature in the field (Flick, 2009). Generally, research based on grounded theory relates to the discovery and/or formulation of theory or theories based on collected and analysed empirical data.

Although the origins of grounded theory are often credited to the work of Glaser and Strauss in 1967, some evidence indicates that its roots go back at least to the early 20th century (Jeggels, 2009). Based on a systematic review of literature by Heath and Cowley (2004), the history of grounded theory can be seen to have stemmed from the pragmatist view on the symbolic interactionism during the late 1930s, with grounded theory emerging from two tenets – interactionist approach and naturalistic inquiry. From this integration of the interactionist approach and naturalistic inquiry, the literature of grounded theory has expanded over time.

In 1967, Glaser and Strauss established a grounded theory methodology, with the basic

assumption that the theory should be grounded in the data gathered and collected to describe the behaviours and actions, as well as the interactions and social processes exhibited by people. Both stressed that grounded theory research involves the initial and systematic seeking of a theory from the data gathered in social research (Jeggels, 2009). In 1990, Strauss, along with Corbin, provided an extended variant of his and Glaser's grounded theory methodology, which, however, met with denunciations from the latter. The Glaserian approach and the Straussian approach to grounded theory have been explored well by researchers seeking to understand how these two variants of grounded theory are different from each other.

Under the Glaserian approach to grounded theory, to avoid the construction of prior assumptions and opinions that could result in unconscious biases for the researcher, the literature should not be investigated before conducting and starting the study. However, the Straussian approach proposed otherwise, by being more supportive of prior literature review for the empirical research, further stressing its importance in creating a background for open-ended inquiry that the researcher can make use of in the actual study of empirical contexts. Therefore, it indicates that grounded theory methodology is an inductive-deductive approach in nature – deductive given that the research has an initial conception of the theories as well as the assumptions, and inductive given that it allows for the development of new ideas based on concepts emerging from the research field (Halaweh *et al.*, 2008). It was the deductive approach in the Straussian approach that Glaser heavily criticised, indicating that the deductive approach makes Straussian's grounded theory only provide a technique for data analysis, and not a grounded methodology in itself (Heath & Cowley, 2004).

According to Opie (2004), cited in Chong and Yeo (2015, p. 258), 'grounded theory is a process of collecting qualitative data and undertaking data analysis to generate categories (a

theory) to explain a phenomenon of interest'. As such, grounded theory is considered a powerful tool in seeking an explanation of a natural phenomenon. Thus, the basic principle of grounded theory is to provide researchers with guidelines on how to identify categories and establish relationships between them. As highlighted by Charmaz (2006), the grounded theory methods consist of systematic and flexible guidelines for collecting and analysing qualitative data towards the construction of theories that are grounded in the data themselves.

Lee (2014) further explained that grounded theory suggests that no one theory can provide explanations to all of the variety which occurs within societies, and therefore, a search for theory is advisable informed by the empirical data collected. Thus, grounded theory is characterised by having concrete and structured guidelines while offering a practical and flexible approach towards interpreting complex social phenomena (El Hussein *et al.*, 2014).

According to Khan (2014), grounded theory cannot be described to be a theory at all; it rather an approach or a strategy. It can be described as a research approach whose main aim is to use research data to develop theory. This research strategy was developed by two sociologists; Barney Glaser and Strauss. The grounded theory deals with an inductive rather than a deductive approach of inquiry. There are three common methods that are used in Grounded theory, and they include carrying out interviews, observing study participants, and collection of artifacts (Khan, 2014). Observation of participants involves the immersion of the researcher in the daily lives of the study sample, and this is typically referred to as fieldwork. Carrying out interviews involves talking to informants and members of a particular cultural group. The types of interviews conducted in such a situation vary depending on the nature and degree of formality. The collection of texts and artifacts involves the collection of materials such as educational handouts, flowcharts, among others. Materials that are used by members of the culture daily. Khan (2014) suggests that studies that are said

to incorporate the approach of grounded theory step towards conceptual thinking and building theories rather than testing empirical theories. This research approach involves a comparative analysis, and this is why it has been named as the constant comparative method. The whole approach involves researchers moving in and out of the collection of data and its analysis. The grounded theory approach begins with the process of question-asking by the researcher and development of theory regarding a certain life aspect (Urquhart, 2012). After question generation, the next step is the iteration of theoretical sampling; and this involves the identification of study participants of the study sample. Data is then collected from the population of the study, and the researcher begins the process of doing its analysis. The analysis process enables the researcher to develop theories in regard to the generative questions. Based on the fundamental theory, the scholar is able to determine how they are going to do the next sampling. This process is regarded as theoretical sampling. The process of data collection and its analysis and engaging in theoretical sampling continually are some of the essential features of constant comparative analysis. The constant comparative analysis is conducted until a point of saturation is reached by the researcher. The saturation point is reached when there no newer ideas are emerging from the data. Urquhart (2012) suggests that, at saturation point, the researcher is able to see theme repetition and hence is able to make a conclusion.

The grounded theory process explains how theories can be constructed based on data that are systematically gathered and analysed. This means that grounded theory is generally about data collection and analysis (Khan 2014). However, it should be noted that grounded theory is not a theory but a method or research strategy, with the intent of generating theory from collected data. According to Noble and Mitchell (2016), the main features of grounded theory are that (1) data collection and analysis occur simultaneously; (2) categories and analytic

codes are developed from the data collected; (3) theoretical sampling is used in order to refine categories; (4) social processes are discovered in the data, and (5) categories are integrated into a theoretical framework. In line with this, different types of designs can be used to produce high quality grounded theory research.

- The systematic design – This is a type of grounded theory design that is mainly being applied in educational field research. The primary systematic design in grounded theory usually consists of three stages of coding – open coding, axial coding and selective coding (Chong and Yeo, 2015). As explained by Creswell (2015), open coding entails constructing initial categories of information related to the subject being studied through the segmentation of the data collected. In axial coding, the researcher selects an open category and links it to other categories. Finally, selective coding entails that the researcher generates theory through the interpretation of the interrelationships that have emerged among the categories formed during axial coding (Chong and Yeo, 2015).
- The emerging design – Robson (2002), cited in Chong and Yeo (2015), asserted that the emerging design is more suitable to be applied to real-world studies as these types of studies are relatively complex and poorly controlled. Thus, the emerging design is a type of grounded theory that focuses on linking relationships between categories and emerging theories as opposed to just merely describing categories (Chong and Yeo, 2015).
- The constructivist design – The constructivist design is a type of grounded theory that takes the view that multiple social realities occur simultaneously. This means that the constructivist design emphasises the beliefs and values of the researchers, thereby creating a new interaction between the researchers and the research participants (Mills, Bonner and Francis, 2006; Chong and Yeo, 2015).

Concerning this, El Hussein and colleagues (2014) identified the advantages of using

grounded theory as a method of inquiry to include providing intuitive appeal, fostering creativity, providing researchers with the potential to conceptualize, offering a systematic approach to data analysis, and providing data depth and richness. Despite these advantages, the same authors noted that there are also certain limitations to the use of grounded theory including being an exhaustive process, presenting the potential for methodological errors and limited generalisability. Similarly, Chong and Yeo (2015) noted that the main strength of grounded theory is that it offers opportunities for researchers to use their values and understanding for generating new theories about complex phenomena. Grounded theory provides researchers with greater flexibility and freedom. However, the provision of flexibility and freedom can also be viewed as a limitation of grounded theory as it can cause potential harm in grounded theory research, particularly for novice researchers (Chong and Yeo, 2015). Also, grounded theory poses several risks for doctoral researchers, such as preventing them from being able to uncover substantial or significant theory (Jones and Alony, 2011).

4.4.5. Case study research

The case study is a widely used research methodology for examining complex issues and phenomena in a natural context with the intention of increasing the understanding of these issues and phenomena (Heale & Twycross, 2018). Although the case study has been used extensively by researchers in social sciences, a universal definition of what a case study is has yet to be devised. Case study research has evolved to being seen as an effective methodology for understanding and investigating complex issues within real-world settings (Harrison *et al.* 2017). Case study research can be adapted to different research methodologies (qualitative, quantitative and mixed-method) and is a practical approach for carrying out diverse types of research studies. Thus, Phelan (2011, p. 221) has highlighted the following: ‘Case study

research is said to allow for an in-depth review of new or unclear phenomena while retaining the holistic and meaningful characteristics of real-life events’.

Some definitions provided in the literature are general, and often do not encompass complex or strict descriptions. One definition provided by Sturman (1997, cited in Starman, 2013) indicates that the case study is a broad term for investigating individual or group phenomena. An early work by Mesec (1998; cited in Starman, 2013) defined the case study as a broad description of an individual case alongside its analysis, characterising the case and the events, and describing how the process is conducted. Mesec’s definition further stresses that the common purpose of the case study is to determine key variables, structures and types of interactions emerging between the participants in a situation; hence, the case study’s theoretical purpose. It can also be used to evaluate the performance of work, reflecting the practical purpose. With these definitions of the case study, it can be postulated that the case study is based on constructivism as its philosophical underpinning. According to Yin (2014), constructivism often focuses on the assumption that truth is relative and is dependent on one’s standpoint.

For a long time, case studies have been criticized because of their lack of heftiness both as a research tool, and in the crafting of the case designs. Different researchers incorporate single-case and multiple-case designs, and the choice depends on the issues in the research question. For instances where no other cases are available to be replicated, researchers adopt the single-case design (Amerson, 2011). Multiple case designs are mostly adopted in real-life events where there are many evidence sources of replication. Multiple-case designs are said to enhance and support results from previous studies, and this increases the confidence level of the robustness of the method. Case replication through pattern matching is a method of linking many information pieces to that from a theoretical proposition. It is essential to

carefully design a case study, mainly because the methods of a case study are via journal entries and interviews. The designed case study must be able to prove that it can be linked to a certain theoretical framework, it is appropriate to the research questions to be investigated, it follows a particular procedure with proper application, and it is the only viable method of studying the subject.

In his study, Gagnon (2010) has stated that there are various categories of case studies include explanatory, exploratory, and descriptive case studies. Explanatory case studies aim at closely examining data at the surface and on a deeper level, with the aim of explaining data phenomena. For instance, a researcher may ask why students use repetitive reading strategies. In such a setting, the researcher may use the data available to form and test theories.

Explanatory case studies are also used in complex and multivariate cases. Knowledge-driven theory, problem-solving theory, and social-interaction theory are some of the three rival theories that are used to explain complex and multivariate cases. Gagnon (2010) describes that descriptive case studies are used in describing natural phenomena that occur within data in a question. In this type of case study, the main purpose is to describe data as it occurs.

Scholars suggest that descriptive case studies are the fact that they can be narrative in nature.

One challenge that comes with a descriptive case study is the fact that one has to begin with a descriptive theory to support a phenomenon in a data set. Exploratory case studies are used by researchers to explore a phenomenon that serves their interests. For instance, ‘do students use any reading strategies? And if so, how often do they use them?’ In such a case, prior knowledge or fieldwork needs to have been conducted before hypothesis and research questions are formulated. An exploratory case study is a pilot study (Gagnon, 2010). Other scholars have categorized case studies as either interpretive or evaluative. In evaluative case studies, the aim of the researcher is to interpret data by developing conceptual categories and

refuting any assumptions made concerning them. In evaluative case studies, the aim of the researcher is to add their judgment to data phenomena.

Gagnon (2010) states that one of the benefits of a case study is the fact that it often allows data examination within the context of its use. For a researcher to draw conclusions in a study, they are required to observe their subject within their environment. Examining a subject in its setting differs from conducting an experiment. The qualitative accounts that are produced in case of studies aid in data exploration in a real-life context and also aid in explain real-life situation complexities, which are often missed in research surveys and in experiments (Gagnon, 2010). Case studies allow for both qualitative and quantitative data analyses. Case studies sometimes seek evidence from categorical and numerical responses. Researchers have cautioned against confusing case studies with qualitative research, and this is because case studies can solely be based on quantitative evidence.

On the disadvantage aspects (Gagnon, 2010) suggests that case studies provide little scientific-based pieces of evidence, mainly because only a small number of subject is studied. The common question that arises in such a case is, 'how can you generalize from a single subject and case?' Scholars have labelled case studies as too long and sometimes producing massive documentation, which can be exhausting. Case studies have also received criticism because they depend on the exploration of a single case, which makes it difficult to reach a generalized conclusion. Case studies are said to lack rigor, researchers using this method have been sloppy and have provided biased views which in turn influence the finding and hence the conclusions made.

The precursors of modern-day case study research were viewed as related to the Chicago School of Sociology between 1920 and 1950 (Harrison *et al.* 2017). The beginning of the

significant evolution in case study research began with the advent of the grounded theory methodology (Harrison *et al.*, 2017). Figure 4-5 shows a summary of the history and evolution of case study research.

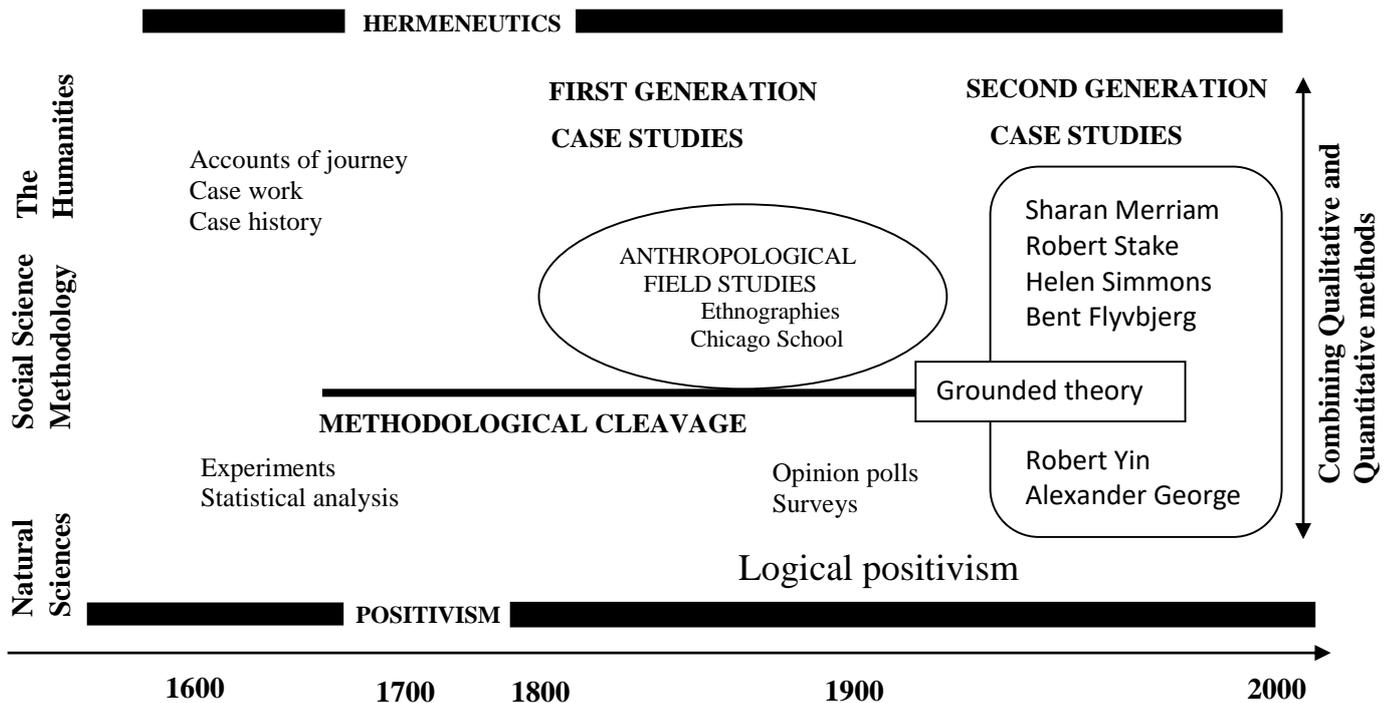


Figure 0-5: History and evolution of case study research (Johansson 2003, cited in Harrison *et al.*, 2017)

Moreover, Heale and Twycross (2018) have asserted that there is no one definition of case study research but that in general terms, it can be understood as the intensive study of a particular person, group of people or unit, community, organisations or other units wherein the researcher examines in-depth data in relation to several variables. Moreover, Crowe *et al.* (2011) noted that the value of case study research is more recognised in the fields of business and law and policy, such that this type of research is deemed significantly effective if there is a need to obtain in-depth knowledge and understanding of a complicated issue, event or phenomenon in its natural setting.

According to Harrison *et al.* (2017), the main challenge in understanding case study research

is that it is referred to as both a method and a methodology. They explained that the ambiguity of case study research being referred to as a methodology or as a method is compounded by the different terminologies used in defining and discussing its context because those terms are often being used without definitional clarity. In line with this, Ridder (2017) noted that case study research has different objectives, particularly in relation to contributing to theory, which results in a critical concern in terms of challenging or contradicting a well-formulated theory. Hence, case study research is often misunderstood as a type or a method of qualitative research (Starman, 2013).

Furthermore, Harrison *et al.* (2017) asserted that case study research is mostly described as a qualitative type of inquiry. The main goal of case study research is to carry out an in-depth analysis of a complicated issue while seeking to understand the issue from the perspective of the actors (or participants) (Harrison *et al.* 2017). Crowe *et al.* (2011) identified the crucial stages in undertaking case study research, including defining the case, selecting the case, collecting and analysing data, interpreting data and reporting the findings. Therefore, case study research can be approached in various ways, depending on the researchers' epistemological standpoint, where it can be approached as either a single case study or a multiple case study (Crowe *et al.*, 2011; Gustafsson, 2017).

In carrying out case study research, one of the most important aspects that contribute to research success is the design of the case study. In line with this, Teegavarapu and Summers (2008, p. 2) noted that designing research means '...to explore, describe, justify, validate, and utilize design knowledge'. In relation to the case study research and in accordance with the perspective of Yin (2014), the case study research design consists of five components, namely the study's questions, propositions, units of analysis, the logic of linking data to propositions and the criteria for interpreting the findings (Yazan, 2015). On the other hand,

Stake (1995) argued that a flexible design is needed to allow researchers to make significant changes even after they proceed from the design to the research stage (cited in Yazan, 2015).

According to Gustafsson (2017), case study research is mostly used to test theories, provide descriptions and develop new theories regarding the subject of study. As such, the type of case study used must reflect the objectives and determinations of the study. Yin (2014) also claimed that it is essential to identify the composition of the case study during the design stage. Also, it is essential to consider the format of the case study. According to Scholz and Tietje (2002), there are several basic formats for case studies, but the most common include highly structured cases, short vignettes, unstructured cases and groundbreaking cases. With highly structured cases, the problem is that the facts are provided in a condensed way (Scholz and Tietje, 2002). Short vignettes are cases that are well structured with little excess information and only covering a few pages. Unstructured cases are those that are described as complex cases, wherein most have no one best solution to be found. Finally, groundbreaking cases are those that provide new terrain for the study team. Scholz and Tietje explained that groundbreaking cases are mostly new situations where only a little knowledge exists that has been gained through structured research. Hence, the main advantages of using case study research are the provision of an intensive study, the opportunity to develop new research, and the possibility of effective conduits being provided for a broader range of research methods (Murphy, 2014).

In using the case study as an approach in research, some factors need to be taken into consideration according to Yin (2014). One main aspect to consider is the focus of the research, in which case studies are used when the emphasis or focus of the research is to address questions on 'how' or 'why' phenomena exist. Research studies that make use of the case study approach do not involve manipulation of behaviours of people involved in the

research study. Researchers can also use a case study when the purpose is to take into account contextual conditions (Yin, 2014). There are advantages and disadvantages to the case study approach that researchers should take into consideration before applying it. The case study is known to be advantageous and more practical as an approach when quantitative approaches and methods are deemed weaker to achieve the purpose of the study. According to George and Bennett (2005), a case study is a qualitative research method that has four advantages: (1) it can offer a high level of conceptual validity that supports contextualized comparisons; (2) it is feasible for an inductive approach to derive new hypotheses; (3) it supports the examination of causal mechanisms in individual cases, and (4) it can facilitate the exploring and modelling of complex causal relationships. More so, if the research seeks to conduct multi-case studies, it is important to understand and reflect on the limitations, especially concerning the difficulty of the organisation and the synthesis of a large volume of data gathered in typical multi-case studies (Heale & Twycross, 2018).

- *Single versus multiple case studies*

Case studies can be divided into different types. Yin (2014), for instance, identified three common types of case study. The first type is the explanatory case study type, which is utilised if the purpose or intent of the research is to address the question associated with explaining the causal relationship in real-life situations and interventions. It is used especially when such situations or interventions are too complex to explore (Yin, 2014). Several research studies in the past have adopted the explanatory case study type. For instance, the study by Joia (2002) made use of the explanatory type to determine how students are learning in a web-based, online participative learning environment, and how such environments foster the participation rates of students (Joia, 2002). The second type of case study is the exploratory study, which is used in investigating interventions that have no clear set of results

(Yin, 2014). Lalor *et al.* (2013) made use of an explanatory case study to explore the effect of specialist and advanced practice roles on clinical outcomes. The last type of case study is the descriptive case study, utilised for describing interventions or phenomena within the real-life contexts in which they occur. Besides the different types of case studies, Yin (2014) also determines two types of case study designs – single case, and multiple case studies – which researchers can adopt depending on the phenomenon or issue being explored.

According to Gustafsson (2017), the main difference between the single case study and multiple case studies is that in the latter, researchers analyse more than one case to gain in-depth knowledge about a specific phenomenon through understanding the similarities and differences between cases. Ridder (2017) explained that classical studies prefer in-depth descriptions of a single case for elaborating new theories. On the other hand, using multiple case studies enables researchers to make analyses within and across cases wherein common themes can be identified based on the analyses and assertions about the cases as a whole (Heale and Twycross, 2018).

Both single case studies and multiple case studies are deemed to be effective methods for understanding complex issues about certain phenomena in their natural setting (Harrison *et al.*, 2017). There are different reasons for choosing either to use a single case study or multiple case studies. According to Scholz and Tietje (2002), single case study research is frequently carried out in unique situations where it is salient to the understanding of the problem or phenomenon being studied. Moreover, a single case study or multiple case studies can also be conducted with embedded units (Gustafsson, 2017). Case study research can be carried out to provide more than one sub-unit of analysis. Scholz and Tietje (2002) explained that embedded case studies involve more than one unit or object of analysis where the multiplicity of evidence is investigated in subunits focusing on various aspects of the case.

This means that embedded case studies allow for the use and interpretation of both qualitative and quantitative data as well as strategies of knowledge or synthesis integration.

Single case study research can either be explanatory or exploratory, where the explanatory case study focuses on explaining a question or phenomenon, and the exploratory case study has the main objective of proving that further investigation is needed (Universal Class, 2019). Despite this, Mariotto *et al.* (2014) asserted that the case study research approach is a useful source of knowledge in several areas, but its major criticism is it being described as insufficiently scientific because it does not develop testable generalisations.

The single case study is a common case study design, which is used in the absence of other cases that can be replicated. This is a practical design to adopt when events being explored are restricted to a single occurrence. For instance, if a researcher aimed to explore the impact of the Japan tsunami in 2011 or perhaps the World Trade Tower attacks in September 2001 on victims or relatives of victims, then a single case could be adopted. Using a single case study, however, has limitations. One of the common limitations of a single case study design concerns generalisations, where such a design mostly does not offer a generalising conclusion, especially when the events or situations explored are rare. This limitation can be addressed by triangulation with other methods to check the validity of the research process (Zainal, 2007). Alternatively, multiple-case studies, according to Yin (2014), is a design that allows for the exploration of divergences within and between several cases. The intent of conducting multiple case studies is to replicate the results across multiple cases. Given that the comparisons between cases are drawn, the cases must be selected carefully for the researcher to expect similar findings across the selected cases or achieve conflicting outcomes based on a theory (Baxter & Jack, 2008).

Gustafsson (2017) asserted that multiple case studies could be used to predict different results for expected reasons or similar results within studies. According to Gustafsson, the main advantage of using multiple case study research is that it allows for a broader exploration of research questions and a theoretical evolution, making it robust and reliable as a method. Yet, it was highlighted by Gustafsson that undertaking multiple case study research can be significantly expensive and time-consuming to implement. Vohra (2014), for example, adopted the multiple case study design to explore the complex concept of contextual leadership drawn from different business organisations in India. Multiple case study design is advantageous as the intent of replication can improve and support results, which further improves the robustness of the process or methods used (Zainal, 2007).

4.4.6. *Ethnography*

Ethnography is another common approach used in qualitative research. Hancock *et al.* (2009:10) noted that the term ethnography means ‘portrait of people’, which makes it a methodology for descriptive studies relating to people and culture. Concerning this, ethnography has its roots in the study of the social relationships of human beings, which is known as anthropology (Hancock *et al.*, 2009; Astalin, 2013). Accordingly, ethnographic studies are carried out if cultural parameters are expected to influence the responses of people relating to solving problems (Astalin, 2013). Moreover, ethnography can also be viewed as ‘a toolbox for methods’ integrated into a multifaceted methodological approach (Reeves *et al.*, 2013).

Reeves *et al.* (2013) defined ethnography as a type of qualitative research that requires the collection of observations, interviews, and documentary data in pursuit of producing comprehensive accounts of various social phenomena. This means that ethnographic researchers conduct field studies to explore cultural groups and specific social interactions

(Reeves *et al.*, 2013). As such, the core of ethnographic research is to provide rich and holistic insights into the behaviours, actions and views of people and the nature of the locale they inhabit (Reeves *et al.*, 2008).

4.4.7. Narrative analysis

Narrative analysis is also common in qualitative research. Hancock *et al.* (2009) asserted that the narrative analysis refers to stories or narratives of people about their personal stories or on sets of events. Unlike content analysis, which focuses on themes, narrative analysis emphasises the sequential unfolding of an individual's story, thereby highlighting characters and plots. According to Hancock *et al.* (2009), narrative analysis is time-consuming and usually involves only a small number of cases.

4.5 Research design

In the initial stages of developing the research design, the researcher followed the advice given in Creswell (2014) and Saunders *et al.* (2007) for designing research. However, in several important respects, the final research design, detailed methodology and methods actually implemented a more varied and blended approach. This chapter therefore describes a process of reorientation away from some of the somewhat rigid distinctions made in several of Creswell and Saunders *et al.*, summary definitions of deductive/inductive research, research approaches, philosophical worldviews, grounded theory and case study methods. Creswell (2014) conceptualised a model as figure 4-6 below illustrates to address the design of the research using three main questions:

1. What is the knowledge claims being made by the researcher?
2. What are the inquiry strategies that will form the procedure?
3. What will be the methods of collecting and analysing data?

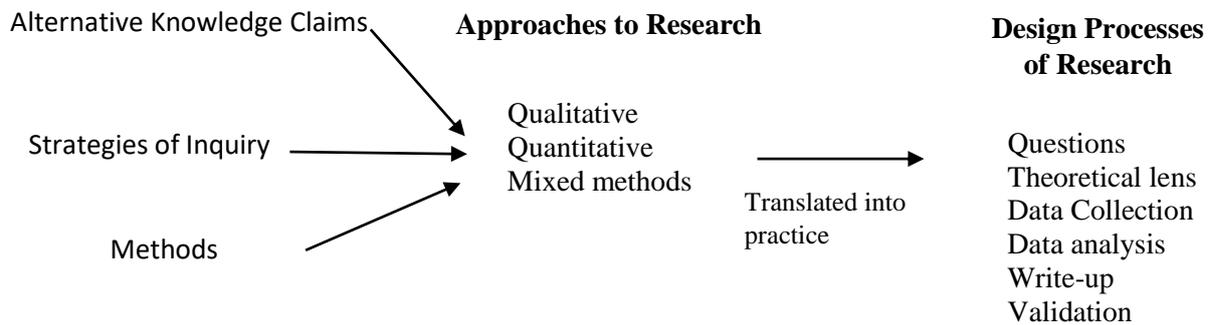


Figure 0-6: Creswell's (2003) research model

4.2.1. Knowledge claims/paradigms

Knowledge claims are also called paradigms. Having a paradigm as the first step enables researchers to have a basis for subsequent choices of methodology, methods and research design (Mackenzie and Knipe, 2006). There are alternative paradigms, as shown in Figure 4-7; the conventional paradigms referred to in research texts are:

1. Postpositive paradigm: Sometimes, this is referred to as the 'scientific method' or 'science research' (Creswell, 2003; Mackenzie and Knipe, 2006). It is also called quantitative research (Creswell, 2003); it aims to test a theory or describe an experience through empirical observation and measurement.
2. Interpretivist/constructivist paradigm: This is about understanding the human experience. It relies on the participants' views. It does not start with a theory like postpositivism; the theory will be developed. The researcher depends on qualitative data collection methods or a combination of both qualitative and quantitative methods (mixed methods).
3. Transformative paradigm or advocacy/participation: this addresses the issues of social justice and marginalised peoples. Also, the inquiry should have a political agenda and actions for transformation to change the lives of the participants. Qualitative and quantitative data collection methods can be used, or mixed-method approaches.

4. Pragmatic paradigm: This is not committed to any system of philosophy or reality. Pragmatist researchers focus on the ‘what’ and ‘how’ of the research problem. This paradigm uses all approaches (mixed methods) to understand the problem

<p>Postpositivism Determination Reductionism Empirical Observation And measurement Theory verification</p>	<p>Constructivism Understanding Multiple participant meanings Social and historical construction Theory generation</p>
<p>Advocacy/Participatory Political Empowerment issue-oriented Collaborative Change-oriented</p>	<p>Pragmatism Consequences of actions Problem-centered Pluralistic Real-world practice oriented</p>

Figure 0-7: Alternative knowledge claims (Creswell, 2014)

4.2.2 Strategy of inquiry

After defining the paradigms, it will be easy to choose a strategy of inquiry. According to Creswell (2014), there are three strategies of inquiry: strategies associated with quantitative approaches, qualitative approaches, and mixed methods approaches.

- Strategies linked with quantitative approaches are:
 - Experiment: the investigator manipulates one variable and randomises the rest of the variables.
 - Surveys: using questionnaires or structured interviews
- Strategies linked with qualitative approaches:

- Ethnographies: collecting, primary and observational data of a whole cultural group in a real situation over a long period.
- Grounded theory: in which the researcher tries to generate or discover a theory according to collected data.
- Case studies: in which the researcher investigates in depth a person, group, activity, process or community.
- Phenomenological research: in which the researcher studies subjective experiences concerning a phenomenon, as defined by participants in the research.
- Narrative research: the researcher tends to consider the lives of individuals, their stories about their lives. In the end, the researcher combines the views of the participants' lives with the researcher's experience.
- Strategies linked with mixed methods:
 - Sequential procedures: in which the researcher uses one of the methods to elaborate on the findings of the other method. For exploratory purposes, the research can start with qualitative methods and then follow up with a quantitative method in order to generalise the results. On the other hand, the study may begin with a quantitative method to test theories and concepts, followed by detailed exploratory case studies as a qualitative method.
 - Concurrent procedures: in which the researcher uses quantitative and qualitative data at the same time to provide an extensive analysis of the research problem; after that, the data will be integrated into the interpretation of the total outcomes.
 - Transformative procedures: this type of research changes our understanding of a practice, concepts or existing scientific truths by involving current ideas and discoveries, and it leads to the creation of a new paradigm.

4.2.2 Research methods

This, the third element, designs the research approach by defining a particular method of collecting and analysing data. For each strategy, there is a different method to use according to the researcher's intent, whether it is to specify the information type or to merge the data from the participants in the project. The contribution of the three elements guides the researcher to three main approaches for research, as shown in Table 4-3.

Table 0-3 Summary of quantitative, qualitative, and mixed methods approaches (Creswell, 2003)

Research approach	Knowledge claims	Strategy of Inquiry	Method	Use these practices of research, as the researcher
Quantitative	Postpositivist assumptions	<ul style="list-style-type: none"> ▪ Experimental design ▪ Quasi-experimental design 	<ul style="list-style-type: none"> ▪ Predetermined ▪ Closed-ended questions ▪ Performance, attitude, observation and census data ▪ Statistical analysis 	<ul style="list-style-type: none"> ▪ Tests or verifies theories or explanations ▪ Identifies variables to study ▪ Relates variables in questions or hypotheses ▪ Uses standards of validity and reliability ▪ Observes and measures information numerically ▪ Uses unbiased approaches ▪ Employ statistical procedures
Qualitative	Constructivist assumptions	<ul style="list-style-type: none"> ▪ Grounded Theory 	<ul style="list-style-type: none"> ▪ Emerging methods ▪ Open-ended questions ▪ Field observation, document data ▪ Text and image analysis 	<ul style="list-style-type: none"> ▪ Positions himself of herself collects participant meanings ▪ Focuses on a single concept or phenomenon ▪ Brings personal values into the study ▪ Studies the context or setting of participants
Qualitative	Advocacy/Participatory assumptions	<ul style="list-style-type: none"> ▪ Narrative design 	<ul style="list-style-type: none"> ▪ Open-ended interview and audio-visual data ▪ Text and image analysis 	<ul style="list-style-type: none"> ▪ Validates the accuracy of findings ▪ Makes interpretations of the data ▪ Creates an agenda for change/reform
Mixed Methods	Pragmatic assumptions	<ul style="list-style-type: none"> ▪ Mixed methods design 	<ul style="list-style-type: none"> ▪ Both predetermined and emerging methods ▪ Both open- and closed-ended questions 	<ul style="list-style-type: none"> ▪ Collects both quantitative and qualitative data ▪ Develops a rationale for mixing ▪ Presents a visual picture of the procedure in the study ▪ Employs the practices of

			<ul style="list-style-type: none"> ▪ Multiple forms of data drawing on all possibilities ▪ Statistical and text analysis 	both qualitative and quantitative research
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In addition, the researcher also follows the principles of research design advocated by Saunders *et al.* (2007). It illustrates the stages that must be covered when developing a research methodology in certain steps by identifying the research philosophy, approaches, strategies, choices, time, and research technique.

The table 4-4 below presents the research design based on some commonly applied terms and definitions stated by Saunders *et al.* (2007) and Creswell (2003), although there are some different steps in each researchers approach, there is common steps between both that ensure the selection of thesis research design is correct and based on approved known steps and terms like Saunders *et al.* (2007) and Creswell (2003).

Table 0-4 Research Design by the Researcher

Saunders <i>et al.</i> (2007)	Adopted research design by the researcher
Research philosophy	interpretivism
Research approach	inductive
Research strategy	qualitative (case study – grounded theory)
Choices	mono-method
Time horizons	cross-sectional
Data collection and analysis	data source: (interview-observation-documentary) data analysis: (coding)
Nature of the research	exploratory
Creswell (2003)	Thesis
Research approach	qualitative
Knowledge claims	constructivist assumptions
Strategy of inquiry	grounded theory
Method	emerging methods

	open-ended questions field observation, document data text and image analysis
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The researcher developed the research design by considering the steps mentioned above and according to the literature review of the thesis topic. Consequently, this research adopts the qualitative research method for the main data collection which was based on the research aim, objectives and questions of the research described in Chapter 1. In this research the qualitative method was adopted due to the nature of the research questions which consists of “how” and “what” questions. In addition, the research aim and objectives are to explore and investigate the issues of SI impact on innovative PPP infrastructure project. Given the complexity of the research which involves people and their perceptions on the subject it is appropriate therefore to adopt qualitative methods. This research method helps researchers to understand people, their actions and the context in which these actions take place by studying the participants on the subject of SI impact on PPP projects.

To ensure that it achieves its objectives and answers the questions posed, the researcher also investigated many of the recent studies done in areas relevant to this research and the methods used to obtain the results, in addition to reviewing the research methodology and methods according to the nature of the research. So, the researcher determined the research methodology and methods based on Creswell’s (2014) model and Saunders *et al.* (2007), in addition to a review and synthesis of previous studies. Figure 4-8 shows the final research design that is used to answer the research aim, objective and questions.

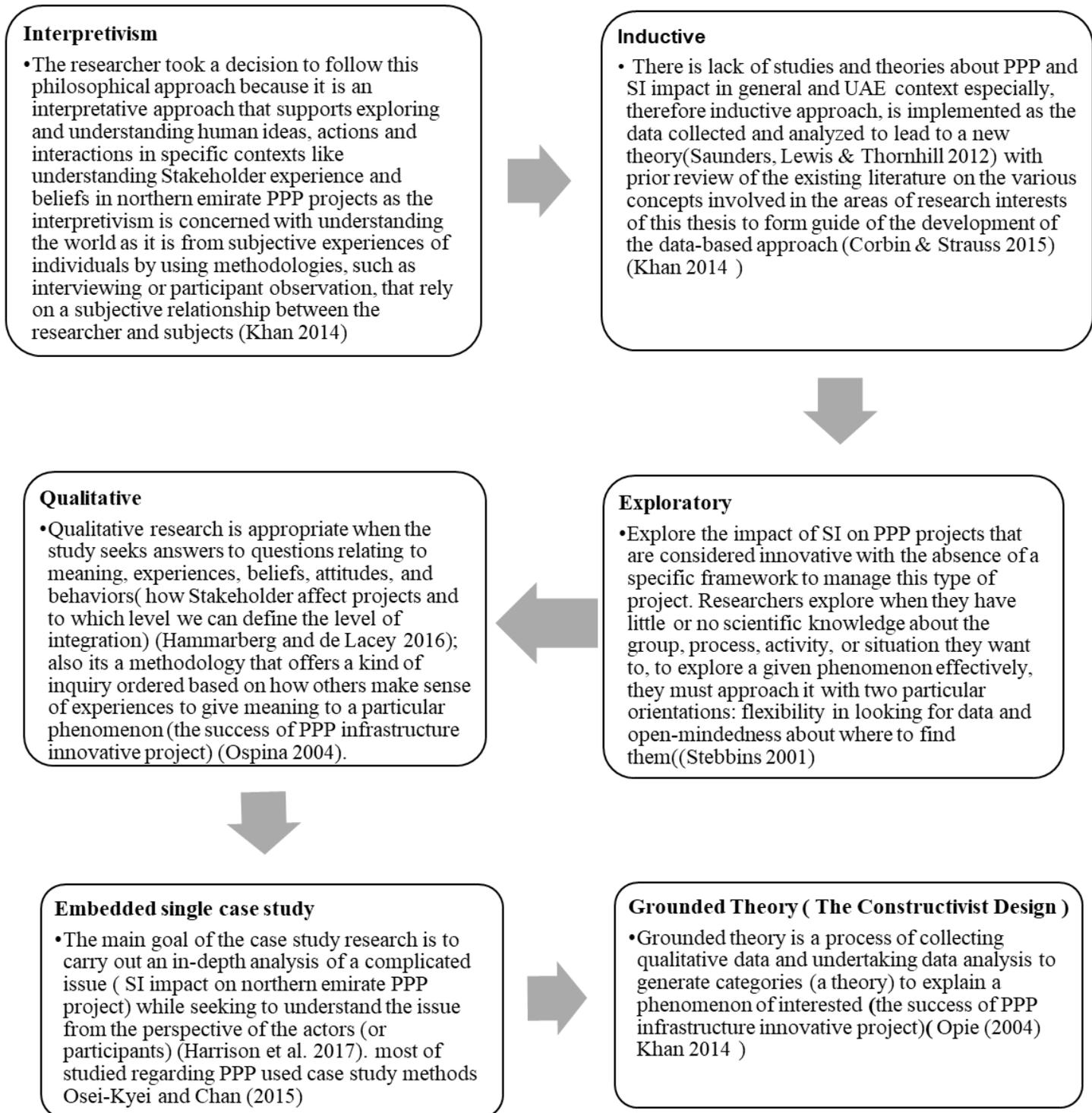


Figure 0-8: Final research design by the researcher

To date, various methods have been developed and introduced regarding the PPP projects, such as case studies, questionnaire surveys and mixed-methods (questionnaire and cases studies). As demonstrated in Figure 4-9, the case study is the most used approach in exploring the CSFs for PPP projects from 1990 to 2013 (Osei-Kyei & Chan 2015). This statistical result is reasonable as the case study approach provides in-depth information about the phenomenon under study.

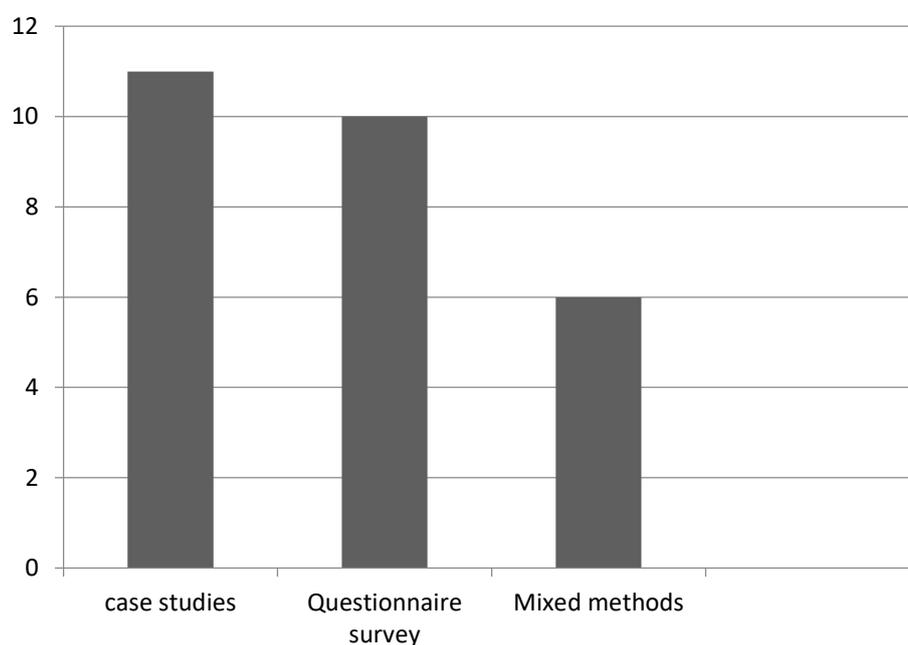


Figure 0-9: Most used methods for PPP studies (Osei-Kyei & Chan 2015)

Given the lack of previous studies in interpreting and understanding the procedure of managing SI to deliver successful, innovative PPP projects, this thesis follows a qualitative methodology in order to gain insights into the SI factors involved.

Single case study approach and design

It was mentioned in the first chapter that the main goal of the research is to explore how SI affects PPP and to define the level of its impact and why SI is important in this type of project, taking into consideration the lack of studies in this field in the UAE. Since this topic

is gaining more attention from researchers and project management practitioners nowadays, the researcher design for this study is to follow an exploratory approach by considering the definition by Yin (2014) to confirm the rationality of using a case study approach.

A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context and it is useful when a how or why question is being asked about a contemporary set of events over which the investigator has little or no control (Yin, 2014).

Case studies are one method that enables a deeper and more detailed investigation of the kind that is usually required to answer questions about how and why. In the research for this thesis, a single embedded case study approach was conducted, which is used in the absence of other cases that can be replicated. In this stage, this is a practical design to adopt when events being explored are restricted to a single occurrence, especially in the northern emirates. The selected case is the most innovative of three PPP infrastructure projects.

A research design is the logic that links the data to be collected and the case study research.

Five components must be identified to avoid a situation in which evidence does not address the research questions (Yin, 2014). The first three components are related to identifying what data can be collected and its boundaries, the last two components, to the resulting data and how to analyse and suggest what is to be done after the data have been collected.

1. Case study questions: case study research is most likely to be appropriate for ‘how’ and ‘why’ questions; the thesis main questions are concerned about exploring how SI impacts PPP projects. Previous studies explored the CSF of PPP projects, and SH was one of the factors; this study focuses on how the level of SI will impact the aligned research objectives, research question and case study questions, as presented in Table 4-5.

Table 0-5 Case study questions aligned with research objectives

Research Objectives	Topics	Research Questions	Case Study Questions
<ul style="list-style-type: none"> •Review existing literature on SI in the public sector. •Review existing literature on PPP success factors. 	Definitions of terms	<ul style="list-style-type: none"> •What defines the level of SI? 	<ol style="list-style-type: none"> 1. What is the definition of SH integration? 2. What is PPP project? 3. What are the classification of SH (in terms of power and interest) in the project 4. What was your role in the project? 5. In which stage of the project were you involved?
<ul style="list-style-type: none"> •To identify PPP success criteria that can be influenced by SI 	Challenges and success factors	<ul style="list-style-type: none"> •What are the leading causes of innovative, large-scale PPP project failure 	<ol style="list-style-type: none"> 6. What type of changes did the SH request through the planning phase? 7. What are the success factors for PPP innovation project? 8. What are the main causes of innovative PPP failure or success? 9. What are innovation project criteria? 10. What are the most critical issues regarding stakeholder engagement? 11. What were the issues that led to the current project situation and who is responsible for these?
<ul style="list-style-type: none"> •To identify the appropriate PPP management process that can be used by the local government that would help achieve successful projects. 	Process and tools	<ul style="list-style-type: none"> •What is the role of the constitution and laws in large-scale PPP projects 	<ol style="list-style-type: none"> 12. How the stakeholder was identified? How do you classify projects type? 13. What are the planned tools to share knowledge among different SH? 14. How did you manage SH communication? 15. How did you collect SH requirements? 16. How did you collect SH requirements? 17. How many years was the project in the planning phase? 18. What type of changes did the SH request through the planning phase?
<ul style="list-style-type: none"> •Examine the source of misalignment between different stakeholders in the PPP project during the planning phase. 	Source of misalignment in planning phase	<ul style="list-style-type: none"> •What are the difficulties explicitly related to local governments for delivering innovative, large-scale PPP projects in the northern emirates? 	<ol style="list-style-type: none"> 19. Does the location of the company affect the communication between SH? 20. What type of changes has the SH requested through the planning phase? 21. Do other projects in other emirates affect the project? 22. How does Expo 2020 affect the project? 23. Do you think that its communication issues or weak planning or knowledge affect the project progress?

2. Case study proposition: When a case study includes specific propositions, it increases the likelihood that the researcher will be able to place limits on the scope of the study and increase the feasibility of completing the project. The propositions may come from the literature, personal and professional experience, theories, or generalisations based on empirical data (Baxter and Jack, 2008). It must also be noted that that propositions may not be present in exploratory case studies due to the researcher not having enough experience, knowledge or information from the literature upon which to base propositions. Instead, the researcher should state the purpose of the case study (Baxter and Jack, 2008; Yin, 2014). For this thesis research, the purpose is to identify SI as a factor and criterion in order to develop a framework to assist Northern emirates and other practitioners to manage successful innovative PPP infrastructure projects.

3. Unit of analysis – ‘the case’: The unit of analysis is the basis for the case. It is important to define the unit of analysis to help the researcher determine the scope of the data to be collected about the subject and what will be included within the case and what will be excluded. The unit of analysis may be an individual person, an event or an organisation or team or department within the organisation. For this research, the unit of analysis is embedded in the research given the focus on the different stakeholders in the context of innovative infrastructure PPP projects. Table 4-6 below illustrates the research units of analysis.

Table 0-6 4:6: Research units of analysis

Internal SH			External SH		
BOT contract / Subcontractor			Local government entities		Federal government
Partner 1	Partner 2	Other parties	Partner 1 Local government	Other local government	

4. The fourth component linking the data to the proposition depends on the case proposition. It was mentioned that this research is considered as exploratory. Therefore, this component will become clear by linking the aims and research questions with data that will result from the research by using an analytical technique to construct theory and offering possibilities for further research and investigation.
5. Criteria for interpreting: this component arises when statistical analysis is relevant. However, much case study analysis does not rely on the use of statistics, finding other ways to examine and explore the research phenomenon (Yin, 2014) to identify and address rival explanations for the research findings.

4.5.1 Case study selection

The primary criterion of case selection is its relevance to the research objectives (George and Bennett, 2005). The researcher has selected a case that assists in exploring and discovering the subject under investigation in a real-life context (Yin, 2017) regarding how to manage effective SI in PPP projects and the impact level according to stakeholders' power and interest. The case involves several inputs and outputs, classifying it as a high-impact project that must be studied and understood to find a methodology to manage similar projects through the activation of the provisions of the constitution or federal laws and other factors.

There are many forms of partnerships with the private sector which depend on the level of contribution and responsibilities, such as service contracts, management contracts, leasing contracts, concession contracts, build, operate, transfer (BOT), build, own, operate, transfer (BOOT), and build-own-operate (BOO). However, the research focuses on partnership contracts for new projects and, in particular, BOT contracts were selected as this study's focus mainly because of the fact that BOT contracts is the common partnership forms

in many projects in the UAE, especially in infrastructural and even in education sector. In Dubai, many of the recent PPP projects are in BOT contract forms – i.e. Al Qusais landfill gas to energy project awarded to BESIX. The main reason for UAE local and national governments opted for BOT contracts in infrastructural and civil projects is that such PPP form allows for faster approval of projects, and facilitates transfer of the majority of the risks to the private sector.

A limited number of projects have used PPPs, limiting exposure to the market to such type of procurement method, in the selected northern emirate context. Therefore, the case was selected based on Dubai Law No. 22 of 2015 and a financial guide by MOF regarding Cabinet Resolution No. 1/1 (f) of 2017 to select the project in terms of cost, time and project approvals. Table 4-7 show the case selection based on PPP Law in the UAE. From a legal perspective, this is an indication that the local governments in the UAE have strong preference on the BOT model for PPP project agreement form; hence, an encouraging this current study to focus specifically on BOT contract projects.

Table 0-7 Case study selection and criteria under UAE PPP laws

	Case study	Cabinet Resolution No. 1/1 (f) of 2017	Dubai Law No. 22 of 2015
Duration of the partnership	35 years	From 30 to 35 years	Dubai legislator did not specify a contract period but left that open according to the agreement between the two parties, with that being limited to the maximum contract which is (thirty years from the date of signing the contract, or the date determined by the Association Committee.
The contract value	12 Billion AED	The value of the project should be more than 200 million dirhams, and projects of a strategic nature	The value is not specified in the law, but a set of powers have been determined according to

	that are classified within partnership projects with the private sector are excluded from this condition by agreement between the relevant authority and the Ministry of Finance represented by the technical office.	the value of the contract, as defined below, as the government focuses on the return more than the value of the contract itself.
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Also, the researcher set simple criteria to select the case, which consist of three main components, including sub-elements. The first and essential elements were the size and nature of the project, the second element was the project outputs, and the third element was the current project status and phase.

The main characteristics of the case are summarised in the following Table 4-8.

Table 0-8 Main characteristics of the case

Project size	Large-scale project	<ul style="list-style-type: none"> • Involves multiple public and private stakeholders • Complex project • Long-term utilisation • Costs more than US\$1 billion (PMI) • Impacts millions of people (PMI) • Constantly growing ever larger in a long historical trend (PMI)
	BOT contract	<ul style="list-style-type: none"> • 35 Years (MOF) • Between private company and government • The private company owns the project assets until they are transferred at the end of the contract
Project output	innovative	<ul style="list-style-type: none"> • New services and facilities (Damanpour 1991) to enhance customer experience with less time & fees, and high luxury.
	Economic impact	<ul style="list-style-type: none"> • New jobs • New income to the emirate • New free zone

		<ul style="list-style-type: none"> • New city • New government services
	Infrastructure development	<ul style="list-style-type: none"> • New transportation • New utilities • New schools and university • New roads
	Planning phase	-
Project status	High risk	<ul style="list-style-type: none"> • Foreign company (the first time in the UAE) • Affects different local governments • Will compete in similar projects • Following international standards
	Cancelled	<ul style="list-style-type: none"> • No official recorded progress in planning and execution since 2017 • No official announcements about project status

4.6 Research methods and sample

For this study, the researcher used the case method as it supports both theory building (Yin, 2015) and theory testing. The case study method's support for theory building is particularly useful in areas where existing theoretical and conceptual frameworks are inadequate (Ponelis, 2015). With regard to the primary sources of research, the researcher used both the structured interview and semi-structured interviews as she relied at the beginning of the research on semi-structured interviews, which consists of a dialogue or conversation between the researcher and the participant that is guided by a flexible interview protocol, where the researcher can probe for clarifications through follow-up questions and comments (DeJonckheere and Vaughn, 2019). But, as mentioned above, the political factors and some of the legal factors prevented some interviewees participating, so the researcher adopted a structured interview formal over the internet without audio recording. The limitation of this

method is that because no follow-up questions can be asked, there is a lack of detailed responses, which limits the ability of researchers to conduct an in-depth analysis relating to the behaviours of individuals (McLeod, 2014).

In addition, Saldana (2010) and Charmaz (2014) state that there is no clear-cut quantification of the appropriate number of interviews to be considered satisfactory to validate the findings of a study in qualitative research and to reach saturation in a grounded theory study. Therefore, the researcher initially planned to interview 20 to 25 participants before anticipating reaching saturation point. During data collection, 22 stakeholders were interviewed, using focused, semi-structured interviewing and structured interviews, where open questions were posed, with a focus on issues related to the BOT contracts between them. This form of interviewing is suitable for grounded theory analysis, in that the interviews were focused on inviting detailed discussions of the topic of study (Charmaz, 2014). The questions were available in English and Arabic, as some interviewees preferred to conduct their interviews in Arabic. Most of the interviews were audio-recorded in sessions that ranged from 30 to 90 minutes. The locations of the interviews were different according to interviewees' availability.

4.6.1 Primary data collection

The collection stage consists of following the case study process, utilising various information sources. building a case study database and maintaining a chain of evidence (Yin, 2017). Accordingly, each of the research methodologies has appropriate methods that can be used in collecting and analysing the data. Walliman (2011) defined research methods as the tools and techniques that are used in conducting research. Similarly, Moffitt (2019) explained that the research method is a systematic plan for conducting research drawn on various qualitative and quantitative research methods. The most common types of research

methods used in research comprise interviews (in a qualitative research methodology) and surveys (in a quantitative research methodology). Prior to selecting the research methods, researchers need to identify whether they will be using primary or secondary data or both. A wide variety of data collection methods can be used, including observation, participant observation, interviews, focus groups, documentary sources, archival records, and physical artifacts. It is preferable to triangulate data using multiple sources of data – and multiple participants to allow significant insights to emerge (Yin, 2017).

- *Primary data collection methods*

In carrying out a research study, two types of data can be used, primary and secondary data. In line with this, primary data research embodies the use of all sources that are original and the data collected for a particular study. As highlighted by Ajayi (2017), primary data can be described as data collected for the first time by researchers, which means that primary data are factual and original. In line with this, primary data research can be described as original research conducted by researchers based on accurate data collected for the sole purpose of addressing the research problem at hand. Driscoll (2011) notes that primary research is often grounded in the principles of the scientific method. In collecting and using primary qualitative data, different techniques can be considered, including the use of interview method, observation methods, and focus group discussions, among others (Walliman 2011).

For this study, the objectives of data collection were to understand how the participants affected the project, and to obtain an insight into the level of integration between them. The researcher adopted primary data methods such as semi-structured interviews to explore new and relevant issues that emerged during the interviews, as well as using structured interviews for those who preferred to answer by email due to distance and security factors, and participant-observation.

1. Interview research method

For carrying out qualitative research, the interview method is the most widely used method, either as a research method or as a data collection method. Also, it is one of the most important sources of case study evidence. Interestingly, an interview can be defined as a qualitative research method involving a conversation between the interviewer and interviewee in pursuit of gathering information. In line with this, the interview as a research method is considered as being most effective in gathering narrative data that allows researchers to investigate people's views and behaviours in greater depth (Alshenqeeti, 2014). Interviews can be conducted face to face or via other communication platforms (e.g. mobile phone, email, conference call.).

Different types of interviews can be carried out depending on the research needs, but the most common and widely used include structured interviews, semi-structured interviews and unstructured interviews. Among these three types of interview methods, the unstructured interview research method is considered the least reliable from the research viewpoint.

In a structured interview method, a set of standard questions are developed which are pre-determined and which all interviewees must answer in the same order (Easwaramoorthy & Zarinpoush, 2006; Edwards & Holland, 2013). The structured interview research method can be conducted in various ways, the most common being face to face and over the internet. Accordingly, structured interview questions can consist of open-ended or closed-ended questions (Williams, n.d.). Moreover, since the structured interview method uses standardised ordering and phrasing of questions, it allows for more effortless coding of data for analysis. In line with this, McLeod (2014) identified the strengths of using a structured interview research method as including it being easy to replicate information because of the use of a fixed sets of questions provides an easier means of testing for reliability and making it

reasonably quick to conduct, which means that large samples can be obtained. Yet, there are also some limitations to using the structured interview research method, including the inflexibility of the method, because no follow-up questions can be asked in an impromptu way and there is a lack of detail in the responses, which limits the ability of researchers to conduct an in-depth analysis relating to the behaviours of individuals (McLeod, 2014).

The semi-structured interview research method is one of the most commonly used in qualitative research and the most frequent qualitative data source (DeJonckheere & Vaughn, 2019). The semi-structured research interview method consists of a dialogue or conversation between the researcher (the interviewer) and the participant (the interviewee), which is guided by a flexible interview protocol, where the researcher can probe for clarifications through follow-up questions and comments (DeJonckheere & Vaughn, 2019). Also, a semi-structured interview can be viewed as an in-depth interview, which is conducted once with an individual or group and is based on a semi-structured interview guide (Jamshed, 2014). Besides, the interviewer can probe areas based on the responses of the interviewees and ask follow-up questions to gain clarification or to expand on particular issues further.

For this current study, a semi-structured interview was selected as the primary method of data collection. There are various reasons as to why semi-structured interview technique was conducted for this study. First, it enables the researcher to facilitate open-ended inquiries, which further aid in gathering in-depth information from participants. It enables probing, open-ended questions for seeking independent perceptions and thoughts of the individual participants in this study. Second, semi-structured interview methods are more likely to assure two-way communication between the researcher and the participants. Third, it is more flexible in pursuing new topics or issues that might emerge during the interview which give the researcher opportunity to seek further clarifications and gain greater insight. Lastly, it can

be easy to perform, having to consider that the researcher had the opportunity to prepare the interview questions (interview guide) prior to performing the interview. In this way, it allows the researcher to have control over the interview by guiding the conversation and keeping the interviewed participants focused on the topic in ways that are relevant to the study's research question.

The characteristics of the data sample in this research study reflect a focus on BOT contract stakeholders who were involved directly in the analysis. There were 16 in total. The following Table 4:9 and graph (4-10, 4-11) summarise the participants in the study. As shown in Table 4-9, the sample size of this current study is 16. In qualitative research, there is no standard formula for calculating the sample size, in comparison to its quantitative counterpart. In some studies, such as Clarke and Braun (2013), the recommended minimum sample size for a qualitative study is at least twelve in order to attain data saturation. Often, determining the size of the sample in a qualitative study depends on the researcher's judgment focusing on achieving quality over quantity. The researcher in this study deemed that a total of 16 participants will be sufficient not just to reach data saturation but also achieving high level of quality when it comes to gathered data or responses from the participants. In selecting the participants, a non-probability sampling technique was utilized – purposive sampling. Purposive sampling is a method that involves researchers relying on their judgment in selecting members of the population in participating the study. Here, the researcher chose the sixteen participants, as they are key people directly involved in the BOT contract project focused in this study.

Table 0-9 Number of participants

Row Labels	Count of Title
local government 3	1
manager	1
partner 1	2
Chairman	1
legal Consultant	1
partner 1 government entity	5
CEO	1
CEO of Infrastructure sector	1
head of section	1
head of section	1
manager	1
partner 2	7
Advisor& partner	1
CEO	1
CEO Advisor	1
engineer	1
head of engineering dept	1
Marketing Executive	1
program director	1
sub contractor	1
consultant	1
Grand Total	16

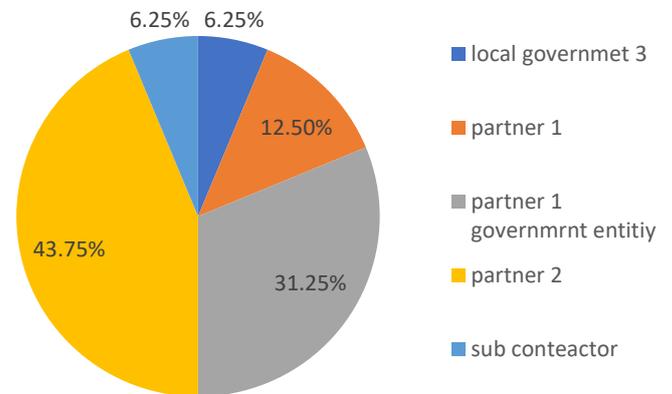


Figure 0-10: Participants organization

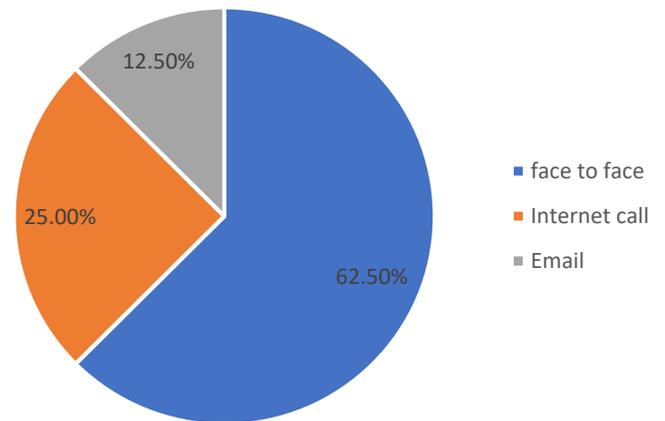


Figure 0-11: Interview Methods

Finally, in conducting an interview, regardless of the type of interview method, ethical considerations must always be followed. According to Alshenqeeti (2014), a high standard of ethical consideration must be maintained, which means that ethical issues must be considered at all stages of the interview process. Interviewees (participants) must provide their informed consent before participating in the interview, and their rights to privacy and confidentiality must be acknowledged and protected by the interviewers for the purpose of conducting interviews; emails, telephone calls or personal meetings are used to ensure that the aims of the research are communicated to the participants. Participant consent forms should be

provided and participants asked to complete them before participating in any interview or other forms of data collection. The interview has proven to be an effective way of gathering data but it has its own drawbacks. Since the researcher is a part of the project, the participants sometimes deviated to discussing more how the researcher might help them to solve the issues in the project and to manage the meeting.

2. *Observation research methods*

Observation can be described as a way of collecting and analysing data through methods and techniques of observation. It is also most commonly used in qualitative research studies.

According to McLeod (2015), observation is a data collection method that involves observing or watching what people do and how they do it. As such, observation as a research method is widely used in a variety of disciplines, particularly as a tool for collecting data about people, processes and cultures within qualitative research (Kawulich, 2005). Observational research is typically conducted in the participants' homes, workplaces or natural environment as opposed to being held in a laboratory or other experimentally controlled setting (Sauro, 2015). As explained by Sauro, observation research methods enable researchers to have a better understanding of how people naturally interact with people, products or the challenges they face.

As defined by Marshall and Rossman (1989, cited in Kawulich, 2012, p. 150), 'Observation is the systematic description of the events, behaviors, and artifacts of a social setting'.

According to Kawulich (2012), observation has been documented as a tool for collecting data since early times, where its importance was illustrated in the works of anthropologists in the late nineteenth century. Similarly, Cohen and Crabtree (2006a) have defined observation as '...a systematic data collection approach' where researchers must use all their senses to examine people in their natural settings or naturally occurring situations.

According to Kawulich (2012), the two significant types of observation comprise participant observation and direct observation. Kawulich explained that participant observation involves being in the setting under study as both the observer and participant, while direct observation consists of observing without being directly involved or without interacting with the people or objects under study. In relation to this, Driscoll (2011) asserted that participant observation is the most commonly used observation research method, particularly within ethnographic research in sociology and anthropology. Driscoll explained that in the participant observation method, the researcher can interact with the participants and become part of their community.

Steber (2017) identified the advantages of observational research to include enabling researchers to observe potential participants in a natural setting that can reveal insights that may be unavailable through the use of other research methods. Observation methods allow researchers to modify their vantage point based on real-time variables. Despite these advantages, Steber also noted some of the disadvantages of observational research, including researchers having limited control over the study environment and having a high potential for subjective bias, among others.

Participant observation is a method of data collection where researchers categorically use research of qualitative measure with an objective of attaining intimate and close familiarity with a particular party of individuals, and their operations via intensive collusion with individuals in their cultural surroundings. It is a methodology applied in several authorities, especially in sociology, human geography, anthropology, social physiology, and studies of communication (Musante and DeWalt, 2010). This method comprises a critically defined range of various purposes such as direct observation, informal interviews, group life participation, personal documents analysis, and collective discussion, though the technique combines dimensions of quantitative measure. Participant observation that is traditional is

normally performed over prolonged periods that range from multiple months to several years and sometimes generations.

There are stages in gathering data using participant observation method, which includes rapport establishment, in-field connectivity, data and observations recording, and analysing data. In the stage of initiating a rapport, it merely comprises of knowing members involved by touring the event location prior to the study. In-field stage of connectivity is essential for researchers to link or show the interest of linkage with the population, in order to be recognized as part of the community (Laurier, 2010). The stage of data and observations recording involves documenting of personal feelings and thoughts about candidates of study via journals of reflexivity. Data analysis involves narrative analysis and thematic analysis. The narrative summary is arranging collected information through locating common themes, interviews, and building a logical story from info. Thematic analysis is categorizing data as per recurrent themes in discussions.

On the other hand, direct observation mechanism permits for a process that is more structured, systematic, and well-designed record forms of observation. This is where a significant number of accessing teams perform fieldwork by observing the actual trend at activity sites of assistance, which is informally done without minding data collection quality. Direct observation can be used to identify whether inputs required are absent or the implementation process is wretched when monitoring data performance indicates findings that are not skilful as planned and have suspected implementation difficulties (Zainal, 2007). Direct observation technique is required when information on the procedure of activity needs to be evaluated, for instance, when tasks are being executed as per the standards demanded efficiency.

There are guidelines for using direct observation, the first being determining the focus of the group at study. Due to the constraints of limited resources and time, direct observation has to be choosy by searching for a few events, phenomena, or activities that are primary to the questions under assessment. Next is to develop forms of direct observation, which should number the items that require scrutiny and give enough space to document the observation. These forms resemble survey questionnaires, but researchers only record their individual observations and not the answers of the respondent (Jorgensen, 2015). Investigators ought to select sites immediately; the forms are available and decide on the location of conducting the observation, hence know whether it will be stationed on more than one site. Agree on the best timing since it is vital to indirect view, mainly when activities are observed immediately they occur.

The fifth step is to perform the intended field observation by establishing a rapport, allowing enough time for direct observation process, using a team approach to develop more comprehensive quality data, and training observers to give a clear and straightforward data.

The next step is to complete the forms by taking notes as much as possible, particularly during the observation. Data from a clear closed-ended observation question can then be analyzed using procedures such as cross-tabulations and frequency counts using statistical software packages. Finally, investigators need to check for validity and reliability since techniques of direct observation are prone to bias and errors that can influence the efficiency of the data but can be minimized by following some of the course actions suggested above.

For this study, participant-observation involved the researcher as an employee 'participant observer'. The researcher was an active participant in this case study insofar as she is the project manager in a local government organization, providing the main information and approvals about the infrastructure of the emirate. This formal work role helped the researcher

to gain access to both partners and different types of data by attending meetings and project site visits. This technique has been most frequently used in anthropological studies on different cultural or social groups.

Table 4-10 presents the most interactive events the research was part of it across two levels, as a representative of local government in the project and as a project manager in local government.

Table 0-10 Researcher roles in participant observation

Participant role	Representative of local government	Project manager in local government
Data source	<ul style="list-style-type: none"> • Project progress meetings • Project site visits • Assigning task documents • meeting with partner 	<ul style="list-style-type: none"> • Projects management process and framework • Manage external project within local government • Comparison of process

Overall, the purpose of including observation methods, particularly participant observation, in collecting primary data is that it allows the researcher to gather data based on the researcher’s engagement with the participants. This is suitable for this current study considering that the researcher does play active roles in management projects of local government, including infrastructure projects. Integrating participant observation into the data collection methods enabled the researcher to gain an opportunity for attain more insight of the participants’ personal experiences. It also facilitated flexibility for the researcher to collect data with a certain group of participants who are all actively engaged in a PPP project management or are key stakeholders of the PPP projects which this study concentrated on investigating.

4.6.2 Secondary data collection

While there is primary data used in research, there are also secondary data which is commonly defined in opposition to primary data. According to Allen (2017), secondary data refer to data that were collected by someone else other than the user. In line with this, Salkind (2010) asserted that secondary data analysis plays an essential role in various fields of study. Similarly, Donnellan and Lucas (2013) noted that secondary data research provides researchers with the opportunity to investigate research problems using large-scale data sets while saving time and resources. Hence, secondary data research has become an alternative tool for researchers, particularly in the social sciences field.

The secondary data research method is particularly useful when a vast amount of data is needed to be analysed within a limited time. For example, researchers can exploit secondary data method when there is a need to collect official statistics records or administrative records (Hox and Boeijs, 2005). Also, using secondary data method enables researchers to study infrequent developmental patterns or antecedents to unexpected events (Greenhoot and Dowsett, 2012). As explained by Greenhoot and Dowsett, secondary data research allows for the sharing and analysis of existing data sets that can be seen as an essential strategy for advancing cumulative and collaborative sciences.

In relation to the specific methods of secondary data collection, analysis and interpretation, Tripathy (2013) identified the major issues around using secondary data research, which include the absence of a culture of data archiving, data archiving posing concerns pertaining to exposing the personal views of the subjects and reinterpreting data at a later date, which can prove to be challenging due to differing circumstances. Therefore, Johnston (2014) claimed that to conduct useful secondary data research and analysis, a systematic process must be developed and followed, one that acknowledges the challenges of utilising existing

data and addresses the distinct characteristics of secondary data research. In this regard, the researcher needs to understand that in carrying out secondary data research, this type of qualitative research can be seen as economical, but existing data sets may limit the answers to all the researchers' questions. According to Silverman (2016), there are different sources of secondary data, including survey research, international databases, administrative data and official documents. To find useful secondary data, Hox and Boeiji (2005) asserted that the primary source of data to be considered are official data archives.

For this study, the researcher collected data using the desk research approach. This method is considered as less expensive, easier to obtain and less time consuming. For this study, the text data was more valuable than non-text data since the text data contains text material such as notice, reports, administrative and public reports, books, journals and newspaper articles (Saunders, Lewis and Thornhill, 2003).

The secondary data for the study was collected prior to the fieldwork as well as afterwards from the following sources:

1. Administrative documents such as progress reports
2. Letters and e-mails and minutes of meetings
3. The internet (government websites and private company website)
4. Policy memos and manuals
5. News and other articles appearing in the mass media
6. Project plans, 3D designs and surveys

The collection of secondary data for this study is useful to potentially validate findings from the analysis of the primary data collected. The collection and use of secondary data sources are justified as it will be used to increase the credibility of research findings based on the

primary data.

4.6.3 Data collection process

The nature of the research was very sensitive due to the presence of people holding high positions in the government, so the researcher left the field relatively open for them to talk about the project from their viewpoint this is when the interviewee begins to elaborate on the answer and move to other aspects of the project, and accordingly the researcher redirected them to specific interview study questions with the intervention to clarify more or to be guided about the factors that affected the project. The researcher followed a plan for collecting the data and accordingly the interviews were conducted along with others, as the stakeholders from all sides were interviewed according to a timetable and arrangement that contributes to providing new questions for discussion and interviewing the next person.

The case study data collecting process was started from secondary information sources such as newspapers, reports and meeting minutes with technical analysis of the plans and project pictures presented in various approved media in the country, in conjunction with the attendance of the project team meetings.

The researcher summarized all data from these sources and the information was divided into groups that define the time, cost, problems, those involved in the project and the historical link with other projects, in addition to considering the Emirates strategy compared to other emirates in terms of vision and strategic goals. The case study questions were determined based on what data obtained from secondary sources as well as from the field observations, in addition to previous studies.

The historical linkage between projects and events was utilized in managing the interview and searching for the interconnectedness of the stakeholders according to these events and

how they deal with them. The researcher participated in a number of meetings as a representative of the project management office in a government authorities, where the stakeholders were identified and reviewed the project from all sides and listened to accounts of the various problems that hinder the implementation of the project in the presence of all the main stakeholders, in addition to that the researcher participated in site visits with key stakeholders.

4.7 Case study data analysis

The analysis of the data involved the use of approaches and strategies in qualitative research that give meaning to the processed data. As this research is based on a single case study with the purpose of exploring a phenomenon, the analysis strategy was gaining data from the ‘ground-up’ (Yin, 2017). This strategy does not consider any of the theoretical propositions. Instead, it depends on the result of the earlier phases. which involved ‘playing with the data’, or noticing a pattern for the first time. In this regard, the creators of grounded theory (Glaser & Strauss, 1967) have provided guidance for following an inductive approach to data analysis. The procedures allocate different types of codes to the data, where each code represents a concept or abstraction of potential interest. The resulting guidance can be applied to all case studies, in addition to studies that are based on grounded theory.

Grounded theory is a general method of analysis that accepts qualitative data from case studies as well as other sources as the data gathered in grounded theory research become increasingly more focused because the researcher engages in data analysis while collecting data. That data analysis drives the subsequent data collection.

As mentioned earlier in this chapter, the central process in grounded theory is coding data.

For this study, the researcher decided that Charmaz’s constructivist approach to grounded

theory fits well with the case study research design as both commence with some ideas, concepts and variables found in the literature review.

4.7.1 Coding

The first major analytic phase of the research consists of coding the data. A code in qualitative research, in its simplest definition, pertains to the words or short phrases that characteristically ascribe summative, salient or evocative characteristics for a certain part of a text-based or visual-based data (Saldana, 2009). Coding is an important process in any qualitative research, in which researchers are breaking down their data through the use of codes to achieve meaningful information. In grounded theory, coding is a critical element which is directly connected to the quality of the research, the term 'coding' is defined by Corbin and Strauss (2015) as 'delineating meaning of data'.

The codes emerge as the researcher studies the data. According to Charmaz and Belgrave (2015), the first cycle of the coding process involves generating codes from a portion of data by examining each line of data and defining the actions or events that one sees as occurring in it or as represented by it, which can take form into a single word, a full-sentence or an entire page of text. The second cycle involves coding portions of data, generating codes that could be longer passages of texts or reconfiguring the codes developed in the first cycle. Several coding methods can be used during the first and second cycles of the coding process. Three of these methods devised by Charmaz and Belgrave (2015) are discussed further.

4.7.2. Initial coding

Initial coding is one of the several coding methods used during the first cycle of the coding process. According to Saldana (2009), open coding involves breaking down the qualitative data into distinct parts, assessing them further and then making comparisons for any similarities or divergences. The objective of the open coding, especially when applied in

grounded theory research studies, is to be more open to the different theoretical directions highlighted in qualitative data (Charmaz & Belgrave, 2015). It provides opportunities for the researcher to reflect on the contents and the nuances of the data. For researchers following the grounded theory methodology, one important element in conducting the initial coding process is searching for processes, which often reflect actions that precede causes or impacts – for example, ‘selecting books’ or ‘dismissing stereotyping’ (Saldana, 2009).

4.7.3. Focused coding

Focused coding is one coding method used in the second cycle of the coding process. It often follows the initial coding conducted in the first cycle and involves searching for identified initial codes that are recurrent or have a high significance; it refers to taking earlier codes that continually reappear in the initial coding and using those codes to sift through large amounts of data (Charmaz & Belgrave, 2015). These codes are considered to be the most salient categories in the data and will require decisions concerning what initial codes represent a more important context for the data. Like the initial coding, focused coding can be utilized in almost all qualitative research studies, especially for that research which employs grounded theory. The main goal of applying this second cycle coding method is to generate categories devoid of unfocussed attention to the properties and dimensions of the categories (Saldana, 2009). A category is a part of developing an analytical framework. By categorising, the researcher selects certain codes as having overriding significance in explicating events or processes. Common themes and patterns may be subsumed in several codes.

4.7.4 Using QSR NVivo in research

Several software applications are commercially available that qualitative researchers can make use of to support qualitative data analysis processes. One is the NVivo software developed by an Australian company, QSR International, over three decades ago. Since its

introduction in the market, NVivo has become a go-to software application for qualitative researchers to support and facilitate qualitative data analysis. It provides a range of advantages, from improvements in time efficiency to transparency and multiplicity, allowing for the analysis of a large volume of data both qualitative and quantitative data (Dollah *et al.*, 2017). QSR NVivo has also been proven to be advantageous and efficient in facilitating grounded theory explorations (Hutchison *et al.*, 2010).

The typical process of data analysis using NVivo (see Figure 4-12) starts with the importation of data into the software, which can include transcripts from interviews, images, videos, and PDFs. The imported data are then explored to determine the keywords found in the data. These keywords are coded through the creation of a node (a feature in the NVivo software). These keywords are then searched through the query, displaying all the keywords of the data through certain forms of visualisations, such as graphs and charts. The researcher then makes and records additional comments through a memo (Dollah *et al.*, 2017). Using NVivo, however, requires technical knowledge and skill on the part of researchers. NVivo, as well as other computer-assisted data analysis software, can be complex and have features that might confuse new users. For example, Johnston (2006) indicated that features like the multiplicative tree structures for modelling theory or aspects such as doc and node links could be difficult to use if users have limited knowledge and skills about these aspects and NVivo as a whole.

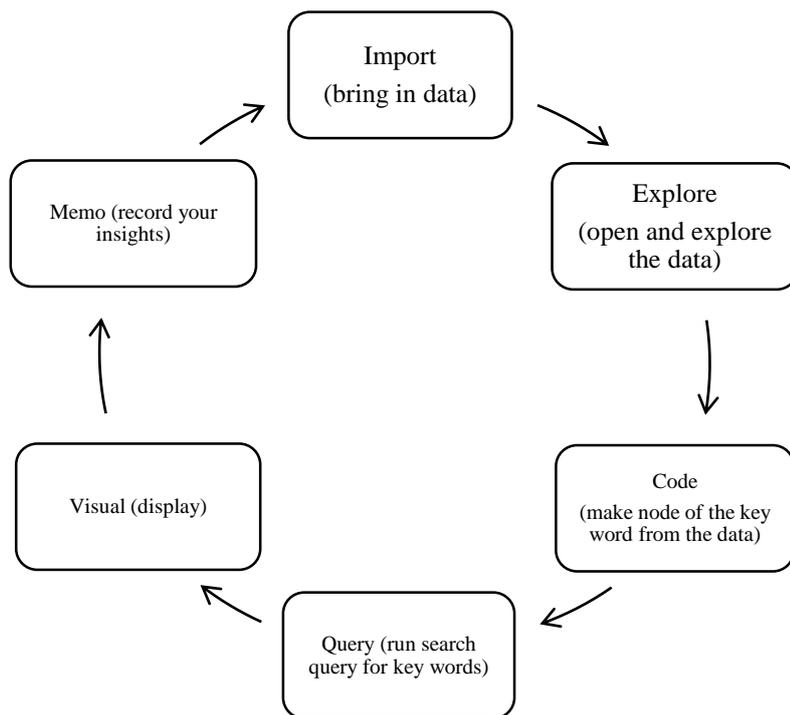


Figure 0-12: NVivo qualitative analysis process (adapted from Dollah, Abduh and Rosmaladewi, 2017)

4.8 Validity, reliability and generalisability in qualitative research

In any research, whether it be quantitative or qualitative, the concepts of validity and reliability are of great importance for researchers to fully understand. Careful attention to these two concepts influences how credible and trustworthy the research is and can help determine whether the research is a ‘good’ or ‘bad’ study (Brink, 1993). These two concepts, alongside the concept of generalisability, are critical to conducting qualitative research.

Within the context of qualitative research, validity pertains to the correctness or suitability of the tools used, the processes conducted, and the data gathered. Typical questions to be taken into consideration to understand and determine the validity of the qualitative research range from reflecting on whether the choice of methodology is suitable or not to answer the research questions to determining whether the design of the research is effective for the

methodology, to considering whether the sampling and the procedures for analysing the data are appropriate (Leung, 2015). In the literature in terms of qualitative research validity, several researchers have provided varying sets of criteria used to measure validity, which can be categorised into primary and secondary validity criteria. Primary criteria include measures of credibility, authenticity, integrity, and criticality, while the secondary criteria, which are further standards or measures of quality, include creativity, thoroughness, congruence, explicitness, and vividness (Whittemore *et al.*, 2001). On the other hand, reliability pertains to the replicability of the processes used in the research study, as well as its results; hence, consistency is emphasised (Leung, 2015). It pertains to the capability of the methods used in the research to generate similar results consistently over replicated testing periods (Brink, 1993). There can be several ways to improve the reliability of the processes and findings in qualitative research, which can include conducting refutational analysis, constant comparison of data and triangulation.

Besides reliability and validity, qualitative researchers should also take into consideration the generalisability aspect of the findings. Typically, many qualitative studies often are conducted to explore a specific problem or phenomenon within a certain population; hence, the generalisability of the findings is mostly overlooked. However, with the growing attention and trend of knowledge synthesis, the generalisability aspect becomes an integral component in evaluating qualitative research. A common way to ensure the generalisability of findings in qualitative research is through a pragmatic approach by using approaches for assessing and ensuring validity, such as triangulation and systematic sampling (Leung, 2015).

Yin (2014) identifies four criteria that have been widely used to establish the quality of case studies:

1. Construct validity – Setting up relevant operational mechanisms for the topics being examined, with the goal of revealing and reducing subjectivity, relating to data collection problems, study questions and proposals. Accordingly, In this thesis, the researcher applied triangulation by using multiple sources of data collection like observation, interview and document review ,as 'triangulation' is considered as a strength of case-study method as it makes the findings more convincing and accurate as a means of validation (Yin, 2017), in order to allow for generalizations to be made.

2. Internal validity (for explanatory or causal studies only) – Establishing a causal relationship by showing that certain factors contribute to other conditions, as distinguished from false relationships. Also, internal validity is concerned with “how accurately the account represents participants realities of the social phenomena” (Creswell and Miller, 2000, p.124). In this study, as suggested by Yin (2014), this research obtained internal validity by matching emerging patterns from results of interviews within each and by recording and producing participants’ responses verbatim.

3. External validity and generalizability – Establishing the domain in which a study’s findings can be generalised. A generalization is based on replication logic. In this study, external validation was achieved by interviewing experts’ validation of the initial framework for PPP projects in order to ensure SI. The selected experts were not part of the project case study as described in section 6.3.4 of the thesis, the validation of the proposed framework was to ensure that the research actually identified stakeholder integration issues in PPP projects and to assess the suitability of the framework in addressing these issues from industry professionals’ perspectives.

4. Reliability – Demonstrating that the operations of a study, such as the data collection

produced, can be repeated with the same results by documenting the procedures and appropriate record keeping. For this study, the research used a case study protocol and developed a case study database as recommended by Yin (2014), in addition this research developed a case study database using the Nvivo 10 software, where all the information related to the case studies was stored and analysed.

4.9 Researcher reflexivity

Researcher reflexivity is an attitude of systematically attending to the circumstance of constructing knowledge, particularly to the researcher's influence at every processing step. It is a qualitative measure that uses the ideological approach of interpreting data, primarily involving a series of actions that encourage both the body and mind to behave in a reflexive way (Haynes, 2012). Reflexivity requires self-awareness, meaning being involved actively in the process of research since it is about researchers' identity being part of the studied social world. It is a process of continuity by researchers' reflections on their attributes, location, assumptions and background affecting their practice in research. The essential key in reflexivity is building an association between and the impact of the researcher as well as participants explicit (Haynes, 2012). Reflexivity regulates the filters in which investigators are working through, including the ways that our agendas impact all points of research.

The positionality of a researcher is not independently present of the research activity, nor does it otherwise determine the latter ultimately. Rather, it is a dialogue of challenging assumptions and perspectives about the researcher's social world. It is optimum to understand the concept of qualitative inquiry to comprehend the principle of reflexivity (Johnson & Duberley, 2003). These ideas include working inductively, acquiring an appropriate and adequate sample, ensuring cohesion of methodology, being a responsive researcher, and

addressing relation ethics. Exercising reflexivity is an essential component involving qualitative investigation but it ought to be embedded in all ideas as a process and associated with the adequate level that researchers exert, intentionally or unintentionally, on the results that are also expressed since the inclusion of an account of reflex increases the research process severity (Johnson & Duberley, 2003). Via reflexivity, the contribution to constructing meanings and experiences lived becomes known throughout the research process.

4.10 Research ethics

Ethics is critical in any research and should be given the utmost emphasis and attention by all researchers. Qualitative research can be unpredictable, so researchers have to ensure that they are prepared with the potential ethical issues that may arise during the performance of the research study. Ethics, by definition, are the act of ‘doing good and avoiding harm’ and ethical rules, principles and guidelines should be considered in carrying out studies for the advancement of knowledge (Aluwihare-Samaranayake, 2012, p. 65). In the literature on research ethics, three ethical principles have to be considered by researchers – autonomy, beneficence and justice.

The ethical principle of autonomy emphasises protecting the rights of research participants. Researchers should respect and recognise the rights of their participants, including their right to be informed about the research study as well as their right to act and decide freely, and their right to pull out from participating in the study. A common technique or tool used to ensure or honour these rights is through getting informed consent. With informed consent, the researcher is allowing the participants to exercise their rights as participants of a study (Orb *et al.*, 2001). Informed consent is not just an ethical requirement but also may be a legal prerequisite, especially when the research involves human participants (Nijhawan *et al.*,

2013).

On the other hand, the principle of beneficence involves ensuring the welfare of the participants. Here, researchers should take into consideration the possible consequences and risks for participants in participating in the study and should exhibit the moral obligation of ensuring the confidentiality and anonymity of the participants. Disclosure of personal information and the identities of the participants without their consent, unless it is needed for legal purposes, can have negative consequences for the researcher as well as for the participants. Therefore, researchers should clearly define in their research methodology and processes how they will protect the confidentiality and anonymity of the participants, as well as how they propose to reduce or eliminate the threats and risks that potentially can harm the participants. Lastly, the ethical principle of justice is associated with the concept of fairness, highlighting the need to avoid exploiting and abusing the participants. This is important in research studies where research participants are vulnerable, for example, mentally-ill participants, children, and the elderly (Orb *et al.*, 2001).

Just as with the secondary data research method, researchers need to consider ethics when carrying out the primary data research method. According to Driscoll (2011), research ethics throughout the primary research process must be regarded to prevent ethical issues and challenges arising. Ethical guidelines must be followed accordingly when carrying out primary research. Driscoll (2011) identified some of the ethical considerations in primary research, including voluntary participation, confidentiality, and anonymity, along with researcher bias. Similarly, Halej (2017) asserted that research ethics are vital, particularly in primary data research, because they allow researchers to research within the boundaries of acceptable behaviours, prevent the fabrication of data and can encourage an environment of trust, accountability, and respect between researchers and the research participants.

Just as with the structured interview research method, ethical issues must be considered in carrying out a semi-structured interview research method. DeJonckheere and Vaughn (2019) highlighted that researchers must observe appropriate and strong ethical attitudes from the start of the research project even before selecting the interview participants. Also, Cohen and Crabtree (2006) noted that the semi-structured research method provides reliable and comparable qualitative data and is often preceded by observation and informal or unstructured interviewing, enabling the researcher to develop a better understanding of the topic area being studied. Thus, DeJonckheere and Vaughn (2019) asserted that the overall purpose of the semi-structured research method is to gather information from key participants who have personal experiences, expertise, beliefs, and behaviours related to the research topic.

On the other hand, observation is one of the significant methodology approaches in research that uses a variety of forms of representation that corresponds to a responsive ethic. Ethics in observation research are simply the principles of morality that govern the behaviour of the researcher while performing an operation. Some of the ethics in observation include requiring allowance to perform inspection and informing the parties involved in the study. Researchers need to get permission from people in charge of a particular setting, but in performing observation research in particular public areas, the relevant organisations are required to know about the specifics of conducting the research. The consent of participants is supposed to be acquired by the investigator. It is feasible in observing behaviours of the crowd in a public area though it may not be logically possible to pursue consent from all persons entering the room. The committee of ethics can usually accept deceptively or covert methods if accounted for, and in circumstances that are exceptional.

There is a risk of people acting differently when they know they are being observed, but

researchers need to understand whether the risk is worth the participation principle. Not seeking participants' consent should be justified if the mechanism involved is not intrusive and have little or no chance of harming contributors. Researchers at all costs should follow safety legal and ethical responsibilities.

For this study, the researcher explained the research aim and methodology to respondents in the body of the emails and has explained the expected benefits of this research. At the same time, all the participants included in this study gave informed consent agreements regarding recording, copywriting, and various uses of the interview data.

Electronic invitations were sent to the meetings, including the details of the study, where consent agreements are signed by both parties, and all participants were notified of the reasons for the recordings and their purpose, bearing in mind that some interviews that were recorded with notes and other interviews were done in the presence of the a company legal advisor. The participants were generally described without identifying their names. As for those outside the country, they were interviewed over the phone and notes were taken after participation was confirmed electronically by sending a copy of the questions and a consent form.

In addition, the interviews with the dignitaries were done with their approval and confirmation of the data that were recorded for use in the study. Because most of the interviews were semi-structured, the researcher avoided adding any confidential data in the study or sharing it with others, merely linking it to events in general in the analysis.

Finally, the researcher followed the university (BUiD) code of ethics, which required completing, signing, and submitting the 'Research Ethics Form' to the 'Research Ethics Sub-Committee'. Furthermore, the researcher made an official request to the university for

permission to conduct the research.

4. 11 Chapter summary

This chapter considered research methodology principles and concepts by discussing the different philosophical positions of epistemology, ontology, and axiology. The methods, techniques and procedures adopted in this current study have been explained. As has been discussed in this chapter, the current study adopted interpretivism as its research philosophy, and follow an inductive approach to research. The study uses interpretivism based on its particular epistemology. The researcher made the basic assumption that the importance of integrating stakeholders in PPP projects is only really understandable through the examination of individual perceptions, experiences, and interpretations of the topic from their unique standpoints, and provided that they have access to varying aspects of reality and phenomena relevant to the research question. The researcher interacted with the participants to explore their experiences, perceptions, and thoughts from within a natural project work environment to attain knowledge about stakeholder involvement.

The empirical investigation is a qualitative research study, which involved a single case research design. Primary and secondary data were collected in this study. Primary data collection was through semi-structured interview involving 16 participants who were all active stakeholders of the case project, and who were selected through purposive sampling. Some interviews took place online without audio recordings due to political and legal restrictions in some areas, which restricted interviewees from physical participation in an interview. In addition, participant observation was conducted to gather primary data. Secondary research was conducted, in which secondary data was used to validate findings from the primary data analysis. This analysis was conducted by using the NVivo 10 software,

with the researcher carrying out initial and focused coding methods. The chapter also included discussions on the ethical considerations considered throughout the completion of the research.

Chapter 5: Case Study Background and Results

This chapter presents the case that has been selected for collecting the required data and information to enable the researcher to answer the research questions. It achieves this goal by analysing and interpreting the received data. The selected case, a build-operate-transfer (BOT) large-scale transportation project, was to deliver innovative solutions reflected in the developing infrastructure of the city and providing new services for different users. It was unofficially cancelled for no reason, leaving those involved, not knowing how to proceed with the decision according to the obligations of the parties to the contract.

However, the case allowed the researcher to identify the factors that contribute to the success of such projects during the planning phase. The study of the case involved several methods – structured interviews, semi-structured interviews, document reviews and observation.

This chapter provides an overview of the UAE constitution and related laws as they pertain to the project, the BOT project, and the context of the case study and the relations between the case through innovation, the stakeholders and various integration measures. Also, the source of the data and the results of the case study are presented here.

The confidentiality factor is taken into account through not mentioning the project or the organisation's name, nor the participants' names or locations. The selected case study is referred to as the HAT project

5.1 Background: Overview of legislation of the United Arab Emirates

This section of the chapter provides legal information related to the research, such as the constitution of UAE, which states in one of its sections on the possibility of establishing joint

projects between the Emirates and the laws for each of the federal government and the local government for the purpose of organizing and managing PPP projects like the government of Dubai.

The researcher provides a comparison between legislation related to the topic and the study case, and it shows how some articles of the constitution can be used to create joint projects similar to PPP projects.

5.1.1. UAE Constitution

The constitution is the supreme law that defines the basic rules of the system of government. It contains all the rights underpinning how the state is committed to the citizens.

After its establishment on December 2, 1971, the United Arab Emirates set up an interim constitution that was transformed into a permanent constitution in May 1996.

The UAE constitution is a national document which outlines the basic rules of political organisation in the UAE, and the legislative, executive, and international powers between the union and its member states. The constitution is the legal and political framework of the state system. It explains the main rules of the political and constitutional organisation of the country and demonstrates the main purpose of the establishment of the federation and its objectives at the local and regional levels. Also, it elaborates on the significant social and economic pillars of the federation and stresses the public rights, responsibilities, and freedoms (www.government.ae).

The constitution establishes the basis of the UAE and the rights of citizens, which are written in ten chapters and consist of 152 articles. The ten chapters are:

1. The federation, its constituencies, and principal aims

2. The fundamental social and economic basis of the federation
3. Public freedom, rights, and duties
4. The federal authorities
5. Federal legislation, decrees, and authorities in charge
6. The emirates
7. Allocation of legislative, executive and international jurisdiction between the federation and the emirates
8. Financial affairs of the federation
9. Armed forces and security forces
10. Final and transitional provisions

The UAE constitution is highlighted through the different articles on joint projects between government and private entities or between two or more emirates to achieve the various objects that affect citizens positively. The constitution elaborates on the fundamental social and economic bases of the federation. Specifically, Article 24 of Chapter 2 states that the basis of the national economy is social justice and to support the national economy, and that there shall be co-operation between public and private entities to achieve economic expansion, prosperity for citizens, increased production, and the raising of standards of living. The union encourages co-operation within the limits of the law.

In addition, articles 117 and 118 in Chapter 6, under the title of: The Emirates, define the role and purpose of government in each emirate by maintaining security and order, providing facilities, and raising social and economic standards. Article 118 states that two or more emirates can establish a political or administrative unit or unify all or part of their public utilities or a single administration or joint administration to run any such utility after obtaining the approval of the Supreme Council.

From the above, it is clear that the government of the UAE provides different options for local government to manage their projects, either by themselves or via a joint administration, so as to provide different services. However, it does not mention PPP projects directly.

5.1.2. Federal and Dubai legislation

By looking at the legislation of the United Arab Emirates, specifically in relation to PPPs, it can be seen that until 2014, the partnership contracts process was not organised according to federal or local legislation, and local legislators began to regulate the relationship with public-private partnerships following the Emirate of Dubai Law No. 22 of 2015 regarding the regulation of public-private partnership and the private sector. After this, the federal legislator organised the issue on a federal scale with the implementation of the provision of Article 48 of Cabinet Resolution No. 32 of 2014 regarding procurement and warehouse management in the federal government, for which a guide was issued for the provisions and procedures of partnership contracts between federal entities and the private sector, approved according to Cabinet Resolution No. 1/1 of 2017.

The Ministry of Finance's (MOF) effort to develop a manual was intended to diversify the mechanisms for developing strategic infrastructure projects and improve the quality of services. It also provided a general framework for the project lifecycle of partnerships, also the manual was prepared with the aim of enhancing investment opportunities and raising the efficiency and effectiveness of governance and risk management.

The financial guide by MOF has procedures for contracting at the federal level, as it includes the definition of terms, contract types, and related laws, in addition to the institutional structure for managing joint projects that define project values and powers related to accreditation and related committees. The guide focuses on the project life cycle and the

requirements of each stage so that responsibilities and requirements are clear to both parties.

In reviewing the guidelines for the provisions and procedures of partnership contracts between the federal entities and the private sector, it is clear that it defines the partnership between the public and private sectors, describing it as: ‘An agreement between a government agency and a private company to share the risks and opportunities in the joint commercial work that involves the provision of public services’. ‘Also, it is indicated that there is no unified global definition of the concept of public-private partnership, but that it benefits from different definitions, according to which the partnership is a contract between a party from the public sector and a party from the private sector, where the private party carries out a public service or public project, and the distribution of risks and the identification of outputs are the pillars of the partnership between the public and private sectors.

The guide also stipulates the reasons for the partnership contracts by identifying several factors and criteria that must be observed and ensures that their results are in the public interest before projects are implemented in a partnership system with the private sector. The following are the most important cases and recommended standards, according to which the partnership is an applicable option if one or more of them is realised:

1. Services and projects cannot be provided through financial resources or the experience of federal entities alone.
2. The private partner can increase the quality of the service level and its quality.
3. The private partner can implement services or projects faster than the government does.
4. Private sector participation in services provides an opportunity for innovation.
5. The opportunity to compete with potential private partners reduces the cost of providing

public services.

6. The absence of regulatory or legislative barriers limits the participation of the private partner in providing services.
7. Service outputs or outputs can be easily measured and priced.
8. The cost of the service can be recovered by applying or charging the user.
9. The use of the partnership may lead to the provision of opportunities that will lead to increased economic growth.

The federal legislator did not define the partnership contract but rather defined the joint projects. This stipulates that the joint project is not just a project that is implemented by both the public and private sectors, such as projects of a service nature that the federal authorities currently exercise with the private sector. Rather, the joint project that this guide aspires to achieve is a project of an economic nature, which represents an actual risk partnership, so the public sector transfers a large part of the financial, technical and operational risks related to the project to the private sector.

On the other hand, the local law of the Emirate of Dubai (22) for 2015 defines partnership contracts as a contractual relationship between the public and private sectors. The contract aims to ensure the quality of services or the development of government agency revenues by benefiting from the efficiency of the private sector and its financial, technical, and other capabilities.

The partnership can take various forms, including construction, operation, transfer and other structures that are at the core of financial and legal, rather than technical, to suit the characteristics of the project to be implemented, as each project has different requirements.

The main feature that combines them is the extent of private sector participation in financing and risk tolerance. The financial guide for partnership contracts specifies a set of types of

partnerships, such as new enterprise partnerships, existing projects, and privatisation.

5.1.3. Northern Emirate (case study)

In the local government, there is no legislation or laws regarding PPP projects, and there are also no clear administrative or legal references regarding these contracts.

However, in the same year that the project was announced, project management offices were established in a few government departments in the emirate. The project has been activated and is following international standards after years of being sought after by private sector.

The table 5:1 below shows a comparison between PPP law and the process of the federal government, the Dubai government and the case study. As was clarified previously, the emirate that owns the project had not issued any law to organise and manage joint projects, or its representation by the project management office in its executive council. Actually, the project was managed by the government by assigning a number of people from different organisations, which is what is explained in the next section of this chapter.

As a result of comparing laws with each other, it was found that there is a higher regulatory body that follows the implementation of contracts regardless of the contract's contents as these laws have contributed to attracting investors to federal and Dubai projects and enhance confidence in concluding these partnerships due to the existence of laws that protect all parties. The Federal and Dubai laws set number of conditions and level of authority for managing these projects and associated issues or requirements in contrast to the case study, for which no law has been issued at the emirate level since 2007, despite the creation of a project management office, which was established to manage procurement contracts and other projects that do not fall under the classification PPP projects Table 5-1 shows the Comparison between PPP law and the process in UAE and the Case Study.

Table 0-1 Comparison between PPP law and the process in UAE and the Case Study

	Case study	Cabinet Resolution No. 1/1 (f) of 2017	Dubai Law No. 22 of 2015
Project's approval process	Emirate gov.	<ol style="list-style-type: none"> 1. If the value of the project is less than AED 250 million AED, then the relationship is direct between the concerned party and the Ministry of Finance represented by the technical office. 2. In case the project value is 250 million AED or more, it is put to the Financial and Economic Committee for initial adoption and then the Council of Ministers for final approval. 	<ol style="list-style-type: none"> 1. The general manager of the government agency or whomever he authorises approves the projects in case the total cost to be paid by the government entity for the partnership contract does not exceed 200 million dirhams. 2. The financial department approves projects whose total cost exceeds 200 million dirhams up to 500 million dirhams. 3. The Supreme Committee approves financial policy projects if the partnership contract exceeds 500 million AED.
Duration of the partnership	35 years	From 30 to 35 years	The Dubai legislator did not specify a contract period but left that open according to the agreement between the two parties, with that being limited to the maximum contract, which is 30 years from the date of signing the contract, or the date determined by the Association Committee.
The authority to approve an extension of the period	Emirate gov.	NA	The Higher Committee may offer according to the requirements of the public interest and upon the recommendation of the Partnership Committee to extend partnership contracts for more than 30 years.
The contract value	12 billion AED	The value of the project should be more than 200 million AED, and projects of a strategic nature that are classified within partnership projects with the private sector are excluded from this condition by agreement between the relevant authority and the Ministry of Finance represented by the technical office.	The value is not specified in the law, but a set of powers have been determined according to the value of the contract, as defined below, as the government focuses on the return more than the value of the contract itself.

5.2 Context of the case study

The UAE's vision is to make the UAE one of the best developed country in the world. To translate this vision into reality, six national priorities have been formulated that represent the key focus sectors for government action in the coming years. This also has been adopted by some emirates in defining their emirate vision to be compatible with the UAE vision 2021, requiring mega and large-scale projects and efforts for long periods to achieve a set of national targets in different sectors, such as education, healthcare, economy, police and security, justice, society, housing, infrastructure and government services. The federal government followed up the implementation of the initiatives and projects with the formation of 36 teams from various public and private sectors to ensure implementation in accordance with the plan and to accelerate the achievement of the UAE national agenda. This action means that all the related stakeholders must be integrated effectively to achieve the ultimate goal of the projects by prioritising the requirements and needs to include the national scope. One of the most critical pillars is infrastructure: To develop and implement one infrastructure master plan is difficult, mainly because some emirates projects have been planned either by the federal or local government. Infrastructure projects are always massive and require large amounts of financial and non-financial resources. They also depend on various inputs, especially projects located within the emirate boundaries, by considering contributions from neighbouring emirates to ensure a proper design and implementation that is aligned with the requirements and needs of citizens and visitors.

In conjunction with the vision of UAE, some other emirates have launched their vision in line with the goals of UAE vision, where the vision was formulated to build a happy society, contribute to building a green economy, and stimulated by a distinguished government consistent with the spirit of the union, and in full harmony and integration with the strategies

of the federal government and the national agenda of the UAE of achieving the ‘Emirates Vision 2021’.

The emirate’s vision is based on supporting the emirate's competitive capabilities, developing it in the areas of sustainable development and building a green economy, in addition to strengthening partnership with the private sector and activating its developmental role to achieve the most important outcomes, such as diversified and sustainable economic growth, developing human capital, stimulating innovation and improving infrastructure.

This emirate set its last vision based on the vision of the state, and the project that is a case study in this research was one of the old partnership projects that started in 2007, as the project contributes very significantly to the development of the country’s infrastructure and its competitive indicators and would be one of the most important destinations for travellers to the state during Expo 2020 in particular.

In 2013, the Dubai Government was awarded the hosting of the Expo 2020, now to be held in 2021 due to the coronavirus outbreak. Different nations and organisations all over the world are due to take part in the Expo, either by providing or promoting the opportunities they have according to the Expo’s themes and getting the benefits of concerts, seminars, summits, new product launches and meetings with similar organisations or people. In addition, there are many local projects which were approved or redesigned to comply with Expo 2020’s vision and objectives.

One of the Expo 2020 themes is focusing on mobility by creating a smarter and more productive movement of goods, people and ideas. Therefore, different infrastructural programs and transportation solutions have been approved and implemented to accommodate the number of visitors to the Expo, which is estimated to be 25 million visitors. The Dubai

government did not drive these programmes; other neighbouring local governments redesigned the direction of the projects to provide services and advantages to residents or visitors of the exhibition through the exploitation of opportunities, promoting investment projects in the emirate; also, they have considered the need for robust transportation solutions to serve visitors who have chosen to live there during the exhibition and their need for quick and comfortable transport. All neighbouring emirates of Dubai have sought to use their resources and capabilities in the implementation of mega and large-scale projects, which are aimed at benefiting the economy and the tourism of the emirates. This means there will be a diversity of projects according to the requirements of the emirates and their strategic objectives.

As shown in Figure 5-1, the UAE is ranked 29th in the world and first in the Gulf region. The UAE continues to be the most competitive country in the Middle East and North African region. It ranks in the top ten globally in 31 out of 90 indicators of the biennial World Tourism Forum's Global Travel and Tourism Competitiveness Report. The 2017 report is entitled 'Paving the way for a more sustainable and inclusive future'. The report measures the factors and policies that enable the development of sustainability in the travel and tourism sector. The report covers 136 countries and is based on 90 indicators (33% based on questionnaires and 67% from statistical data). The report also confirms the country's leadership and competitiveness in infrastructure, where it is ranked first in the world in terms of the quality of tourism infrastructure and road quality, second in the air transport infrastructure quality index, and third in the quality of ports infrastructure.

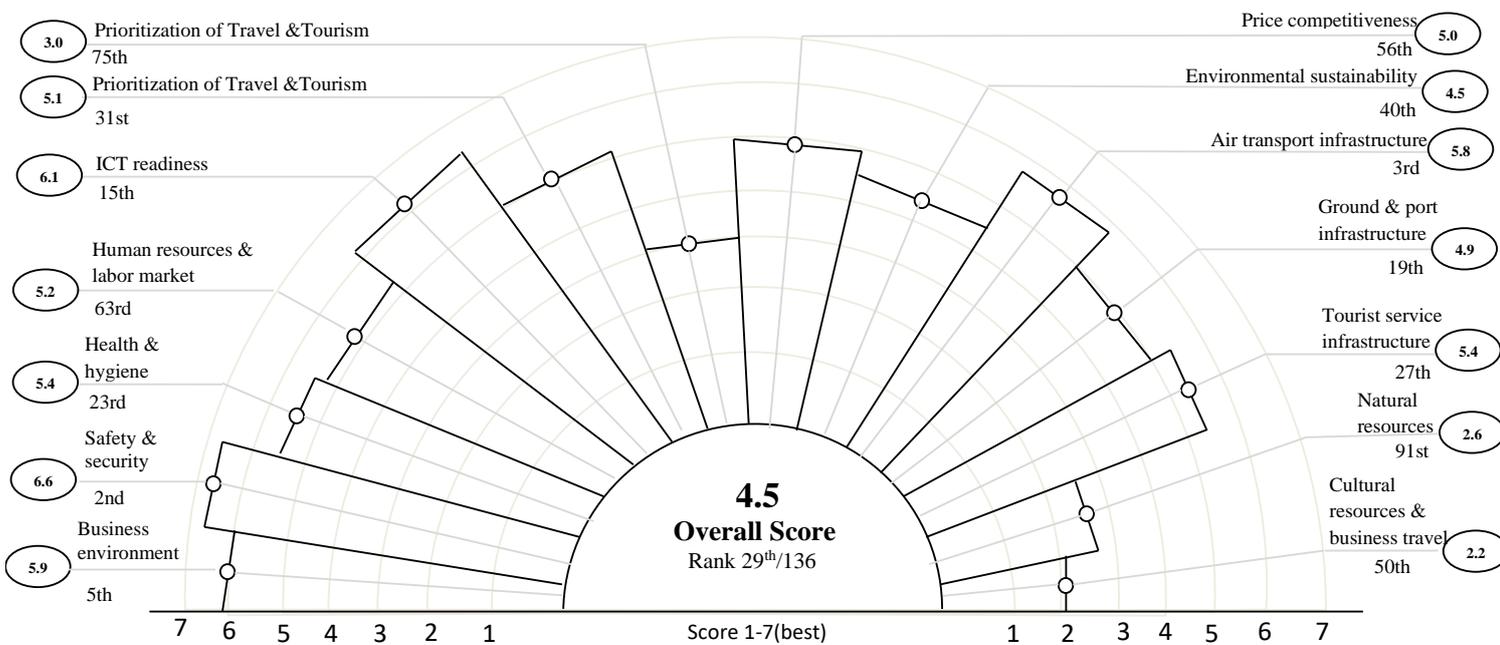


Figure 0-1 United Arab Emirates performance overview (World Economic Forum)

The country is ranked eleventh globally, outperforming leading economies such as Hong Kong, the United States and Switzerland, as well as the remainder of the Arab world, according to the World Bank Logistics Performance Report, which includes a set of indicators, including infrastructure, in which the country is ranked tenth in the world.

The UAE has also achieved first place regionally and the fifth globally among the most competitive countries in the world, ahead of countries such as the Netherlands, Denmark and Sweden. It has advanced by 23 places since its inclusion in the 2019 Global Competitiveness Yearbook report issued by the Global Competitiveness Center of the International Institute for Administrative Development in Lausanne, Switzerland. This is one of the most important specialised institutions in the world in this field.

The report focuses on four axes, each with five sub-axes: economic performance, government efficiency, business efficiency and infrastructure. The report indicators consist of 66.7% of fixed data and 33.3% of survey indicators.

The UAE is ranked first in the world in many major axes, sub-axes and sub-indicators monitored in the report, and it has risen to the first position globally on the ‘business efficiency’ axis and second globally on the ‘government efficiency’ axis. It has come in the top five globally in many sub-axes, such as, first, in ‘administrative practices,’ second, in the world in ‘international trade’, ‘efficiency and productivity’, ‘infrastructure’, ‘behaviors and values’ and ‘labor markets’, and third globally in ‘government funding’ and ‘tax policies’.

The federal government, local governments and private sectors have played an essential role in achieving the strategic objectives to be part of the Expo 2020 projects. These goals require the cooperation and participation of stakeholders to obtain results quickly and innovatively to satisfy the different and changing requirements of the citizens and visitors at the local and global levels.

However, one of the most significant challenges of being a world leader and hosting the expo is to address and understand the requirements of different stakeholders from different sectors and backgrounds according to their power and interest in PPPs. These stakeholders are from different categories. To ensure the success of these projects, there must be a plan to engage and communicate with them through various channels which is compatible with their strengths and interests in its different stages, especially given that all of the objectives are linked to achieving successful infrastructure projects which affect the UAE’s and the emirate of Dubai’s goals and the latter’s readiness for this expo.

Based on what was discussed above about the UAE position in competitive indicators worldwide and the requirements for Expo 2020, as well as the emirate’s self-vision, the HAT project could be one of the most critical inputs to achieve these visions and the Expo 2020 goals. The project’s impact on the emirate and UAE level will basically affect the indicators

of business efficiency and infrastructure, economic performance, government efficiency and tourism.

The HAT project involves a build-operate-transfer (BOT) of a large-scale infrastructure project between a local government (the northern emirate) in the UAE and a private company from Europe for 35 years. The main output of the project will be the development of infrastructure for the provision of international passenger and cargo services and subsequent logistical and economic services by focusing on developing the remote areas of the emirate to provide substantial employment opportunities for the citizens in the economic, cultural, urban and social fields, and to provide high-quality logistics services.

This project is considered to be one of the most important large-scale projects announced by the emirate after the 2008 financial crisis, which was supposed to have a significant impact on it in particular and the UAE in general. However, this project up to the date of preparing this research has gone through many problems and changes and was unable to reach the implementation phase or the phase of cancellation formally for both parties. This has resulted in a number of negative effects, the most important of which is the reputation of the emirate and the company in the field of partnerships with the private sector.

Over a 13-year period, the project could have been implemented, by realign it with the strategic objectives at the level of the emirate itself, the national agenda and the requirements of Expo 2020, in addition to re-studying the feasibility and determining the positive impact of the project on all concerned, which may require redesigning or changing some services to ensure the success of the project and not to affect negatively on the existing projects, as the goal is to provide services and returns from the project without negatively affecting the economy and other sources of income of the neighbouring Emirates, especially in light of

what was spent by them on their similar development projects during the previous years before the announcement of the project. The fact is that the output of HAT would help to achieve the UAE vision and fulfill the Expo requirements, in addition to its hugely positive high impact on the economic and tourism sectors for the long term.

5.3 HAT background and information

The project was first announced in 2007 and launched in 2008, and the project started in the first half of 2009. The construction of the project was due to be completed in two phases, with a total implementation period of approximately three years.

Since the project will provide more than 60% of its operation on cargo and about 35% on transportation, the basic phase of the programme is targeted at transportation facilities construction and infrastructure. Also, the other phases of the programme focus on providing commercial and residential buildings as well as establishing different hotels and related education campuses to fulfil communities' needs in the selected city, especially by offering substantial employment opportunities for citizens and residents and excellent investment opportunities for investors from inside and outside the country.

In 2007, the local government announced the launch of the project in one of the cities that is near four existing transportation projects. The plan includes several stages of implementation according to the schedule and links to the sites dedicated to the implementation of these stages. Initially, the programme will accommodate one million passengers a year, rising to 10.4 million by 2046, with at least 400,000 tons of cargo.

Aside from the airport, other facilities are expected in the region. These facilities include a hospital, a university of medicine, an amusement park, a sports city and an aviation

engineering college.

Project timeline

The announcement for the HAT was made in 2007 and the masterplan was unveiled in May 2008. The government agreed to a concession that the private sector company should construct and operate the airport for 35 years. Construction commenced on the allocated site in 2009, with 2018 projected as the completion date. The Sheikh of the HAT project Emirate approved the final designs in 2014. The project stalled due to the widespread economic crisis. In September 2014, the civil aviation authority reported that the company had yet to fulfil some of the requirements needed for the construction of the airport and therefore was withholding the approval of the construction. One of the big issues highlighted by the civil aviation authority involved how to give a position for the HAT in the already congested airspace. Table 5-2 illustrates the timeline of the project based on the main events related it.

Table 0-2 HAT Project Timeline

Project status	Year	Project details
➤ 2004-2005: Announcement of the construction of the largest airport in the world in Jebel Ali (location 4 in Figure 31)		
<ul style="list-style-type: none"> • HAT announcement by the government in the presence of the main stakeholders from both sides as the government granted the sole concession to design, build and operate the airport with the private sector. • The airport designs were presented to the main SH • Feasibility study was completed 	Dec. 2007	<ul style="list-style-type: none"> • Project cost: AED 12 billion • Project timeline: construction would be completed in two phases, the first to be completed in 18 months and the second phase in up to 36 months. • Construction phase expected to start by the second half of 2008. It begins in 2008 after the initial approval of the Federal Authority • Start operation by 2011
➤ 2008 Emiri Decree of 2008 - dated 10/13/2008: Establishment of a local department in the		

emirate called the Civil Aviation Department		
<ul style="list-style-type: none"> Meeting with the European ambassador and an accompanying delegation to discuss bilateral relations between the two countries and their consolidation, as well as touching on the desired results of the HAT project 	Jan. 2008	-
<ul style="list-style-type: none"> Masterplan unveiling in the presence of the main stakeholders from both sides as the government granted the sole concession to design, build and operate the airport with the private sector. 	May 2008	<ul style="list-style-type: none"> Timeline : 6-12 months for the detailed design phase to be completed Project cost: AED 12 billion
<ul style="list-style-type: none"> Four issues delayed project implementation related to the location and its infrastructure Resubmission of the masterplan and Feasibility study to Federal Authority 	2009	-
➤ 2010: Emirates Vision 2021 was launched: it is a plan that aims to make the UAE one of the best countries in the world		
➤ 2010: Similar project opened to cargo operations on June 27, 2010 (phase 1) (location 4 in Figure 31)		
➤ 2011: Dubai applies to host World Expo 2020		
<ul style="list-style-type: none"> Statement of SH in an interview after the project stalled due to the economic crisis 	2011	<ul style="list-style-type: none"> Completion of the economic feasibility study pending the approval of the Federal Authority
<ul style="list-style-type: none"> Reassessment of airspace 	Jan. 2012	<ul style="list-style-type: none"> Approval of the construction of the project entails a reassessment of the common airspace and common agreements between other airports
➤ 2013: The UAE wins competition to host International Expo 2020 in Dubai		
➤ 2013: Similar project opened for passenger flights in October 2013 (Phase 2) (location 4 in Figure 34)		
➤ 2013: Acting Director General of the Department of Civil Aviation assigned		
<ul style="list-style-type: none"> Government submits a memorandum to the General Authority to obtain a license to establish HAT project 	Feb. 2013	-
➤ 2014: Strategic plan 2021 for the local Emirate (first partner) launched		
➤ 2014: Memorandum of cooperation between two local governments to develop the airport's comprehensive development plan (location 2 in Figure 31)		
<ul style="list-style-type: none"> Designs and final plans for HAT project approved by the local governments in 	15 Sept. 2014	<ul style="list-style-type: none"> Cost of \$1.2 billion (AED 4.4 billion)

the presence of the private companies (second partner) and related local authority of the government (first partner)		<ul style="list-style-type: none"> The project has been operating since mid-May and is expected to be complete in 2018
<ul style="list-style-type: none"> Federal authority responds to the approving the design event on 15 Sept. 2014 	16 Sept. 2014	<ul style="list-style-type: none"> HAT licensing had not seen any development since the last meeting in February 2012. Federal Authority is still awaiting fulfilment of the requirements and technical requirements met by those responsible for the project, according to the technical report issued by the meeting
<ul style="list-style-type: none"> First partner: Acting Director General of Department of Civil Aviation 	18 Sept 2014	<ul style="list-style-type: none"> Clarification on the approval of drawings is an internal and required procedure to enable the consultants to proceed with preparing detailed designs for the project to be submitted during December for approval
-	2015	-
<ul style="list-style-type: none"> New local authority team forming from PMO to activate the role communicating with SH and finalising the obstacles among local and federal stakeholders Location site visit and meetings by the team from PMO and other SH 	2016-2017	-
➤ 2018-2019: Offices of private partner changed to new location not in the first partner emirate		
➤ 2020: Emiri decree on the transfer and cancellation of the competencies of the Civil Aviation Department		

- Project location**

Figure 5-2 shows the location of the HAT project compared to the transportation projects and programmes of the neighbouring emirates, which it shares borders with, indicating the presence of these services before the initiation phase of the project or even its planning phase. The project was surrounded by four existing operating airports and a federal cargo rail project. Three of these airports share borders with HAT emirate, which shows the

complicated location for the project and the uniqueness of it: it is easy to reach for different passengers and companies from more than five emirates, including the first partner emirate.

Table 5-3 below shows the distance between the HAT and other similar operating projects.

Table 0-3 Distance between HAT project and other emirates

From	First partner Emirate 1	Emirate 1	Emirate 2	Emirate 3	Emirate 4 (project 1)	Emirate 4 (project 2)
To HAT	46 km 36 minutes	32 km 24 minutes	42 km 31 minutes	49 km 37 minutes	64 km 48 minutes	99 km 74 minutes

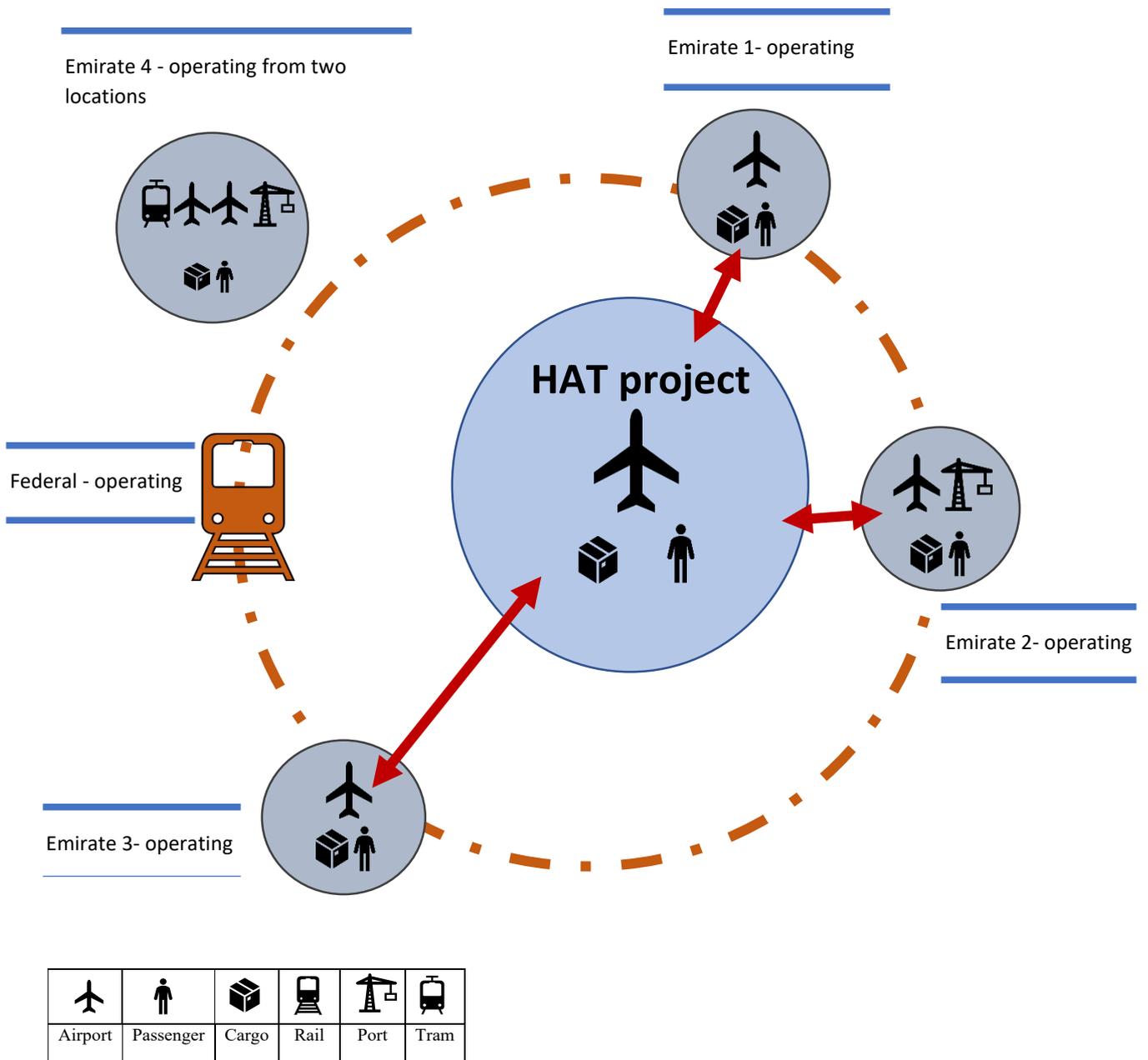


Figure 0-2: HAT project location

5.3.1. HAT and project stakeholders

The project is considered one of the biggest investment projects in the local emirate that is not run by the federal government, such as water, electricity, and communications. The project has, besides being between the two parties specified in the contract, a group of different stakeholders whose duties and responsibilities vary according to the various phases.

Table 5-4 below identifies a group of stakeholders, according to Briola's (2018) classification. These SH were identified based on the data collected by the researcher. They are divided according to their affiliation with the local or federal government, in addition to representatives of the local and foreign government who are from the royal families.

Table 0-4 HAT project stakeholder classification

Stakeholder classification	HAT project	Project phase/time
Executive stakeholders: They define the strategic needs of the project and often expect that the project goals will be met	<ol style="list-style-type: none"> 1. Partner 1 2. Partner 2 3. Executive council 4. Local government 5. Foreign government 6. Investors 7. The federal authority which is responsible for approvals 	Initiating to closing
Business stakeholders: They represent the business requirements and needs and even work with the project team to complete the project	<ol style="list-style-type: none"> 1. FEWA 2. Municipalities 3. Roads (Federal and Local) 4. Du/Etisalat Mobile Telephone 5. Etihad Rail project 6. Transportations entities 7. Land department 	Planning to close
Sponsors: They lead the project according to the business perspective	<ol style="list-style-type: none"> 1. Partner 2 2. Investors 	Initiation to closing
Project manager: He or she integrates and manages all the involved project stakeholders.	<ol style="list-style-type: none"> 3. Assigned from Partner 2 only 4. Partner 1 did not assign Project manager 	Initiating to closing

Project team: Seamlessly works with the business stakeholders; and	<ol style="list-style-type: none"> 1. Programme manager 2. Project manager 3. Technical team 4. Legal team 5. Media 6. Consultant 7. Contractors 8. Sub-contractors 	Initiation to closing
Other stakeholders: They are the rest of the stakeholders who could be part of the business or project areas of the project team	<ol style="list-style-type: none"> 1. Residents in the city of the project 2. Investors 3. Ministry of education 4. Tourism department 5. Real state offices 6. Expo 2020 	Planning to closing

5.3.2. HAT and innovation

Innovation is a new process where a new product is designed from scratch or developed from its current status to sustain end-user satisfaction and filled needs. It can be either a process or product and it is not restricted to a period of time or place. If we reflect on the meaning of this definition on the project, it has many innovative aspects that make it the focus of everyone's attention. In terms of a strategic location in the region, it will be an international transportation site in a city set in the mountains.

The buildings in the city were designed with innovative and distinctive specifications in terms of the materials used and their external appearance, in addition to linking the components of the city with the latest technologies. The project design was by one of the most prestigious companies in the field.

The design simulates the geographical nature of the area and took all measures to preserve its nature, such as the use of Ezz materials, and glass and ripples in buildings to resemble the

mountains in the region.

In terms of services, the goal of the project was to provide exceptional services to travellers. The project planned to prepare an inter-city air transport line called the Flying Taxi, which is one of the exceptional innovations that is new in the world today. This would reduce the distance of flights and serve the tourism, transportation and business sectors.

The other unique features of the HAT are:

- Central location: The airport is located between several emirates, thereby making it accessible to citizens of other emirates.
- Fast train route: The development of the airport comes with a fast train development between the project location and the partnering emirate.
- ABCD maintenance rating: The participants projected that the airport will be the first one with an ABCD maintenance rating.
- Ability to accommodate all planes: Participants highlighted that the airport masterplan is designed to enable the airport to accommodate all types of aircraft.
- Government-private partnership: It will be the first airport with a partnership between the government and the private sector.
- Special service where the passengers do not have to carry luggage: The company will provide special cars to Ajman, Sharjah and Dubai for transporting luggage and the passengers would simply arrive at the airport.
- Specialised section in cargo for transporting animals, horses and unique items.

- City served by a train that will connect it with the airport.

5.4 Case study results

This section presents the results of the analysis via the Nivivo program, a qualitative software analysis developed by QSR international, applying the grounded theory method, in which the interviews, documents and results of the observation are analysed. The researcher followed steps to reach the results and achieve the research objectives.

The analysis follows a four-step process, as indicated in figure 5-3 below:

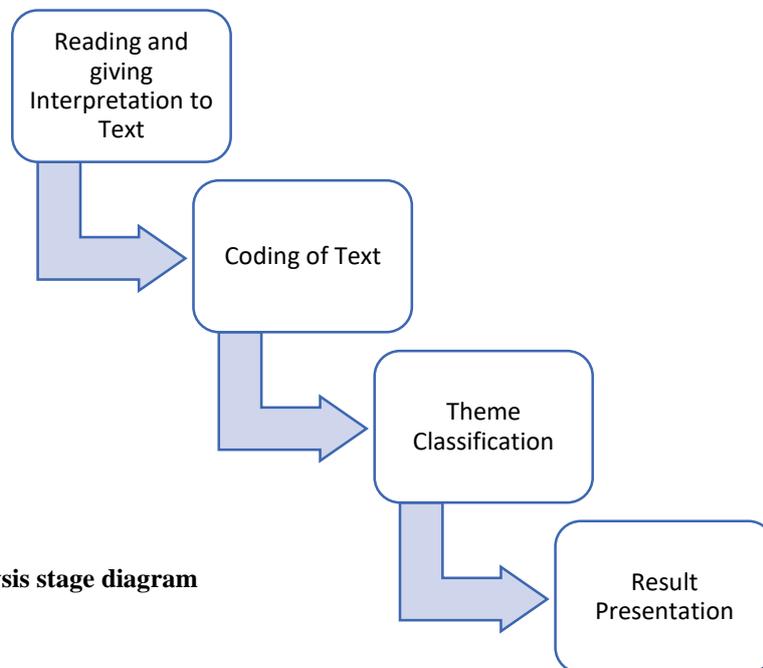


Figure 0-3: Analysis stage diagram

Stage 1: Reading and interpretation of text

The collected data were read several times in this phase to get a brief overview of what they entailed. A word cloud diagram was used to depict the most used words and phrases in the data. This was mainly to ascertain if the most used words were in alignment with the research objectives.

The most used words in the collected data were project, airport, authority, government, aviation, political, requirements, neighbouring, technical, integration, political and finance.

All the mentioned words are synonymous with the research objective. This a clear indication that the collected data are attuned with the purpose of the study.

Stage 2: Coding of text

A total of sixteen face-to-face and telephone interviews were conducted and the interviewees were conducted in English and Arabic. Each of the interviews lasted between 45 minutes and 60 minutes and they were conducted between June 2018 and September 2019. The interviews were all audio recorded, and these were subsequently transcribed. Due to the ethical considerations of qualitative research, the identity of the interview participants was kept anonymous.

The interviews were conducted with stakeholders in the project representing both the first and second partners in the contract, in addition to government agencies in the country who had a relationship or tasks in the project, whether in providing services or approving them. The qualitative data were carefully read, and the meaning was described to the phrases in the form of codes using NVivo. The data were read and studied approximately eight times. The initial coding revealed a total of over 575 codes, as indicated in the appendix. This was later reduced in the theme development phase. The codes that were irrelevant to the research objectives were removed.

1. Open coding

In this step, the researcher was open to all theoretical directions and possibilities that were presented in the data. The researcher used the most common method at this stage, line-by-line coding, which helped to identify the themes, insights and emergent links. During this phase, 16 interviews were analysed for a group of stakeholders in the project, in addition to analysing the data available to the researcher, in which 575 open codes were identified. It was

important to take into account the nature of these interviews and the people who were interviewed as they explained the project and the obstacles encountered, especially since in some cases this touched on the political side in the view of the interviewees.

Open codes were defined for each set of data separately, such as primary and secondary. Also, it was noted that most of the codes were repeated in each interview or file, but there were some additional words or descriptions for them. An example of that is the interpretation of the word 'innovation'. While the actual meaning of the description is innovation, the interviewee described these outputs according to market demand. Another example of different words and descriptions used was the definition of government entities. This was described by the second partner (the private company) according to a different definition because it does not fully know the description used in the country.

2. Focused coding

Focused coding comprised the second cycle of the coding process and involved searching for identified initial codes that were recurrent or had a high significance and represented a more important context for the data. The main focus areas were internal causes of failure, external causes of failure, role of stakeholders, stakeholder integration, project complexity and project success criteria. As the coding continued, more codes started to emerge and similar codes were categorised into themes and sub-themes (sub-categories).

Stage 3: Theme classification

The codes were grouped according to the existing relationship between them to form themes. The analysis revealed a total of four main themes and several sub-themes. The themes were then analysed using different criteria. The results were exported to Excel and Microsoft word to be used for the thesis write-up. Themes that emerged were: (1) Project complexity and

innovation, (2) Federal, country laws and local authorities' role, (3) Approvals and planning were inadequate, (4) Public and private sector roles and (5) Stakeholder integration and projects Elements of success.

Presentation of the results

The results presented in this section will be discussed. The data were gathered from primary and secondary sources. Interviews were conducted with stakeholders and observations for the primary data and the secondary data were sourced from newspaper reports. Sixteen interviews were conducted with stakeholders for the primary data and twenty-three news articles were reviewed for the secondary data, besides the design developments and land details. Hence the researcher identifies the participant as: first partner, second partner, local authority and federal authority due to it being a single case study, politically sensitive and moreover that confidentiality was assured as a basis of people's participation in this research study.

5.4.1 Theme 1: project complexity and innovation

HAT is considered an innovative project not because it will use modern technologies such as air taxis, but because it will provide a set of exceptional services at the state and region level as well as internationally, such as a full maintenance service in the airport for all aircraft, unlike what is currently present, which is partial maintenance. This makes the project complex and exciting to compete in a local and external context.

The project was characterised by complexity for several reasons, including the nature of the outputs and their results, which will affect the work of the rest of the airports and cause conflicts of opportunities and benefits. On the other hand, the location of the mountain project, its nature and the culture of the region and the neighbouring emirates, and the quality

of the contract and the stakeholders in the project, are pluses.

During the interviews conducted by the researcher, there was some reservation evident in mentioning other innovative things in the project, in addition to the interviewees not replying explicitly about the other complications of the project in order to avoid any future questions regarding the statements.

The researcher found that the project is complex in several aspects, such as:

1. Establishing a new international airport considering the presence of four international airports that are sufficient to receive the country's visitors for international events, such as Expo 2020
2. While it is an exceptional project site, on the one hand, it has a different nature from the rest of the country's airports, as it is in a mountainous area. In addition to that, the project site is linked to the borders of three of the neighbouring emirates, which requires a lot of coordination in ground services and coordination of flights.
3. There were requirements for obtaining various approvals, such as approvals related to technical matters, the common borders between the emirates, and the services provided by federal bodies in the emirate such as electricity, water, and gas.
4. A local aviation authority to represent the emirate was absent. This was later established in 2008 and the general director was assigned in 2014 with less than four employees.
5. The first project for the airport operator was a private, not a governmental, entity.
6. The residents of the region had to be compensated for their homes and farms to

establish the airport, bearing in mind that the region has a population of no more than 200,000 people.

This list of complications that were related to the project greatly affected its progress obtaining approvals. This was the result of the poor organisation of permits required and communication with the stakeholders. Therefore, the implementation of the project was delayed from the announcement until the date of preparation of this research.

The complications that were mentioned above are related to the technical and administrative nature of the project itself, but there were a set of complications that occurred within the project, such as a lack of expertise and the change of requirements due to the lack of permits in advance and the legal and security aspects of the project. In addition, lack of communication was one of the most important things that greatly complicated and affected the project as a result of the lack of integration of the two stakeholders.

Local authority statement:

'The requirement was changed from neighbouring emirates to all emirates, so let's say, they increased the complexities. These requirements did not exist before, and no other airport must go through it before.'

Second partner statements:

'The new technological tools have made this solvable however, because these tools are not known here, they made an issue out of it.'

'The project had a complex ingredient involving internal intergovernmental relations, beyond technical requirements.'

On the other hand, innovative projects need to be understood by those concerned with the extent to which these innovations affect them, accept them, and participate in diffusing them

with those around. But this project had been dealing with innovative aspects conservatively and not participating with the concerned parties for fear of implementing them in other similar projects that were under construction during the announcement of the project. This resulted in a kind of lack of clarity for the remainder of those concerned about the airport and what it is.

The following are some statements about innovation from the first and second partner respectively:

'Innovation needs a drive; people search for new things.'

'Because the things that HAT was going to have are unique and creative.'

5.4.2 Theme 2: Federal, country laws and local authorities' role

The focus of this theme was on the role of the federal government, the country's laws and local authorities' (emirates) role in PPP and their concerns about the HAT project, in addition to any similar project that may result in PPP failure.

The results indicated that the federal authorities have a large organisational role in the partnership projects between the private and public sectors, which must be determined before a project is approved and the contract signed for projects that include any kind of interconnection with the neighbouring emirates. The results confirmed the importance of studying and analysing neighbouring emirate projects and the extent of their impact on the success of the projects by considering what their concerns are. Other sources of information showed a difference in definition and determine the role of some of the federal and local roles, what the most important projects they have and their experience.

a. Federal role

This subcategory explores the role of the federal civil aviation (the Federal Authority) authority in the development of the HAT project. The Federal Authority is an autonomous body set up to oversee all aviation-related activities in the UAE and to regulate civil aviation and provide designated aviation services to strengthen the aviation industry.

The Federal Authority had an important role in the project, which started after the announcement of the project by the local government. Therefore, it was found by the rest of the stakeholders that there were several differences in the nature of their roles, which caused a problem in the way the project was presented and solving the difficulties that arose.

With regard to the first partner, the role of the federal entity has been described as a coordinating body to solve the problems of joint airspace, convergence of opinions and the development of solutions to ensure opportunities for all, but this role was not activated. In the view of a representative of the federal side, this was only presenting the problems without solving them:

‘The UAE wants to improve the level of safety in air space and this is something we respect and there are always solutions and they don’t want to address the solutions, only the problems.’

Likewise, one of the representatives of the first partner clarified what the federal civil aviation authority had done in adopting the initial plans, as it was important to involve them in the beginning of the project. But after some time passed, there was no answer from them, and the matter became dependent on their decisive opinion on whether the project should be implemented or not.

‘The federal civil aviation authority was supposed to be involved from the beginning

and we did involve them. They gave us the initial approval after we met certain requirement namely, the location, and what we call the conceptual design/ drawings and the business case and the feasibility for the airport and the technical studies, now the whole issue is in the hands of civil aviation.'

On the other hand, a number of employees of the local authorities indicated the role of CFA in the project and how their impact was crucial to the project's success, given that the requirements of the entity for the purpose of accreditation and coordination were essential and had to be provided to ensure equal opportunities and the safety of everyone. This is the opposite of what most of the project stakeholders thought about their role, as this participant defined their role to be the overseer of this kind of projects, because it was a critical one and had an impact on the whole country.

'These were essential requirements and should have been met...whether in neighbouring jurisdictions or far away jurisdictions, these federal requirements were not obstacles, but they were essential requirement.'

Another participant identified the regulatory role of the Federal Authority and that their lack of response in the recent times had been due to the lack of any development of the project by the private company, bearing in mind that the participant had already met several times with the federal entity to present the project and solve problems:

'...They coordinate some of the meetings and sort out conflict that happens between us and other aviation bodies.

'There is no response because there is no progress in the project from the developer.'

However, the participants highlighted that the civil aviation body purposely adjusted its rules to relieve itself of the responsibility of conflict settlement. It failed to intervene when the company was having difficulty with securing approval from neighbouring emirates even though it is responsible for the coordination of meetings and conflict settlement between the company and other civil aviation bodies.

'Yes, it is their responsibility and to go back to the subject, they have introduced new regulations during our progress because in the beginning they were sometimes good but other times they are complicating things for us.'

On the other hand, most of those interviewed indicated that there was a problem and a lack of cooperation from the federal authority concerned with giving permits to implement such projects, as these projects are joint ones in the airspace.

With regard to the Federal Authority, it explained its role through a press release to the Alittihad newspaper and that the problem that occurred was the opposite of that agreed upon in the meetings held between the parties. This was confirmed by some participants who declined to be interviewed. They stated that the Federal Authority's role organisational and ensuring the security and safety of all and that the problems that hindered the project were technical ones. The general director emphasised to Emaratalyoum newspaper in 2012 that:

'The authority is the legislative authority for civil aviation in the country, and therefore, the establishment of a new international airport requires a series of procedures through the legislation and regulations available on the website, which includes details of issuing the required licenses and changes in the airspace in the country.'

With the clarification in advance of the role of the Federal Authority, those involved in the project are awaiting a solution to a problem that is not within the authority's remit, which affected the development of the project.

In 2014, the Director General of the Federal Authority elucidated the role and responsibilities of the authority and what was hindering the project

'The announcement of the approval of Ajman airport project designs was made without completing the license and initial procedures, according to a previous agreement in 2012 with the authority, as the only body concerned with licenses for the initial and final airport'.

'The authority has nothing to prevent the establishment and establishment of an international airport in Ajman or any other emirate, but only on the condition that it complies with the conditions of security, safety and air routes in the country, and without harming the airspace of the country.'

From the point of view of the second partner, the Federal Authority has a different role than what was determined by the authority, as explained to the researcher in advance when it became clear that most of the stakeholders for the second partner were directing the blame for the project's failure on the ineffectiveness of the authority's role and lack of cooperation with them. It was evident in the interviews that the whole matter had stalled.

'The issue is the contract I signed is technically and economically with us and politically and the license is with the Ajman federal government. We (need) take no objection from civil aviation federal government.'

'But I think the problem was with the Civil Aviation Authority because there was going to be a conflict in the air traffic.'

However, the stakeholders who had experience of such projects stressed that the role was to ensure permits based on internationally recognised requirements were met:

'The general Civil Aviation Authority is the body that would authorise the construction of the airport.'

The researcher noted that the definition of the role of the federal authority differed between the first and second partners and some representatives of the local authorities.

Those concerned with decision-makers on both sides were awaiting a solution from the federal side, unlike some of the participants who confirmed the legislative role and that they

authorized and approved the plans and coordinated the use of the total airspace in the event of the approval of the neighbouring emirates.

Given the role of the Federal Authority, the first and second partners did not engage them in a timely manner in accordance with their roles, where, as the Director-General made clear, that procedures for taking permits were visible even on the website, as is the role of the Federal Authority.

b. Federal concerns

With the abundance of notions that part of the reason for the project stumbling or stalling was the lack of approval from the Federal Authority, the researcher was able to determine what the concerns of the authority were about this project and that they were not involved in it until after the project was announced by the two partners..

One of the most important concerns which led to delays in the appropriation process was security and safety requirements, technical requirements and the nature of partnership and ownership.

The major concerns about security and safety requirements as stated by the second partner related to noise, high tension poles and that the site encroached on an old military training site.

In addition, there were technical issues like the limited current airspace due to the presence of four international airports nearby and their impact on these, the telecommunication tower and the highway near the airport.

In examining all the data and documents available to the researcher, however, only one person mentioned directly that the type of ownership in the project was problematic or that it

might be one of the most important concerns of the Federal Authority and the others. This is what the researcher found was related to the exceptional nature of the project, where the local government provides exceptional services by instigating a new process, but the federal authority had not been notified of it to study the issue from other legal aspects in terms of state and security.

‘There was an objection as to the issue of sovereignty because airports should be owned by governments so trying to involve a foreign partner in the ownership caused some unease.’

c. Local governments and authorities’ role and concerns

The role of local authorities in the project has a significant impact, as they are not involved in financing or operating the project, but their approval is very important for the Federal Authority and project partners to implement it.

The project, as explained previously, is located between the borders of some of the neighbouring emirates, which own airports and ports and provide the same services that the new project will provide.

There were reservations from some of the neighbouring emirates regarding this project and others clarified what their concerns were about this project. We can say that the role of other local governments is to provide approvals and implement the requirements.

Local authorities and governments did not participate in the interviews and refused to express any opinions on the matter and considered that the reasons for not implementing the project were technical and had not been studied properly. One of them stated after his refusal to participate in an interview that their role in the project was limited to adapting the airspace to

meet the needs of all concerned and those of the Federal Authority.

Some local authorities had another role different from approving the implementation of the project, such as not giving permits to build near the project to ensure that all the infrastructural requirements for the project were provided in accordance with global requirements and standards in this field.

'We raised some issues and they raised some issues, but it will not have a big impact because the buildings which were built were not directly in the path of the runway.'

The various sources of information on the requirements of governments and local authorities concerns were supposed to have been collected by the stakeholders in the project at the stage of the feasibility study and the analysis of the surrounding environment of the project.

A group of existing projects will undoubtedly be affected by this project, and local authorities cannot take a decision or approve the implementation of such a project without a detailed study of the situation, knowing that the neighbouring emirates have more than 20 years' experience operating these projects.

As for the second partner, the concerns of local governments and their affiliates were related to the expected benefits of the project and how to benefit from Expo 2020, as the project will provide exceptional services in the field of transportation, tourism and training. But considering the concerns were related to the requirements of security, safety and interference at borders, in addition to the presence of similar projects having been announced previously and causing conflicts in services and the exploitation of the airspace, this confirms once again that the project did not consider the requirements of all concerned.

The lack of response by local governments to the project's demands has been justified by some of the participants. The concerns may be political and economic at the same time, as

such projects cannot be planned without the presence of the rest of the stakeholders from the neighbouring emirates.

'... felt a new airport is coming to take the business away from them.'

In addition, some of the internal problems that have arisen, such as the requirements of the residents of the region and agricultural residential areas in addition to infrastructural services have been indicated that these were part of the reasons for stopping the project. Moving the project from one location to another requires a certain time period to provide an appropriate site from the neighbouring emirates whose infrastructure can bear such requirements. This was not planned by the service agencies, and it is important to note that the project area and some neighbouring regions derive infrastructural services from the federal authorities as they do not have these resources.

'Some of the reservations we heard is that of noise which might be caused to the surrounding areas.'

'The idea of transferring high voltage lines, even if approved, requires a period of at least 6 months to a maximum of 3 years. The areas surrounding the emirate of Ajman, which are reliable for feeding the beneficiaries of these lines with electricity, do not have the surplus or sufficiently high a capacity that can be relied upon.'

d. Local governments projects

One of the reasons that affected the implementation of the project was the presence of previous and new projects that had been announced by local governments and were in the same field as the public-private partnership project. As said previously, the project is surrounded by several existing projects, which have been operating for more than 20 years and new ones were announced and started before the project was announced in 2007. It was

clarified by the participants that the existence of these projects affected the approval of local governments on the new project, because the existence of this project required a reassessment of the airspace, which would affect all the country's airports.

'In particular, presence of four international airports close by are the most significant challenges to creating a new airport.'

'This new location is like if we take a circle it is in the middle.'

The researcher identified projects that were close to the project concerned and that affected it, as these projects are owned by the government and very close to the project site.

All this information about the projects, the concerns and the roles of the Federal Authority and local governments indicated that the requirements were not taken account of by the project parties, with the project stakeholders being unable to define their roles and the importance of their presence at the beginning of planning the project before announcing it. This will be clarified in a later section that focuses on the planning stage.

The existence of these projects and these results affected the Federal Authority in taking an appropriate decision, as well as local governments, which some may interpret as political, as interpreted by the second partner, who repeatedly said in interviews that these political matters were not his responsibility. However, the data are essential for planning infrastructure projects, especially in such countries that are subject to federal and local laws simultaneously. It can be seen that the second partner did not study the legal side, which was confirmed by a group of participants from the local authorities, who said that there are laws that have not been examined or that the nature of the requirements was different from other countries and that it was better that it was taken into account. This includes studying the

existing projects and their impacts, as confirmed by the first partner and local authority participants:

‘Of course, the airspace requirement differs from one country to another as some countries adopt more stringent rules and require more safety restrictions.’

‘There are lots of federal laws that apply to all.’

To sum up, this project is the first of its kind of a partnership contracts in the infrastructure development sector related to transport and air freight. In addition to that, it is the first project owned by a private company unlike the rest of the projects in the state. It requires research into the federal and local law in managing joint projects and involving legislative bodies in the state to ensure its implementation in accordance with local and international laws and standards. Here lies the importance of identifying the stakeholders from other relevant bodies, especially the legislative bodies in the country, which, based on the researcher’s review, shows that the federal legislative bodies for such projects have not been identified. Their involvement at the appropriate time to review and apply their laws in an optimal way did not occur. With the announcement of the project, it was clear that their approval was important for the project’s plans to proceed with its implementation. The second partner believed that the approval of the first partner for implementing the project meant everyone’s approval was in place, which was not correct and became a problematic issue.

Some participants stated that the lack of approval of the local governments and the local authorities affiliated with them in addition to the federal authority was political in nature, but the first partner stressed in the interview that these requirements had to be met and that the requirements in the UAE were different from the other countries that the second partner had to study.

5.4.3 Theme 3: Approvals and planning were inadequate

The theme explores the information about the planning of the HAT before its implementation. The results of the analysis reveal that not all stakeholders were involved in the planning of the project. There was no memorandum of understanding amongst the stakeholders in this phase and the preliminary study was grossly inadequate although it was approved by the first partner. Participants further reiterated that the planning of the project was a total failure, highlighting that the company failed to acquire all necessary approvals needed for the construction of the airport in the UAE. Furthermore, participants highlighted that the inadequate planning was as a result of the second partner's inexperience in project construction in the UAE.

e. Feasibility study and approvals

The approvals ultimately altered the expected completion date. Acquiring approval from the civil aviation authority was the major challenge faced by the developers of the HAT. The aviation authority highlighted that the company had yet to fulfil all the requirements needed before approval for the project could be granted. The company highlighted that the Federal Authority has a stringent approval procedure, with over ten steps involved. Also, the participants highlighted that this lack of approval had negatively impacted the commitment of the investors. Investors insisted on seeing the Federal Authority approval before disbursing funds for the project.

One of the conditions needed for the approval of the project by the civil aviation authority involved getting approvals from neighbouring emirates. Participants revealed that each emirate has distinct requirements, and this increased the complexity of getting their approval as all the requirements had to be fulfilled. Some of the emirates placed some newly

introduced requirements on the project. Also, it was highlighted that some of the emirates stopped responding to their approval requests.

'They didn't study it well. Also, they did not obtain the initial necessary approvals from the beginning ...there are so many things that needed to be approved.'

'So they made a mistake by not anticipating all these approvals beforehand...They just thought that they could get approval from one party only; so they assumed they could proceed, but it doesn't work this way.'

Some of the participants from the local governments stated that the planning was poor and one of the most important reasons for the project's failure, which was explained in advance, was such projects need approvals and to follow the state's laws and study the surrounding environment.

f. Existing projects

Through a review of documents and observations, the researcher determined, as per Table 5-5, that there was already a group of successful projects at the local and international level near this project and that the airspace was crowded. However, the second partner was aware of the new project:

'I know Dubai spent a lot of money on the opening of this airport, a big airport.'

This confirms the second party's knowledge of existing projects that like HAT project, in spite of that, the extent of the possibility of implementing the project in the presence of these projects has not been studied and how it will affect obtaining the necessary approvals to implement the project due to the disbursement of large funds on a similar project that

positively affects the entire country in many ways.

Table 0-5 List of existing and new projects near the HAT project

Project location	Experience	passenger (2018)	Project status
Location 1	Since 1976	-	Signing a strategic partnership agreement in 2014 between Ras Al Khaimah Airlines and Air Arabia, to become the last under which the official carrier of the emirate would provide its services from Ras Al Khaimah Airport
Location 2	Since 1987	-	Plans to expansion since 2003 - The airport carried out a strategic study from 2003 to 2025 divided into five stages so that projects and expansions were implemented at the airport to meet the needs of the travel and freight market in Fujairah A memorandum signed in 2014 between Abu Dhabi Airports and the Department of Civil Aviation of the Emirate of Fujairah, by which Abu Dhabi Airports led the expansion programme for Fujairah International Airport
Location 3 <u>International Airport</u>	Since 1932	12.04 m	Based on a study and master plan for the airport's expansion in 2013, expansion plans were approved in 2017
Location 4 1 - <u>International Airport</u> 2 - <u>International Airport</u>	Project 1: 1960 Project 2: 2010	Project 1: 90 M Project 2: 900K	The opening of the new airport in the emirate on June 27, 2010, for cargo operations and then for passengers in October 2013, where construction began in 2007
Other locations <u>International Airport</u>	Since 1982	20.0 M	Abu Dhabi International Airport, located in the capital of the United Arab Emirates and operated by Abu Dhabi Airports, opened in 2006

Also, participants reported that the project was not completed because the contractor had failed to deliver on the agreement on building the airport. The contract was broken so it had to be terminated. A participant from the local authority said that there was lack of progress on the side of the developer while the second partner pointed out that there had been many changes in the implementation of the project. What had been planned was hard to achieve on the ground. Another participant from the local authority said that such massive projects take a

long time to complete; however, the developer was in a hurry to get things done and, hence, got confused along the way.

'Yes, it has changed a lot from what it was at the beginning of the project, It went through many stages; in the first stage, they had a concept and they followed through with it; but at every stage, they confronted changes. The reality was different from the concept.'

In addition to that, the investors changed the plans several times based on several inputs, and through observation and attending the meetings, it became clear that the main goal was for the project to transport goods and then the matter developed into transporting passengers and creating an integrated city and other new ideas in the region.

'Here in the UAE, you have to obtain approvals from multi-party organisations, and get consent from neighbouring jurisdictions.'

The stakeholders failed to do a proper feasibility study to identify some of the issues that came up during the implementation stage. There was a highway that was passing near the airport site serving another emirate. One of the Partner 1 participants added that the things they thought on paper were easy to do became hard to implement on the ground. The participant added that the planning stage was a failure.

'There was a highway passing near the airport and this has created an obstacle so we required the emirate which the highway passes allow to build a tunnel to allow the free flow of traffic without affecting the safety of the aviation.'

'This was true at the beginning of the project, but not based on a study. They thought they can do this and they can do that but, on the ground, it was not achievable. The area was very small, not enough for a good runway...so as I mentioned before, the concept and early design were

different. On paper, it all looked good, but on the ground, it was completely different and difficult to achieve.'

From the observations of the researcher through attending some planning approval meetings among others, there was no representative from the concerned authorities from the neighbouring emirates or from the service agencies. The second partner asked the researcher to communicate with the stakeholders from other parties and obtain their approval and overcome the obstacles to the project.

Through the visit, it was found that there are a number of buildings that might have constituted an obstacle to the project and some of the barriers identified at the project location were that it was very close to the borders of the neighbouring emirates. This was indicated by the second partner, who explained at the site that the project was stopped because there were no approvals and some issues about the site that were in the hands of the neighbouring emirates, such as building permits and borders. In fact, there were existing infrastructure and utility lines which needed to be moved before the commencement of the project.

The second partner did not indicate the existence of a problem with planning, but emphasised that he had modified all the plans based on the requirements of the Federal Authority and resolved all the technical obstacles at the site, but he had not received an answer after the fourth amendment to the project because of a new law that obliged him to obtain approvals from the neighbouring Emirates as well.

It is worth pointing out that the planning and study stages were slow, with many changes, and spanned from 2009 to 2014. As one of the second partner consultants stated:

'Given that the planning phase was too long., investors adopted a policy of wait and see.'

That is why the second partner appointed a specialist company again to do the study and submit the plans after the requirements that were not fulfilled were determined according to the statement of the Federal Authority . The authority explained that the airport project was located in an area close to other airports, which required the preparation of a comprehensive study. It was agreed in 2012, to develop a vision about the required changes in the tracks, and the need for new routes, but up to this point in time, no new developments have occurred.

‘After that, we proceeded with mapping out the details and plans and land surveying and topography and we brought in specialised companies.’

There were many sources of poor planning that have been mentioned above, which were repeated by the majority of the participants. But there were some reasons that were different and that were quoted by the participants, who can be classified as important in the project and who came around to the viewpoint, highlighted how the incompetency of the project’s previous managers from the partner one side was responsible for the slow development of the planning phase.

Finally, through a thorough and comprehensive analysis of the interviews and the newspapers in the country in addition to the observations, the researcher noted that the feasibility study presented by the private company to the local government was based on assumptions that do not apply in the United Arab Emirates. Among these was the issue of approvals for the exploitation of the surrounding lands and setting conditions for activities in the neighbouring emirate construction activities, such as construction and major transportation and energy services.

The study included all the technical requirements according to the perspective of the private company, except that the company did not rely on a study of the surrounding situation of the

project in the state, as the study on which the project was based may not have included projects that had undergone a long period of operation and had strategic plans for expansion, especially the Al Maktoum International Airport project, which is similar to the proposed project.

In fact, the new project is 32 km to 90 km away from each airport in the neighbouring emirates, which is about 24 minutes at a minimum to 74 minutes to reach one of these international projects.

The company in its meetings did not discuss solutions to obtain the approvals but expressed its desire to meet all technical requirements and appoint consultants and private companies again to re-study the project. As was explained by some of the participants, the company did not ask the rest of those involved on its part to attend the meetings with the federal bodies.

Most of the new and expanded projects for existing schemes have been accredited by the Federal Authority and have never been obstructed. It is worth noting that these projects were related to the strategic plans of the emirate and are projects that must be implemented to achieve the vision of the country or the emirate.

5.4.4 Theme 4: Public and private sector roles

Project management focuses a lot on identifying the stakeholders and their roles during the project phases, as the determination of the stakeholders lies with the project sponsor and the project manager and in such projects that are within the scope of federal infrastructure services, the number of stakeholders is large and differ in their strength and impact on the project.

During the review of the secondary information sources, the researcher surveyed the

stakeholders whose names and roles were mentioned and compared them with the project data that were limited to mentioning some of these. This meant that the official newspapers and other websites were able to identify the stakeholders through the problems that the project went through, unlike the main party in the project. By this, we mean the second partner who, in his meetings and documents, did not mention some of them so that it appears he did not know what the names of these entities were or whom they followed. The problem lay in not defining their role in the project.

Also, during the interviews with the parties, it was found that there was a difference in describing and defining their roles to each other, despite the existence of a clear contract between them. But the tasks and roles were different from one person to another. One of the decision-makers from the local government insisted that clarity about the roles was important and would lead to success:

‘The success of any big project depends on clarity. Everything should be clear from the outset and what every party’s role is.’

When interviewing those involved in the public sector (the first partner), it was clarified that their role was to provide and facilitate all the requirements for the second partner inside and outside the emirate according to what is required, in addition to the land, subject to the contract for the project. To solve the problem of not obtaining the approvals, the first partner established a new aviation authority to represent the government with the federal government and other governments in order to discuss the requirements and find appropriate solutions in addition to being a link between the first and second partner and other relevant authorities, as stated by two of the second partner participant:

‘The relationship was very good. I believe the government had given their support including the creation of civil aviation authority.’

‘The previous team was on high level and the matter of gathering them for discussions and meetings with other Emirates used to take more time but now with the new team we have more authority and are smaller and can move faster than the previous team and more freely.’

Nevertheless, another participant of the second partner saw the local government as the concerned authority for obtaining approvals and resolving any problem, which was a role, according to the first partner, within the jurisdiction of the second partner. The second partner indicated that his role was concerned with technical and economic matters:

‘The government’s responsible for obtaining approvals and completing the procedure.’

‘that time there as political issue, the political issue is and military issue and government federal and this s not my job this I the job of government.’

The participant from the second partner was one of the decision-makers, and based on what was discussed with him, the region was studied, and plans were drawn up, and, accordingly, the project was announced. So, there were camps, high pressure lines and borders with other emirates, which are things that should have been clear during the site selection. It became clear through the representatives of the local government that the project was supposed to be in another location, but later it was changed to the second location for the area to be an international project, meaning that the second partner was the one who conducted the study and looked at the economic side and the extent of the feasibility of implementing the project according to the data. But it appears as if the failure to obtain approvals are political matters. However, the first partner saw it as one of the tasks of the second partner, as it is incumbent on him to obtain all approvals in the implementation of the project and include approvals from the competent authorities.

Given the statement of the Federal Authority that it had been waiting for a response to its observations from 2012 to 2014 from the company, and reviewing the events in the same period and the answers of the participants, we see that there is a dispute or a lack of clarity in the roles, as the company confirmed that all the observations were met by the Civil Aviation Authority (affiliated with the partner) for the purpose of sending it to the Federal Authority. The local authority confirmed that it did what it had to do and that they were awaiting a response from the Federal Authority. We see that each of the partners did not define their roles appropriately and here we look at the central authorities in the emirate who could manage the project.

A participant from the local government explained that one of the directors of the second partner company spoke a lot without application, and he was trying to coordinate a meeting with senior figures in the government to discuss its role in solving the problem to the extent that he asked for help from employees in other government agencies.

The researcher found out that the role of the first partner was to provide and give powers to the second partner to search and study the project within the emirate's scope and provide the necessary support in accordance with what was explained and defined in the emirate and in the constitution. The second partner had to study the project in detail and choose what was appropriate for investment by the two parties, what the requirements were and strive to meet them.

In addition to that, the role of the second was is to provide financing for the project, establish a company in the state legally and complete the financing procedures in the state banks. The second partner was late in providing and identifying the sources of financing explicitly. The second partner stated that once the plans are approved, financial support would be available,

which was not clear despite the private company having a partnership with one of the sons of the bosses in a European country, who was present during the announcement of the project but then disappeared.

During the discussion with the interviewees and others who declined to be recorded, it was indicated that there were disagreements between the second partner and unclear sources of funding who required approvals to be obtained. Thus, the second partner came under pressure from all parties, which prompted him to partner in the UAE with one of the stakeholders from the capital, thinking that the presence of a partner from the capital might solve the problem. This behaviour shows that the roles were not clarified for all.

To conclude this theme, the roles of all the main parties of the project were not clarified and what the researcher found was that the roles were different in their description and identification, and the contract was not mentioned or referred to, which indicates that those who managed the project from both parties were not party to it or to defining the roles to ensure the success of the project. The importance of the role of providing finance, which is one of the most important reasons why governments turn to partnership projects between the public and private sectors, was not recognised.

The second partner looked to the first partner, who did not perform his role properly, and the first partner believed that the second partner failed to provide the requirements and obtain the approvals from the relevant authorities.

It can be said that one of the most important reasons for the weaknesses and lack of clarity of the roles between the parties was that the party that was running the project for the government was not a technical and experienced party in the projects for knowing the importance of defining the roles and how to distribute them between the stakeholders. This

created a problem in the planning stages of the project. The first partner realised the importance of this by establishing a local body to represent them with other civil organizations, in 2013, that is, nearly five years after the project was announced and the plans drawn up.

On the other hand, the second partner appeared to have limited the roles to a small group who moved between the offices in two emirates and appointed a group of programme and project managers who were from outside the state and were not aware of the requirements of these projects in the state and the nature of approvals. Up to 2017, they were requesting the approvals from other local bodies which were not a party to the contract from the start.

The roles were unclear and conflicting, and the lack of implementation of some of the roles made the project a difficult and changeable situation. The analysis shows that stakeholders' roles are important in integrating PPP project because a PPP project is seen as treaty between two or more governmental entities, especially at the project's initiation and planning phases because identification will enable project co-ordinators to understand all the stakeholders' requirements, design a project framework and understand the HR plan that is based on international practice.

5.4.5 Theme 5: Stakeholder integration and projects elements of success

This theme explores the adequacy of the relationship between the stakeholders. The analysis reveals the project suffered from inadequate integration between them. Through the responses of the participants and the observations, the researcher defined stakeholder integration as the extent to which all stakeholders were integrated in several key aspects that qualified them to perform their tasks, such as experience and knowledge, communication and engagement, economic and political strengths and cultural aspects.

As these issues were mentioned in the answers, these aspects and their relationship to integration will be explained by the researcher below. But before explaining them, the researcher was able to obtain an appropriate definition from one of the decision-makers from the first partner, which is a definition that emphasises the importance of identifying the stakeholders and what their roles and impacts are,, especially in such projects that are considered exceptional in their legal form, their outputs and their internal impact on the country and outside it. As was mentioned earlier, the private company is owned by a member of the royal family in Europe, who visited the site himself, in the knowledge that an ambassador of a European state was present during the announcement of the project.

‘The stakeholders play a part in the activation of the project and (usually) hold a certain responsibility and carry it out in conformity with other stakeholders. When everybody performs his tasks according to his scope and background, the full work will be completed successfully; therefore, the integration between all the stakeholders means there is a challenge for the management of the project as to how we can bring all these stakeholders and initiate their roles in a proficient manner to reach a successful outcome.’

‘Integration is something basic in every project; everybody should know his role in the project so as to complement each other as one team to get the project successful, whether it is a project or a relationship. Integration is a key component of success. If all roles were clear from the beginning for sure the project would succeed.’

When we refer to integration, the researcher means integration between all the main parties of the project and those who have the power to make decisions during and after the implementation of the project. The aspects that were mentioned above and that will be explained are the same ones that are used to analyse projects in general, except that the researcher saw the necessity of applying this analysis to every stakeholder in the project and

defining their role. This will be explained in Chapter 6, in the proposed framework on the integration of stakeholders.

a. Defining roles

It is recognised in all management methods that when deciding to implement a project, it is imperative to form a team, allocate roles and responsibilities, and link them to the tasks and schedules of the project, in addition to having means to measure the performance and productivity of the work team and check the quality of the processes implemented in the project.

The definition of roles in the project was the source of a number of problems, as it was clarified in the previous sections that the project failed to define roles and responsibilities between them and other stakeholders, such as the Federal Authority and local governments.

Definitions of the roles and responsibilities make it easier for decision-makers to follow up on the implementation of a project and ensure that the roles are determined based on a set of criteria such as scientific and practical experience and the method of communication.

Effective communication has a significant impact on a project and is one of the aspects that must be determined within the roles of stakeholders.

‘They didn’t take the stakeholders into account; this was not done at the beginning.’

In looking at the results of the data collection, it can be seen that many emphasised the importance of identifying roles and their clarity over and over again and giving each stake its role and involvement in the project in a correct manner, with periodic follow-up on their opinions and implementation of their roles in the project. The stakeholders from the first partner made it clear that the lack of clarity of roles and taking the roles of others had a

corrosive effect on the project.

'The issue is the contract I signed.'

'It was not a bad management as such but in my opinion, matters were not clear from the outset ...'

Partner 1 statements related to roles:

'There is a problem when everybody takes the role of others. But when the roles are clearly specified, projects will go smoothly....'

'The projects which succeeded due to integration between private and public sector are the ones concerning utilities.'

Local government participants; statements:

'The success of any big project depends on clarity. Everything should be clear from the outset and what every party's role is.'

The project needed to define the roles appropriately and what the requirements were for its implementation since it was related to the economy, politics, law and culture of the emirate in particular and the state in general. It was important to define the roles based on the people who worked in them. The problem is who would define these roles? In the project, the roles were defined by the participants themselves and according to their experience in their countries. That is, those involved in the state here developed the roles according to their experience in the projects that were managed by them. The second partner defined his technical roles in a detailed manner and left the administrative role, which is one of the most important ones in the planning stage and when getting approvals. In addition to that those who manage the contract for both parties are legal people. The first partner, who ran the contract in the early stages, did not have technical background in such projects.

'The roles are defined and specified and as you have mentioned the integration and the work teams plus the funding it should all be there.'

b. Experiences and knowledge

Project expertise contributes to risk reduction and proper implementation of plans based on previous experience in similar projects.

In the view of the participants in the interviews and those who attended the meetings with them, the representatives and team members of the first partner did not have any technical experience in aviation-related infrastructure projects, with the exception of only one engineer, whose experience in administrative work was more than technical. It was also noted that during the meetings, the discussions were not technical when presenting the problems, which made the situation unclear and one that could not be discussed with those outside the emirate.

As previously mentioned, this project is the first in the country in which the owner was to be a private company that managed an investment asset which provided transportation services inside and outside the country over a period of 35 years. It was one of the partnership contracts that required accuracy in specifying roles and carrying out tasks. The work team from the first partner had no experience in managing and following up on similar projects, whether at a local or federal scale, which contributed to the decision to change the work team and establish a technical body affiliated to the first partner to manage project requirements with other authorities from the technical and administrative side.

It was also noted that the meetings that were held were in order to obtain the approvals with the support of the local authorities in the emirate itself. The meetings did not explain the tasks in detail or the technical requirements.

Participants from the local government warned that the project was complex and new in the emirate and it needed experienced people in addition to the knowledge and know-how of the second partner on the requirements of these complex projects in the state and not resorting to requests for advice from experts in the country:

‘They lacked previous project experience.’

‘They should see other companies, not only depend on personal efforts ... see companies who had previous experience in airports. They will help you.’

‘He treated the project just simply as a construction issue; but an airport is different.’

With regard to the stakeholders of the second partner, the project management requested the presence of people with experience in the field of aviation, as most of the stakeholders who were interviewed by the second partner found that the requirements on which approvals are given are matters of political and competition between them. But only one of them was experienced in the work of airports. He stated that these were indeed major requirements that could not be overlooked, and it was important to provide them. He also indicated that experience was required to effectively manage these complex projects:

‘I fully understood what the requirements of an HR plan were, based on international practices and the GCAA’s particular requirements.’

‘For them it was an exciting project, but I believe they could have been better organised and equipped to deal with such a complex venture.’

Another participant from the second partner highlighted the lack of experience although they were excited about this project, outside of the funding issue. From that, it can be concluded that even the second partner lacked the experience and knowledge of PPP as he was the

partner who had to provide the funds at the beginning and be clear about the sources of it.

'I believe that the ...didn't have the experience or funds to move forward with the project.'

With regard to the administration's experience of such projects in the planning, implementation and operation phases, it became apparent by looking at the rest of the documents, official articles and reports that all the neighbouring emirates had more than 15 years of experience in planning and managing these projects and knowing what was the effects of the implementation of a new project or expansion of one. . One of the most important reasons for the delays in giving approvals may have been the lack of experts from both parties so that there was a failure of problem solving in planning and implementing the project and, for the most important stage, its operation.

although the private company has indicated that the project will provide institutes in the field of aviation the company has already provided courses for some of the representatives of the first partner, which were for weeks. The project needs members who have experience working in the same field and not courses offered in the field of aviation.

'It was a lack on our side. The previous team who represented the government with the developer were not up to the standard the government had hoped for so there were some clashes and obstacles which arose that delayed the project.'

There were also meetings between the federal and local bodies to discuss the project and the attendance of two parties who did not have the full technical expertise to understand the requirements, which affected the process of direct communication and providing solutions and requirements faster.

'We needed more meetings more coordination, more teams and specialised and technical people.'

The Director General of the Federal Authority stated that they were awaiting a response for nearly two years. In the event, the second partner contracted a specialist consultant to respond.

c. Communication

The project was unable to define the roles and responsibilities between the stakeholders inside and outside the project, in addition to there being weak scientific and practical experience between the parties of the project, which led to poor communication. As was previously indicated, the project was announced and planned without getting initial approval.

There is ample evidence of poor communication, coordination and stakeholder involvement in decision-making that led to a lack of integration of the stakeholders and a lack of access to appropriate information and solutions.

Also, the results showed that there were no proper channels of communication at all levels. There was also a lack of appropriate coordination of stakeholder meetings. For some participants, it was hard to hold meetings with the technical teams and other emirates. The second partner faulted civil aviation for failing to communicate their position concerning the approvals as the authority did not give any feedback. The management also was unable to treat the airport project as a unique case; it coordinated affairs just like any other project.

'There should have been connections, and the stakeholders requirement ... from the outset, there should have been memos of understanding (MOUs) ...all stakeholders should sit at the same table and gather all their requirements and listen to their concerns and points of view ...and benefit from their expertise.'

The participants from the first partner indicated that there was no cooperation between the stakeholders and that everybody who had an interest should have participated in the project. In addition, the local governments did not have membership of the council as (Civil Aviation) board members consist of one member from each emirate. This is what makes the communication and making decisions complicated.

‘There was a lack of communication, integration and cooperation between the three parties to the project.’

‘Despite our repeated requests, there was no cooperation.’

The project lacked an effective method of communication, coordination and appropriate engagement for several reasons, as mentioned, which directly affected the style and quality of the communication channels between them. Even in the last three years, there was no clear channel for communication internally or externally, which is what the researcher found when one of the team members asked her if the money they were owed by the company would be given to them.

‘We want to know the truth and see if there is any way to recover our money.’

d. Culture

In this project, the second party had a private company from outside the country that faced difficulties adapting to the culture and for which a plan had to be prepared in a way that did not have a negative impact on the project. In the United Arab Emirates, however, the parties were unable to understand the mechanism of working and communicating with senior figures, especially with regard to decision-making and the separation between the ruling family and the government.

One of the mistakes made by the second partner was that when he could not solve the problem of getting approvals from the neighbouring emirates, he took a path in partnership with a VIP in the capital, thinking that he would put pressure on others to obtain approval. This is not done in the state as there is a clear constitution and laws. It explains how to work on such projects:

'They asked me about the sheikh's fortune so I told them, this is a taboo subject, you cannot ask this question because you are here.'

The first partner expressed his respect for the laws of the federal state and the reasons for setting strict requirements in this regard for the safety of all, unlike the second party who interpreted this matter by the failure of the first party to solve the problem, which explains the need to understand the UAE culture, how to communicate between governments and the mutual respect and participation needed in order to reach the ultimate goal for the state.

'The UAE wants to improve the level of safety in air space and this is something we respect.'

Studying the culture of the state in all respects is important because sometimes behaviours that affect relations arise, which causes tension in a project or the occurrence of problems that cannot be solved. It is necessary for all sides to study the culture of the two parties in work and relationships, especially in projects that are large level for a long period. The researcher found that the second partner was looking for a way to solve the problem of approvals by communicating with the rulers of the emirate instead of solving technical issues, which is unacceptable behaviour and has nothing to do with imposing opinions on others under any circumstances.

e. Power and interest

One of the basics of managing stakeholders in projects is their analysis and knowledge of their strengths and their interest in managing them properly according to the project requirements. As was explained in the previous sections, there was a weakness in defining stakeholders and their requirements and communicating with them, which changed the course of the project a lot.

What is important in such projects is that both parties have strengths and these can be used in an appropriate manner to implement a project. Except that in the view of the researcher, the interest was variable at different stages of the project.

The researcher found that at the beginning of the project, all parties were enthusiastic and knew of the importance of the project. When problems began to appear, the interest began to wane for some to the extent that some of them found that the project would be cancelled before it started. This indicates that the project was not closely linked with the goals of the parties, so it was easy to give it up at some point.

What has been observed is that the project was not linked to any strategic goal of the emirate and was not part of the plans of the urban plan of the emirate at the beginning of the millennium. But it became a project that would serve the country's version of 2021 and Expo 2020. As was explained previously, the neighbouring emirates had these plans in advance. Whether they are new or expanded projects, they are based on tight strategic goals and plans by governments.

In fact, during the announcement of the project in 2007, the first party did not have any declared strategic goals for the emirate or a clear orientation according to the data seen, except that after the launch of the vision for 2021, the emirate prepared a strategic plan linked to the state's plan starting from 2014. It was noted that after the launch of the strategy, it was

mentioned in a newspaper article that the project would contribute to achieving the vision for the emirate until 2021, provided that the project was completed in 2018, which did not happen.

f. Elements of success

This category explores the attributes that a PPP project such as HAT must possess to be successful. This is essential as most PPP project requirements are complex.

When questions were asked of the participants about elements of success, it became clear that there were a number of optimists for the project. A participant highlighted that the project had met its ultimate demise. He further explained that the agency was considering the option of converting the facility to a free zone or an agricultural zone. Most of the participants in the project thought it could be revived through the personal commitment of the stakeholders, a high commitment by the first partner and redesigning the HAT to make it significantly smaller, as shown in Figure 5-4.

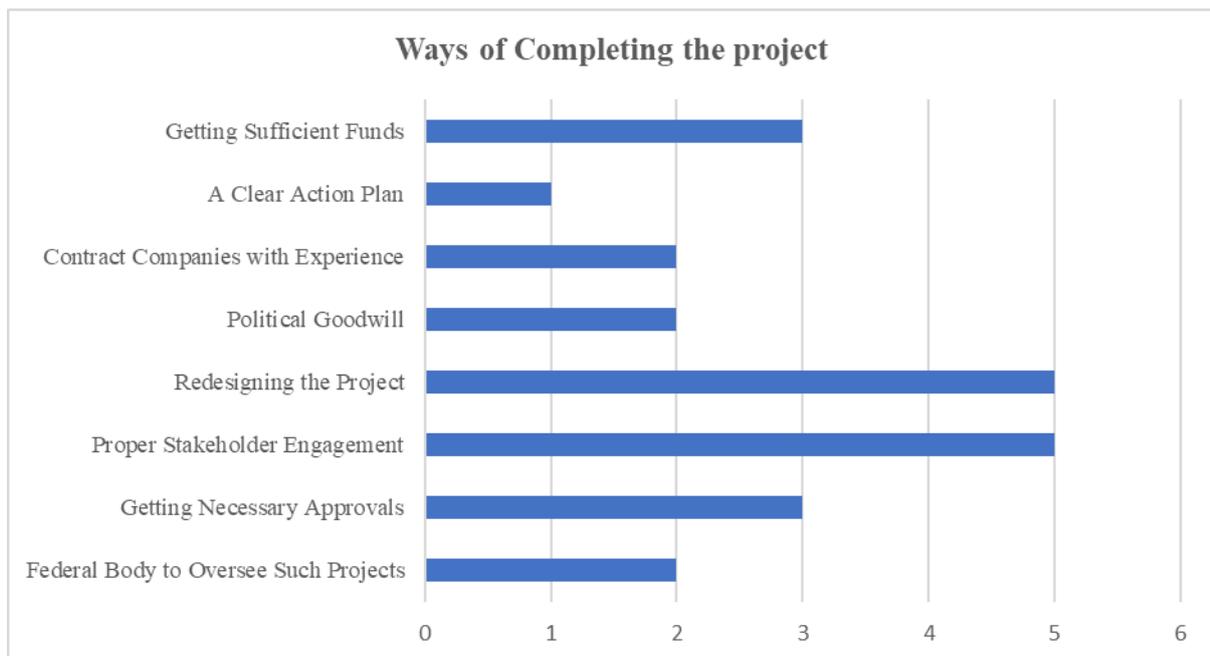


Figure 0-4 Ways of Completing the project suggested by the participants

The success elements of the project are the same solutions to the challenges that appeared in the project during the planning period, and many answers were repeated with the participants. Some thought that there was an opportunity for the project and others thought that the project had ended, and it was time to search for another party or change direction.

The researcher was able to summarise the success factors of the project based on the participants and the results of the analysis which can be compared with the challenges, as listed below:

1. Clarity of project mission: Participants highlighted that the objective of the mission must be clearly defined.
2. Action Plan: A well-developed action plan that will account for unforeseen circumstances and events that may occur halfway into the project's development.
3. Exceptionally reliable developer: A reliable and highly experienced developer.
4. An adequate and competent technical team
5. Sufficient funding
6. Clearly defined roles: The roles of all stakeholders must be clearly defined
7. Clarity with the requirements of other local and federal governments

In addition to the success elements, the researcher summarised the challenges that the project faced, and this ultimately altered its expected completion date. The theme is exploring the challenges faced by the project and their causative element, as listed:

1. Obtaining approval from civil aviation authority: Acquiring approval from the civil aviation authority was the major challenge faced by the developers of HAT. The aviation authority highlighted that the company had yet to fulfil all the requirements needed before approval for the project could be granted. However, the company highlighted that the federal authority had a stringent approval procedure, comprising

over 10 steps. Also, participants highlighted that this lack of approval had negatively impacted the commitment of the investors. Investors insisted on seeing the federal authority approval before disbursing funds for the project.

2. **Obtaining approval from other emirates:** One of the conditions needed for the approval of the project by the civil aviation authority involved getting approvals from neighbouring emirates. Participants revealed that each emirate had distinct requirements, and this increased the complexity of getting their approval as all requirements had to be fulfilled. Some of the emirates placed some newly introduced requirements on the project (for fear that the project would displace their air transport market share). Participants also highlighted that some of the emirates stopped responding to their approval requests while one of the emirate completely opposed the project.
3. **Project structural and design changes (land area):** Participants highlighted that they were forced into changing the design and structure of the project due to a continuous change in the predetermined land area assigned for the project. The land was reduced drastically. The residents of the community were unwilling to give their land up for the project.
4. **Lack of an appropriate technical team:** The project lacked the appropriate technical team, and this ultimately slowed down its development.
5. **The general financial crisis:** The general financial crisis of 2008 negatively affected the financing of the project.
6. **Incompetency of previous managers:** One of the participants highlighted that the incompetency of the project's previous managers was responsible for its poor planning and slow development.
7. **Strong competition:** The project suffered from strong competition from other airports

in the region. The second partner believed that such a huge project would displace their market share; they were therefore committed to seeing the failure of the project.

8. Lack of patience: One of the participants highlighted that the lack of patience on the part of the company led to the ultimate demise of the project, highlighting that the company did not take enough time to study the project and get all the necessary approvals before commencing it.
9. Federal authority and military requirements were unmet
10. Inadequate preparation by private firms: The private firms were inadequately prepared to handle a project of this magnitude.
11. Lack of funds: Participants revealed that they suffered from a lack of funds from the second partner and this contributed to the stoppage of the project.
12. Achieving air space approvals: UAE airspace was already congested. The participants highlighted that they faced a significant level of challenge in acquiring HAT air space approval.

Figure 5-5 summarize the main causes of HAT project failure.

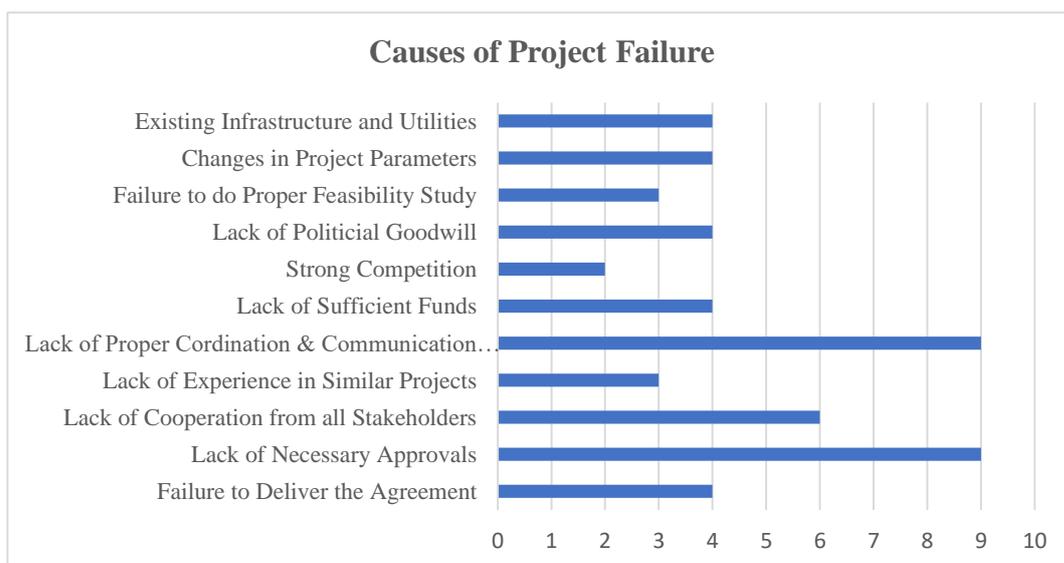


Figure 0-5 Causes of HAT failure

5.5 Chapter summary

This chapter presented findings of the first innovative PPP project of (BOT) contract case study conducted in a northern emirate in UAE that provide new infrastructure facilities and services. The case study involved the conduct of 16 in-depth interviews of stakeholders, analysis of relevant documents and the researcher's observation by using NVivo software.

The findings from the case study revealed 575 codes that were categorized to five themes: (1) Project complexity and innovation, (2) Federal, country laws and local authorities' role, (3) Approvals and planning were inadequate, (4) Public and private sector roles and (5) Stakeholder integration and projects Elements of success.

Based on the presented findings the project encountered difficulties in its initial stages, as it was evident that various factors affected the progress of the project, such as geographic, political, experience, economic and knowledge factors related to the main stakeholders of the project and the compatibility of their requirements and goals in the project with others from the neighboring Emirates and the second partner of the contract.

In addition, The project was approved without considering similar projects in services, design and goals, which is the reason for delaying the project and obtaining approvals, as one of the objectives of the first party is to develop t infrastructure, provide job opportunities and attracting investments in the emirate, on the other hand the second party's objectives are to provide a competitor in its services, design and innovations for existing projects regardless the impact of project implementation on existing or under construction projects, which proves the lack of integration between the main parties in the project. Different factors affected the project progress starting from the level of project complexity that had innovative aspects, the

identification of role and responsibilities between the stakeholders, the level of the integration between them and the lack of unified PM process and framework to manage PPP projects

Also, findings revealed the success factors and failure causes of the project that showed the importance of stakeholders as critical factor that affect the success and failure of the project, which was not been considered and planned properly in HAT project phases. Therefore, these findings necessitated the need for developing a framework (see Chapter 6, Figure 6-4) to guide the implementation of PPPs in project planning and development phases through addressing and considering SI.

Chapter 6: Discussion of the Results and the Proposed Framework

This chapter presents the findings of the research study undertaken to investigate the impact of SI on delivering an innovative, large-scale, infrastructural PPP project in the UAE and then proposes a framework to ensure the integration of SH in the development and planning phase. According to the identified challenges and the CSF from the literature review and case study analysis results, this chapter highlights how the research aims and objectives have been realised and the research questions answered, the relationship with the literature as well as the study's contribution to the body of knowledge.

6.1. Overview of findings

The findings of the research confirm the similarity between the elements of success of PPP projects, innovative projects, and large-scale projects. This research highlights the importance of identifying the element of stakeholder management in another way, which is the integration of those involved in projects in relation to the two main parties in the project.

With a BOT contract, we are referring to a first party, the government public sector, and a second party, the private sector. The results of the research showed that a number of challenges were encountered by the stakeholders in the project, which caused this project to fail and the planning and preparation period to be extended for more than nine years.

Surprisingly, during the first quarter of 2020, a decision was issued to cancel the project monitoring body that was established to ensure that the project requirements were met with the rest of the stakeholders internally and externally.

The results indicate that the problems in the project were caused by the concerned parties, whether the first or second party, due to poor planning and incompatibility between the two parties in terms of goals, skills and knowledge. Although the project could have been implemented after obtaining approvals in 2014 and linking these with the requirements of Expo 2020 and the state's strategic goals, the relationship between the two parties was not compatible for proceeding with it. Interest in continuing with the project evaporated for one of the parties.

The results emphasise the importance of managing the stakeholders in the various stages of the project due to their significant impact. Therefore, the researcher presented another component for the success of such projects, which is the integration of stakeholders. This component evaluated the lack of integration based on several specific features that were closely related with the second party, resulting in a proposal to choose stakeholders in a manner that ensures complementarity. This, it is argued, will lead to the success of those necessary administrative methods and tools for managing them throughout the project period.

Therefore, this research resulted in a definition of the integration of stakeholders, the components that indicate the integration of stakeholders, and a framework for such projects, which, together, would ensure the integration of stakeholders in the planning and pre-planning stages.

The objectives and research question were fulfilled through different research methods, as presented in Table 6-1.

Table 0-1 Summary of Achievement of Research Aim, Objectives and Questions

Research Aim	Investigate and explore the impact of SI in delivering successful, Innovative, large-scale PPP Infrastructure projects in the Northern Emirate			
Research objective	RO1: Provide a comprehensive review of the existing literature relating to SI, PPP, large-scale projects, and innovation management	RO2: Identify the sources of misalignment between different stakeholders in innovative infrastructure PPP projects and propose solutions that can be adopted to address the misalignment.	RO3: Propose an appropriate framework that can be adopted by the local government to ensure the successful integration of stakeholders on innovative infrastructure projects.	RO4: Ascertain key PPP success criteria that can be used by the local government to achieve a successful stakeholder integration during the delivery of innovative PPP infrastructure projects.
Research questions	Q1: What are the leading causes of Innovative PPP, large-scale project failure?	Q3: What is the role of the constitution and laws in a PPP large-scale project? Q2: What are the difficulties explicitly related to local governments in delivering innovative large-scale PPP projects in the northern emirates?	Q1: What are the leading causes of innovative large-scale PPP project failure? Q3: What is the role of the constitution and laws in large-scale PPP projects? Q4: What defines the level of SI?	Q4: What defines the level of SI?

Methods of achievements	Literature review and case study	Literature review and case study	Literature review and case study	Case analysis and synthesis of findings via interviews
Location in thesis	Chapters 2,3 ,5 and 6	Chapters 2, 5, 6 and 7	Chapters 2,3,5, 6 and 7	Chapter 5 and 6
Outcome	<ol style="list-style-type: none"> 1. Framework for SI management in PPP projects (p.306) 2. Identified five leading causes of innovative, large-scale PPP project failure (p.291) 	<ol style="list-style-type: none"> 1. Identified five leading causes of innovative, large-scale PPP project failure (p.291) 2. Recommendations for governments, policymakers and project practitioners to consider the constitution and laws, SI and success criteria for future projects (p.335-281) 3. Case study results (p.278-281) 4. Framework for SI management in PPP projects (p.306) 	<ol style="list-style-type: none"> 1. Different elements of success criteria and SI are synthesised into a framework after the findings of the SI impact on PPP success. (p.306) 2. Recommendations for governments, policymakers, and project practitioners to consider the constitution and laws, SI and success criteria for future projects (p.335-281) 3. Identified five leading causes of innovative, large-scale PPP project failure (p.291) 4. Case study results (p.278-281) 	<ol style="list-style-type: none"> 1. SI affecting success criteria variables (p.300) 2. SI definition (p.296)

6.2. Research questions and main findings

The analysis of the data revealed that the project suffered from a flawed master plan, the company failed to get all necessary approvals and the local civil aviation authority failed to assist in settling approval issues with other emirates. Furthermore, the inexperience of the Second partner firms in project planning and development in the UAE also contributed to the failure of the project. Shrinking land space, insufficient funds and strong competition all contributed to its failure. The majority of the participants believed the project could still be completed, though, not on the initially designed scale; they believed HAT could still be built if it was made significantly smaller, with significantly fewer services.

In fact, all the results of the analysis confirm the importance of the integration of stakeholders, as their differences in culture, experience, communication and management skills greatly affected the project, in addition to the absence of any strategic direction, which ensured there was no interconnectedness between the stakeholders and the pursuit of goals. Despite the presence of several representatives from the local authorities of the first party, this project needed a project manager who managed and followed all the requirements of government agencies and was concerned with communicating with the private company.

The answers to the questions were different depending on the role and tasks of each participant, since the participants who made the decisions had comprehensive pictures of the project except for the current project status. According to the first partner, the project would not be completed because the second party did not adhere to the terms of the contract, but the second partner was excited about implementing the project according to how it was planned after resolving some legal and financial problems outside the country. This was one of the factors affecting the project. The rest of the participants look at a different view of the project

of solving challenges and changing its scope because of its importance and positive impact on the emirate in particular and the country in general.

The study identified a set of goals that contributed to obtaining answers to the questions identified by the researcher in Chapter 1, which enabled the researcher to obtain answers by reviewing the literature, analysing the results of the interviews and observations and reviewing the documents related to the case study.

The main question was: '**How does the level of SI impact on delivering successful, large-scale, innovative PPP infrastructure projects?**' To obtain an accurate answer, the researcher set five sub-questions that have been answered through the analysis of data as follows:

RQ1: What are the leading causes of innovative, large-scale PPP project failure?

Project failure factors are the same factors that make a project succeed but are not managed appropriately and at the right time.

With regard to PPP projects for infrastructure projects that are characterised by a kind of innovation in providing exceptional services, there are a set of factors that accelerate the failure of these projects before they are even implemented. This is evident from the analysis of the data available by the researcher as explained below and summarised in Figure 6-1, which shows the causes of PPP innovative large-scale projects, followed by an explanation.

1. A communication channel strategy did not have a place within the plan from the initiation phase. In particular, HAT project teams did not interact with different users and both were in a different area from each other. Not to mention the weakness of the communication between the local departments internally.

2. The researcher also considered the consequences of culture on the failure; the second partner culture was to satisfy and impress the known stakeholders in the emirate, especially the royal family, without considering the other main stakeholder outside the circle of their interest. It is clear that the employees from both partners were aware of the project deliverability benefits; they promoted it without considering the need to spread it among all the stakeholders by the organisation's different communication channels.
3. The partners failed to combine the innovation process, the change management process, the PPP management process and stakeholder management in order to diffuse the innovative project inside and outside the emirate in a way that empowered the partners to get the approvals without the fear of uncertainty and competition. Moreover, the government did not spread the need for innovation or support it in different ways. The innovation cultures in the UAE needed to be taken into consideration.
4. Integration between the concerned parties from both sides was not at the level required to manage and implement the project to achieve its goals, as there is a vast difference in administrative skills for managing large projects, which require an administrative team working in all administrative aspects. This includes legal, financial and other resources, in addition to technical skills and expertise that relates to the scope of the project. This was one of the most important reasons for not obtaining the approvals. The recurring technical issues could have been resolved before they were submitted to the stakeholders in other accreditation bodies.
5. There was a failure to analyse the legal, political, and financial dimensions of the

project by the two parties. The focus on the project from the technical side overshadowed the other aspects that arose in communications with other parties. An example of this is the lack of clarity of external funding sources that required a security and political review.

6. There was a lack of strategic alignment with the emirate or the country during the feasibility study phase, as linking with the strategic goals at the local and federal levels contributes to the acceptance by others of a project. This had an impact on the achievement of their own goals, which made the rest of the stakeholders from neighbouring and federal governments less flexible in approving the project. There were other projects of the same size as this one, but they were approved due to their strategic interconnections, the clarity of their sources of income and the risks were fewer due to the fact that the owner of the project was the government and not a private company.

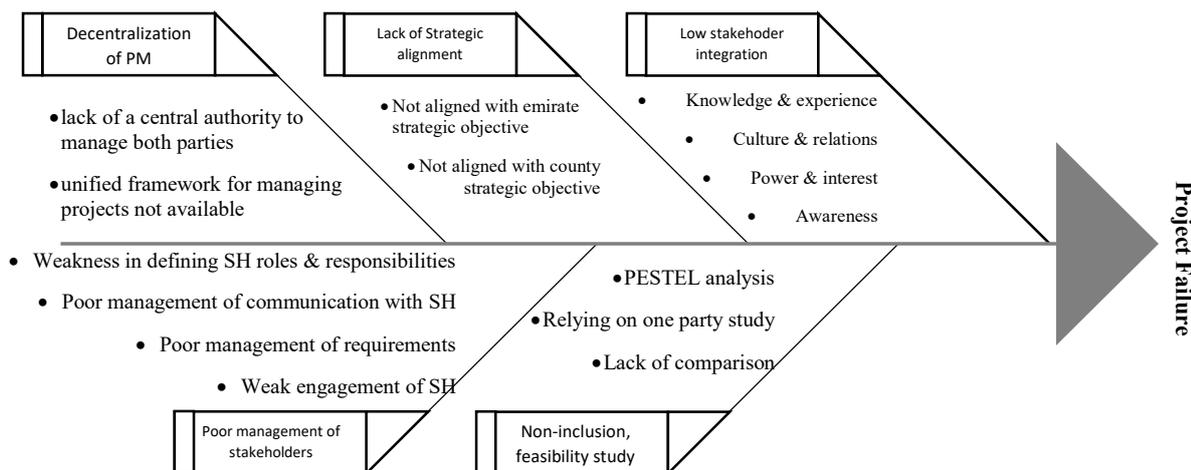


Figure 0-1: Leading causes of innovative, large-scale PPP project failure

RQ2: What are the difficulties explicitly related to local governments for delivering innovative, large-scale PPP projects in the northern emirates?

There are four main difficulties facing the northern emirates in such projects as outlined below, and they affected the project and the stakeholders from both parties in addition to the neighbouring governments and the federal government. Any partnership project between the public and private sectors involving infrastructure will require the government to provide the approvals when there are common border issues. Emirates that do not have master plans and do not share their concerns will face several difficulties in the adoption of projects that are not planned strategically or integrated with other strategic projects.

1. Lack of knowledge and experience

Local governments in the northern emirates have implemented a series different size projects through direct contracting services and other public facilities and infrastructure projects, but there are no large projects to establish integrated cities, airports and a train service. Also, partnership and innovation projects have been defined as large project according to its size and cost that provide exceptional services that cannot be provided by the government, which requires that these projects to be managed by specialists who have the scientific competence and practical experience in managing and following up on such projects, especially as they constitute a source of income for a period of 35 years and require a commitment from the government to the second party for the same period.

2. Different laws and requirements from neighboring and federal governments

To manage partnership contracts such as a BOT, laws must have be put in place to ensure the comprehensiveness of all other laws in the country and the emirate itself, whether they relate to issues or technical requirements or how to manage project resources and data.

The northern emirates do not have PPP laws. These need to be created according to various criteria such as the World Bank's stipulations and other laws. While PPP project legislation was enacted at the federal level in 2017 and at the local level in the emirate of Dubai in 2015, remainder of the northern emirates did not pass any kind of special laws for such projects and therefore each emirate has a different mechanism for such projects, which results in a kind of heterogeneity.

On the other hand, there are laws and technical requirements issued by the legislative authorities in the state for such services that change according to the requirements of achieving the strategy and based on the results, and these laws must be updated and applied in all projects, so local governments are obligated to consult partners periodically and follow up on any changes with the legislative authorities in the state.

3. Framework and methodologies to manage innovative large-scale projects

Although there are executive boards in the northern emirates, some do not have a programme or project management office (PMO) to manage strategic government programmes and projects. Therefore, there is no framework for a project management mechanism and stakeholder management and linking it with the strategic goals of an emirate.

PMOs have an effective role in project governance by monitoring performance and ensuring that a project is implemented in accordance with the set goals, as the authority is concerned with developing UAE strategies, linking them to initiatives and monitoring them periodically by using approved frameworks and processes.

The lack of a unified framework at the government level causes a kind of lack of clarity between the local parties involved in the project and the private company, in addition to weak

governance.

With regard to innovation, this part needs a working mechanism that ensures everyone's participation in the stages of innovation and its acceptance and dissemination among the stakeholders, because the innovation department needs to directly communicate with those concerned and manage the outputs associated with providing exceptional services that will have a positive impact on society. It is known that innovation in its early stages faces several difficulties, including acceptance of the idea. This underlines the importance of having a mechanism for managing innovation from the central authority in an emirate and providing the necessary support.

4. Lack of proper mechanism for strategic planning and monitoring

Some local governments did not define their vision and strategic plans based on their needs and resources in advance. When the government of UAE announced its strategic vision and plan, the remainder of the emirates encouraged the preparation of the plan, but some were not detailed and did not specify the mechanisms for implementation in addition to many of the plans and initiatives that could be shared between the neighbouring emirates. This was not studied in a joint application mechanism that guaranteed achieving the goals with fewer risks. In addition to the novelty of these plans compared to the history of similar projects, there was no encouragement to get financing and, thus, the authorities were forced to enter partnership contracts. In addition, there was no urban plan for the emirate and this is one of the most important plans, which shows the direction the emirate is taking and ensures the optimal use of resources.

When developing strategic plans or implementing them via any of the available methods, whether implementing them by the local or federal government or implementing the

provisions of the constitution regarding partnership between two emirates or partnership contracts with private entities, the responsible body must be identified in the follow-up, audit and evaluation during the period of project implementation of the project and after it. It was found that these projects were managed and followed up by many parties with the various roles in the follow-up differing from one side to another. This resulted in a lack of proper follow-up to projects and a lack of reporting which would have helped the government to take appropriate decisions in addition to a lack of detailed data that would help in decision-making.

RQ3: What is the role of the constitution and laws in large-scale PPP projects?

The constitution has a chapter related to joint projects between two or more governments in order to provide services, and this can be used for large projects that are being run jointly between two emirates provided that they are managed jointly. This is the best solution for projects that are in joint locations instead of partnering with foreign companies and not getting the appropriate approvals.

On the other hand, the laws that are issued regarding the management of such projects constitute a protective shield for governments, especially since companies that are from outside the country have different sources of funding and other technical and legal methods that may not be applied in the UAE.

So, the role of the law on managing partnership projects between the private and public sectors is to define responsibilities and requirements based on the laws of the neighbouring state and emirates and the define roles legally so that each of the parties can perform its duties as required and according to the requirements and nature of the state. As for the constitution, its role is to define the powers of each emirate in providing services to its

residents and the possibility of partnering with other local governments.

RQ4: What defines the level of SI?

Integration between stakeholders can be described as the extent to which the skills and experiences between the two parties coincide in several different aspects, such as experience, knowledge, administrative skills, legal expertise, economic experience and communication and culture skills, which must be identified for each stakeholder and compared to its counterpart from the other side to ensure harmony and interdependence between the parties and that all the resources are invested properly.

The integration of stakeholders also means that all parties are aware of all project data equally and complementarily to each other and that they follow the same processes and use the same tools for managing the project. The level of integration can be determined based on the nature of the project and its requirements, provided that the flow of data and tasks is clear and smooth between all parties without the presence of technical or practical complications or other elements on which integration can be assessed.

As mentioned in Chapter 3, stakeholder integration is an essential component for projects to succeed and is defined as a capacity to identify the needs and expectations of the stakeholders who are connected with the concept of teamwork, which involves an optimal work environment, team solidarity and cohesion so as to promote effective performance and good project outcomes.

From the results analysis and literature review, the research defines SI as:

‘...the integration of major variables between the two most important parties in the

project that shape the nature and behaviour of the other party in managing the relationship and its development between them to achieve the desired goal. Based on the degree of integration and convergence in these variables, the project is positively affected”

Therefore, managing integration between the two stakeholders is not a method of work or tools for identifying or engaging SH. It is the availability of variables that lie in the behaviours and skills of each partner, who are important in making important decisions in the project, which correspond to the other party to such an extent that there is an intellectual, professional and moral harmony between them. Figure 6-2 shows the important variables to be considered in defining the level of SI between the stakeholder to ensure the integration, harmony and interdependence

1. Knowledge: What is meant by knowledge here is knowledge of the technical and administrative side of the project, and that includes scientific expertise in the field of technical project specialisation and access to all standards and requirements related to technical items. The administrative aspect relates to concepts of project management, programs, portfolios and general and service management concepts in the field of projects. Large-scale projects that are innovative need a scientific background for understanding the contents of a project’s work mechanism and the surrounding environment and what the management methods for such projects are. This makes those concerned realise and understand all the requirements and their necessity.
2. Experiences: The technical and administrative experiences in the project are important. This is an application of the technical and administrative knowledge that was mentioned in the first point. The strength of the experience between the two

parties and their convergence facilitates the decision-making process, understanding the requirements and challenges and finding the appropriate solutions.

Technical expertise in how the project is implemented is important besides the administrative experience in project management and the stakeholders in all respects. This must be closely linked between the two parties to overcome risks and challenges in a joint manner.

3. **Skills:** These are the sum of knowledge and experience together. The skills are evaluated periodically and can be collected from the periodic evaluation of the members or through competent authorities. Such skills comprise active listening, communication, creativity, critical thinking, decision making, interpersonal communication, teamwork, and management and leadership. These skills are acquired over time and contribute to the implementation of business in an integrated manner.
4. **Legal awareness:** This relates to the concerned people being familiar with local and international laws to manage any type of project and what the law requires for implementing the project with the rest of the stakeholders in an integrated manner and in a way that guarantees the rights of all. In fact, it is an important matter in large-scale projects, innovative projects and PPP projects, where there are many parties from different backgrounds, either inside or outside the country, in addition to its many outputs that require technical, legal and operational management. These include the ownership and intellectual rights on the innovation side and legal clauses in the contract between the parties and the assets that will be managed, the financing and revenues. Also, in such projects, the number of companies are different and many, and the types of major contracts and subcontracts with them vary with their different

requirements and tasks. Here, it is important to know the laws related to projects and how to manage these contracts and what the laws that will be applied in the project are.

5. Unified process and procedures: It is essential that there are unified processes and procedures for project management and that these are identified by the stakeholders to ensure proper follow-up and information flow for all concerned, in addition to procedures for tackling escalation of problems and requests for change. These must be specific and updated according to the project's need, where everyone has awareness of these processes and models. It is necessary to agree on the processes and procedures used to ensure the desired results and reports from the project are obtained in a way that guarantees the taking of decisions and adopting the outputs uniformly. As previously explained, governments or international organisations have specific project management processes, which must be viewed by the SH and identified before planning can be applied within the project planning phase and in the implementation phase. Hence, it is worth noting that it is important for governments to have a clear working mechanism based on the quality and nature of projects and best practice.
6. Unified PM tools: Unified project management tools provide an important component for integrating stakeholders and obtaining all the data and requirements that clearly help them in carrying out their tasks. Such tools are means of communication, project data management and logistical resources. The stakeholders are supposed to be aware of the tools used in the management and implementation of the project and have access to and use them as well. The researcher recommends a unified electronic system for project management, where there are several programmes known to manage projects that can be specified in the contract for both parties. This ensures

data accuracy and ease of monitoring project works and archiving project data and documents electronically to access them at any time and place.

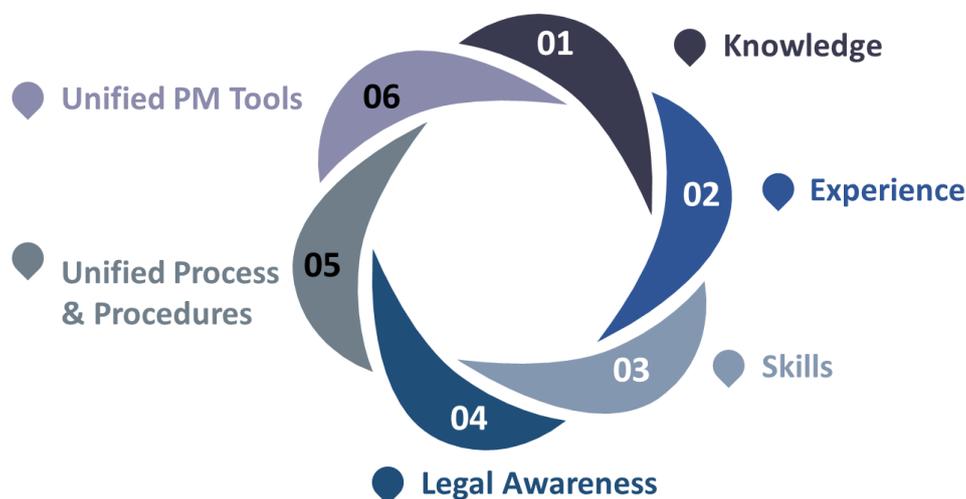


Figure 0-2: Stakeholder integration variables

Based on the above listed points, the researcher has proposed a framework, SI theory and suggested a number of recommendations, as explained in the following section.

6.3. Proposed framework

This section of the chapter provides the background and development of the proposed framework as one of the aims of the research is to develop a proposed framework for stakeholder integration within PPP innovative infrastructure projects in local governments that have their own laws in addition to the federal constitution, which also includes laws and legislation on projects.

The findings from objectives 3 are merged with objective 4, which is about the success criteria of these projects that are affected by the level of stakeholder integration and the sources of misalignment between the stakeholders.

6.3.1 The need for a framework

From researching and reviewing the literature, it is evident that there are some frameworks for managing PPP, in addition to the presence of many bodies that define partnership mechanisms and requirements, such as the World Bank. But for the researcher, there is a need for a framework for local governments to share with federal governments in terms of legislation and approvals. The lack of integration between stakeholders is a major risk that threatens the success of projects in all their stages. The proposed framework focuses on ensuring a level of integration and interconnection between stakeholders by linking them with the rest of the factors affecting the success of these projects, especially those that are innovative and have a different and difficult nature that require several necessary factors to be available.

The development of the framework is based on relevant features related to stakeholder management in large-scale projects, innovation and PPP projects. These features were derived from the literature review in chapters 2 and 3 and the findings of the qualitative analysis presented in the previous chapter (Chapter 5).

In general, the findings show that there are several unique features of stakeholder management in PPP projects, such as communication, engagement, culture and the roles of stakeholders. There are several tools for managing and analysing stakeholders in terms of power and interest.

However, no mechanism has been identified to measure the extent of integration of stakeholders and its impact on projects, as integration between them is required at all stages of a project. This will be clarified later in explaining the framework according to its various stages.

This study adopts the process framework. This type of framework seeks to answer the ‘how?’ (Vaughan, 2008). The proposed framework will aid in understanding and outlining how stakeholders are integrated from a project’s initiation to project planning, and how the process flows from partner 1 to partner 2 by taking into account the mentioned above SI variables.

6.3.2 Aim and objectives of the framework

The aim of the framework is to help local governments and private sector industry practitioners to build and maintain stakeholder integration in innovative PPP projects by considering whether essential requirements are present in the project’s stages or whether they are dealt with according to specific strategies. These issues affect the success of the project outputs and its long-term impact on both parties and the end user.

Consequently, the following are the specific objectives of the framework:

1. To ensure that all important CSFs of the PPP, innovation and stakeholders are considered in stakeholder integration.
2. To develop a framework for stakeholder integration in PPP projects by taking into consideration the existence of several laws in the country concerned and different strategic views by showing the approvals process.

6.3.3 Proposed framework

The framework focuses on how the steps and approvals are sequenced from the government (the first partner) to the private entity (the second partner), particularly where these steps are important in the early stages of the project due to the nature of the partnership projects between the public and private sectors. Furthermore, the researcher also took into account

other factors, such as land area and shared geographical boundaries with several other local governments, including roads, bridges, air and maritime space, communications and other infrastructural services.

Figure 6.3 consists of a simplified set of the processes that the framework incorporates, involving a set of forms and documents that must be developed and used to manage the planning stage, in particular, for such projects. The framework focuses on the project development and project execution phases on the horizontal axis and moves from left to right. On the vertical axis, it is divided according to the sequence of stakeholders, starting with the first partner, who represents the government itself, and not the executive council or any similar central government agency, and other main stakeholders.

The proposed framework comprises five parts, as shown in Figure 6-3: The parts are: start & end (stadium); process (rectangle); sub-process (rectangle with two lines); decision (diamond); documents (semi-rectangle), and data (parallelogram).



Figure 0-3: Framework legends

The researcher identified the stakeholders in the proposed framework as is shown in Table 6-2, as each of them has a set of processes and decisions. The framework defines the stakeholders based on what was concluded from the study and the analysis of the results, as the researcher believes that these stakeholders are the ones who create the integration of stakeholders in such a project because of their significant role and the impact of their roles on the project.

Table 0-2 Stakeholders' roles and responsibilities

Stakeholder's Name	Definition
First Partner	The first party to the partnership contract, the owner of the land and the assets on it, and he represents the local government itself in the constitution
First Partner Legal Advisor	Legal advisor to the first party in the affairs of the emirate and responsible for reviewing and issuing legislations and submitting legal notes and recommendations and gives advice according to the legal aspect in a manner that guarantees the preservation of the rights of the emirate and its residents
Executive Council PMO	Perform a leading role in the emirate in the field of developing general policies and strategic plans, aiming at upgrading all governmental services within the local Emirate to the highest degrees of quality, excellence and ensuring the implementation of the emirate's vision and its strategic plans that are aimed at achieving comprehensive and sustainable development in all economic, social, educational, health, environmental and cultural fields
Supreme committee (specialists, expertise)	The committee that will be formed at the government level to represent it in its economic, cultural, financial, political, and technical aspects to ensure that all requirements are met by the second partner and the local concerned authority; the committee roles will be continuous until the project is delivered and start the operational period for a specific short period, as the relevant committee will be responsible for approving all changes and studying their impact on different areas. To ensure that a neutral opinion is given, committee members are experts from the emirate itself or outside it.
Local concerned authority	The competent technical authority in the government of the first party and a project team is formed of the company's employees with the authority to contract with an external technical expert to follow up the project with the second party as an integrated team, where the team

	must implement project management according to the requirements of the government and participate in planning and implementation.
Second Partner (private)	The second party in the contract, which is responsible for providing financing for the project, its implementation and operation for a specified and approved period between the two parties, and has to manage the project in cooperation with the government and implement its local and federal laws.

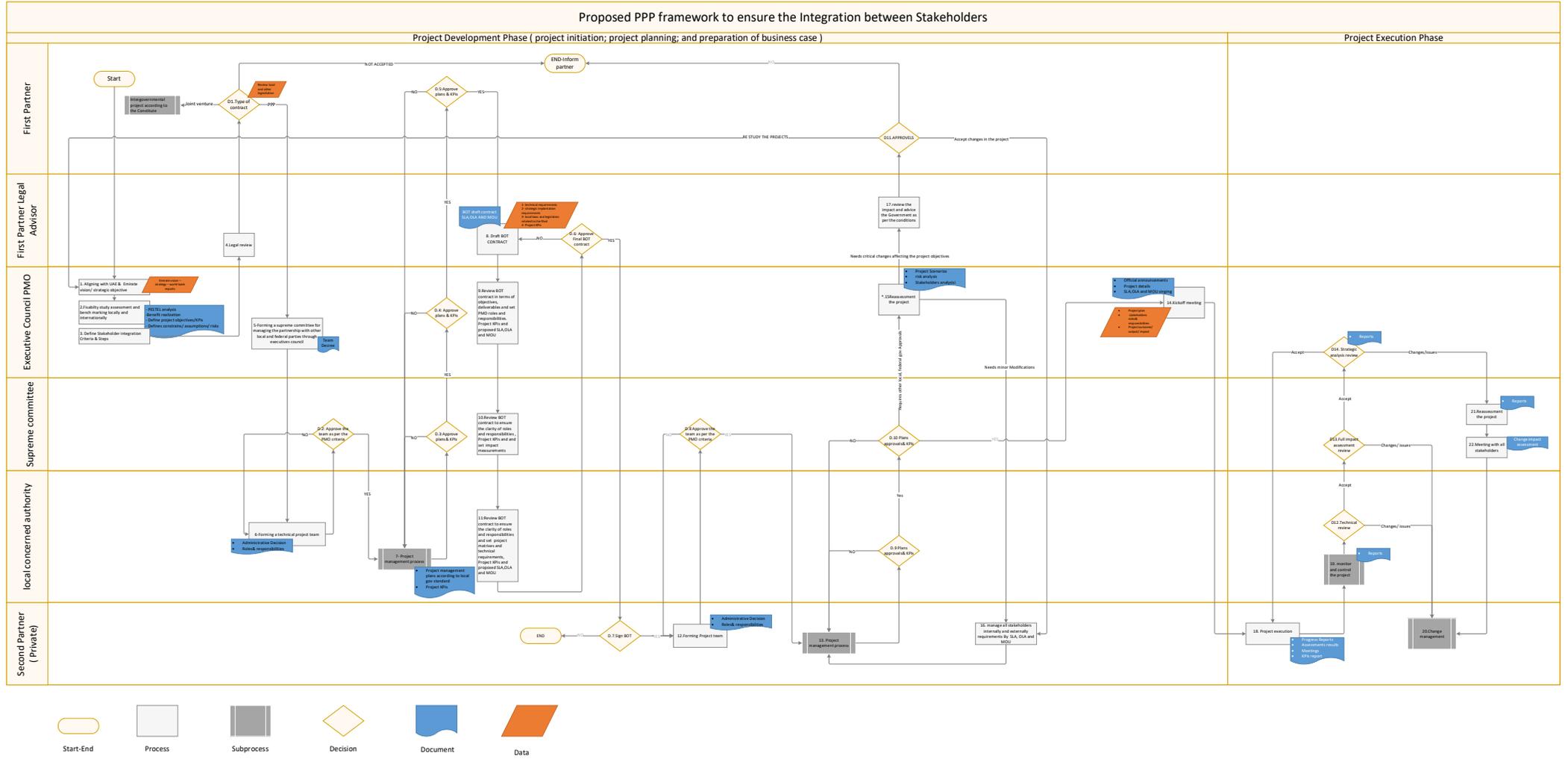


Figure 0-4: Proposed PPP framework to ensure the integration of stakeholders

The following section discusses the two components of the framework across the two projects phases.

1. Project development phase

This stage is considered one of the main stages that contribute to defining the partnership relationship between the two parties and determining what the project is and is not, its outcome and impact and how a project can be managed by several representatives of the public and private sector. The stage often begins with a proposal by a private or government company regarding infrastructure development projects through PPP. This stage is where important decisions are taken between two parties and the output of this partnership can affect a large number of residents in the emirate in addition to neighbouring emirates. For this stage, it is very important to identify the stakeholders and choose them accurately to ensure the integration of the project and achieving its goals without obstacles due to poor planning or by not specifying the requirements correctly. This phase consists of 15 processes and 3 sub-processes, with 11 decision gates for different stakeholders.

The framework is implemented when the government sees an opportunity to develop infrastructure in partnership with private entities after submitting a preliminary proposal or a request from the private entity to the government or through the government's desire for a project similar to one run by private companies. Hence, the government instructs the Executive Council to study the proposal or request:

*** Step no. 1:** Studying the extent of the project's conformity with the emirate's strategic vision and its strategic goals, and the extent of the project's conformity with the country's strategic vision and its strategic goals in general. It will also benefit from a report from the

World Bank, as the country depends on its recommendations and directions.

As linking partnership projects with the government's strategic goals increases the opportunity for the success of a project and harnessing all resources and tools to achieve the goals and implement the project in an integrated manner, this will ensure the integration of those concerned with a common strategic goal for all.

*** Step no. 2:** Instruct the PMO to prepare a feasibility study different from what the private sector provided for the project and to analyse the project using various methods of analysis to anticipate and study the environment surrounding the project while studying the benefits and obstacles expected in the implementation of the project by preparing comparisons of similar projects at the local and international levels.

*** Step no. 3:** Determine the requirements for the integration of the expected stakeholders of the project and the necessary steps to ensure integration and participation.

Integration among stakeholders includes the agreement of the stakeholders from the main parties in terms of their knowledge and practical experiences, culture, power, interests, project management skills, communication and tools used to carry out operations.

*** Step no. 4:** Reports and recommendations are sent from the PMO of the Executive Council after relying on a set of analytical tools to the emirate's legal advisor to study the report and submit recommendations in a way that ensures the project is in compliance with the laws in the emirate and the country and informs the extent to which the project can be implemented in other ways such as applying Article No. (118) of the country's constitution regarding establishing a political or administrative unit, or unifying all or part of their public utilities or a single administration or joint administration to run any such utility after obtaining the

approval of the Supreme Council, which guarantees the sharing of opportunities and interests for both.

*** Decision no. 1:** The first decision in the framework is taken by the royal government after it reviews the recommendations of the Executive Council and the legal advisor to choose the legal form of the project according to the analysis of the two parties. In the event that it is agreed that the project will be implemented by the company with the private sector another process in the framework will be implemented according to the specific sequence. In the event that the government chooses to participate with other governments, it will be a different process than the one proposed by the researcher, which is concerned with laws and public policy in the emirate and the country. As for the third option, which is a refusal and a lack of approval to implement the project, this will be the result of not obtaining approval from the government on the results of the partnership with either party in the short and long term and choosing not to enter into a contract because the project is not feasible for the emirate and the country from comparing the benefits with the risks or the negative consequences of the project, whether it be economic, political or community.

***Step no. 5:** When the government approves the proceeding of the project and adopts the legal form of the contract, the Executive Council is directed to begin the formation of a higher committee for the project to manage the partnership between the two parties and the rest of the stakeholders from the federal or local governments. The role of the committee is based on several main aspects that may change according to the nature of the project, except for some aspects which are fixed. Members of the committee can be from outside the emirate and have experience in similar projects as their role is to follow up on the project and take decisions based on the impact on the emirate in addition to the approval of the stakeholders from the work teams of the local authority concerned and the private company according to

the project requirements based on their experience.

The role of the committee is important in determining and selecting the rest of the stakeholders and their integration among them, in addition to their role in studying the impact of the project periodically, especially when there are requests for changes or problems in the project that may affect the emirate and the progress of the project. Figure 6-5 illustrates the process starting from step 1 to step 5.

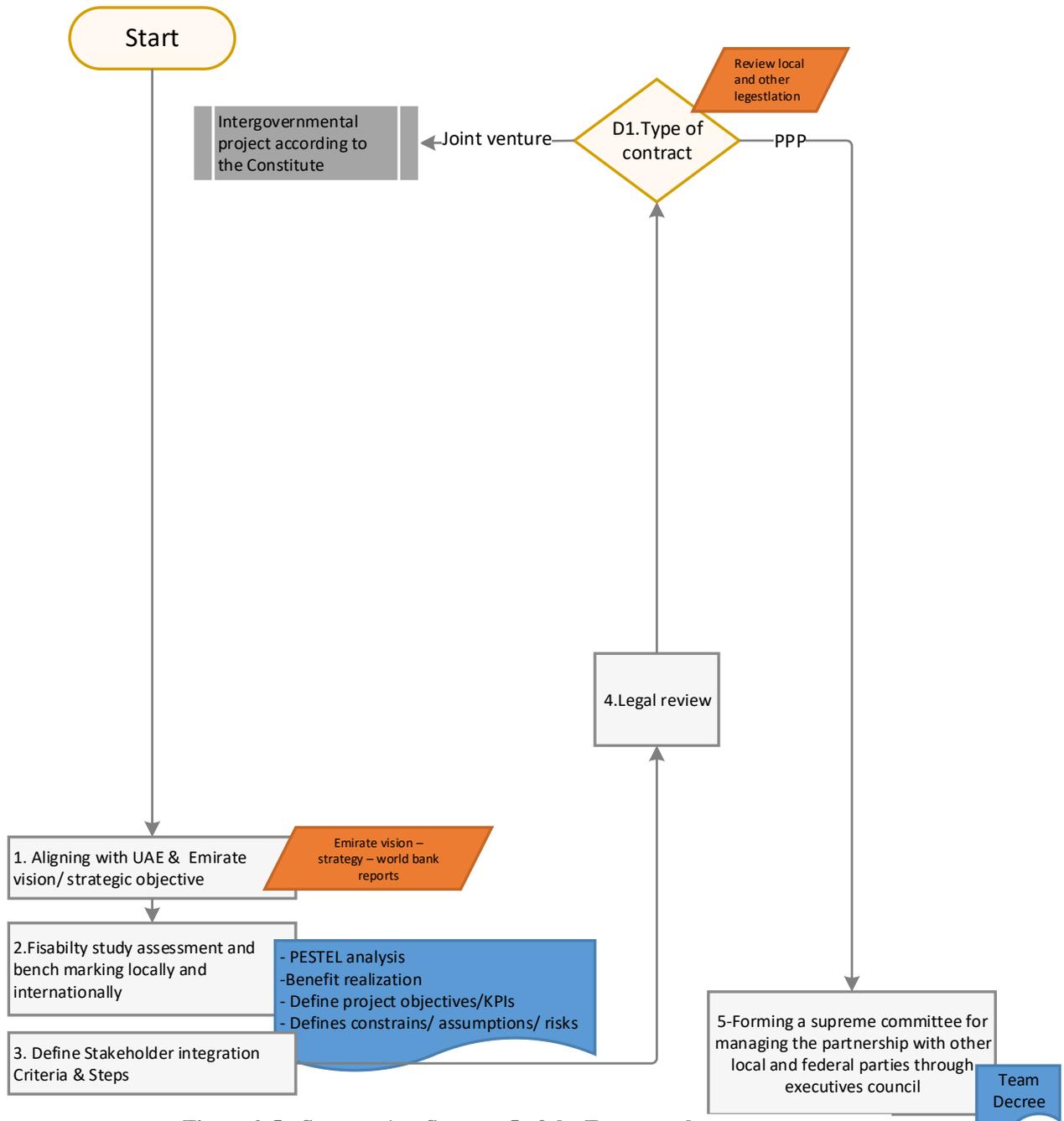


Figure 0-5: Step no. 1 to Step no. 5 of the Framework

Step no. 6: The project team is formed by the concerned local authority dealing with the project, specifying their roles and responsibilities in the project. An integrated working group from the government agency follows up on the technical matters of the project with those involved in the emirate and ensures an exchange of experiences and knowledge that will contribute to the development of the project.

In addition, the work team has to follow the project management procedure approved by the Executive Council, which is also applied by the private company. Therefore, the technical teams are identical in the methods and tools used in project management and the approval of these plans together.

The technical team from the concerned local authority is concerned with providing reports and notes periodically for the Supreme Committee.

*** Decision no. 2:** The committee will accredits the team from the concerned local government dealing with the project, reviewing the experience of the team and what the requirements for team development are, in addition to alignment with the technical skills required of the project and the PMO project team criteria. This matches the requirements of Project Management ISO 21500 and PMI in terms of knowledge and practical competence, project management qualification and communication skills.

Step 7: The technical team starts implementing the project management process, which must be accredited and unified at the government level and is based on international standards and specifications such as PMI. The project management process is made up of several sub-processes related to integration management, scope management, time management, cost management, quality management, resource management, communication management, risk

management, procurements management and stakeholder management. With these plans being prepared and approved by the stakeholders in the government, the compatibility process between the two parties will be greater as the project will be managed jointly and according to realistic plans that include vision and expertise from the government and the private sector. This will facilitate the risk management process. Hence, the plans that will be prepared by the local government will be to manage the project according to their roles in monitoring, controlling and project governance, and managing the technical and administrative requirements of the project from the private company and other relevant parties, in addition to managing internal communication with the various teams and, most importantly, the risk management of the project. moreover, the team will set KPIs for project objectives.

*** Decisions 3, 4 and 5:** The plans will be approved in three phases, starting with the approval of the Supreme Committee to ensure the comprehensiveness of the plans for the committee's axes and that all the risks, processes and tools needed for the project are identified. Then the second approval will follow from the Project Management Office in the Executive Council, which is concerned with aligning project management operations with the office's operations in project management and approving their plans. Finally, the first partner depends on all the plans submitted by the local government to manage the project and its resources, determine its risks and set up precautionary plans to provide the required support to them and give them the required powers to communicate with other local and federal technical authorities

*** Steps 8, 9, 10 and 11:**

After the plans for project management and the KPIs are approved by the local government, a draft partnership contract is prepared between the two parties, taking into account all the

plans submitted by the government agency and the approval of a draft stage comprising three additions, including step 9, the requirements for achieving strategic indicators in the contract and each of their functions at the emirate level and then step 10, where the committee sets other standards, conditions and KPIs according to its competence and defined critical aspect and measurements of the project. Finally, in step 11, the concerned local authority sets and defines its role and requirements in the contract and sends it to the consultant for approval.

*** Decision no. 6:** After fitting all the main stakeholders to their requirements within the contract, the draft contract is reviewed by the legal advisor to ensure the legality of the additions and requirements and the availability of all administrative, technical and legal contract extensions, and then sends them to the second partner for review and approval.

*** Decision no. 7:**the second partner will review the draft copy of the BOT, that includes all the strategic, technical and other factors requirements and KPIs and any related agreements , if the second partner approved then it will proceed to the next step, otherwise it will be cancels if they rejected

***Step no.12 :**After approval and the signing of the contract by the second partner, the company's work team is formed and a draft decision, roles and responsibilities are sent to the project's higher committee for review and alignment with the project's standards and requirements and the executive board to ensure that the work team is integrated with the technical and administrative team of the project.

*** Decision no.8:** The committee will review the skills and expertise of the work team for the second party according to the project requirements, in addition to the alignment with the technical skills requires of the project and the PMO project team criteria which matches the requirements of Project Management ISO 21500 and PMI in terms of knowledge and

practical competence, project management qualification and communication skills and the complexity of managing such projects. Below figure 6-6 presents step No 6 to 12

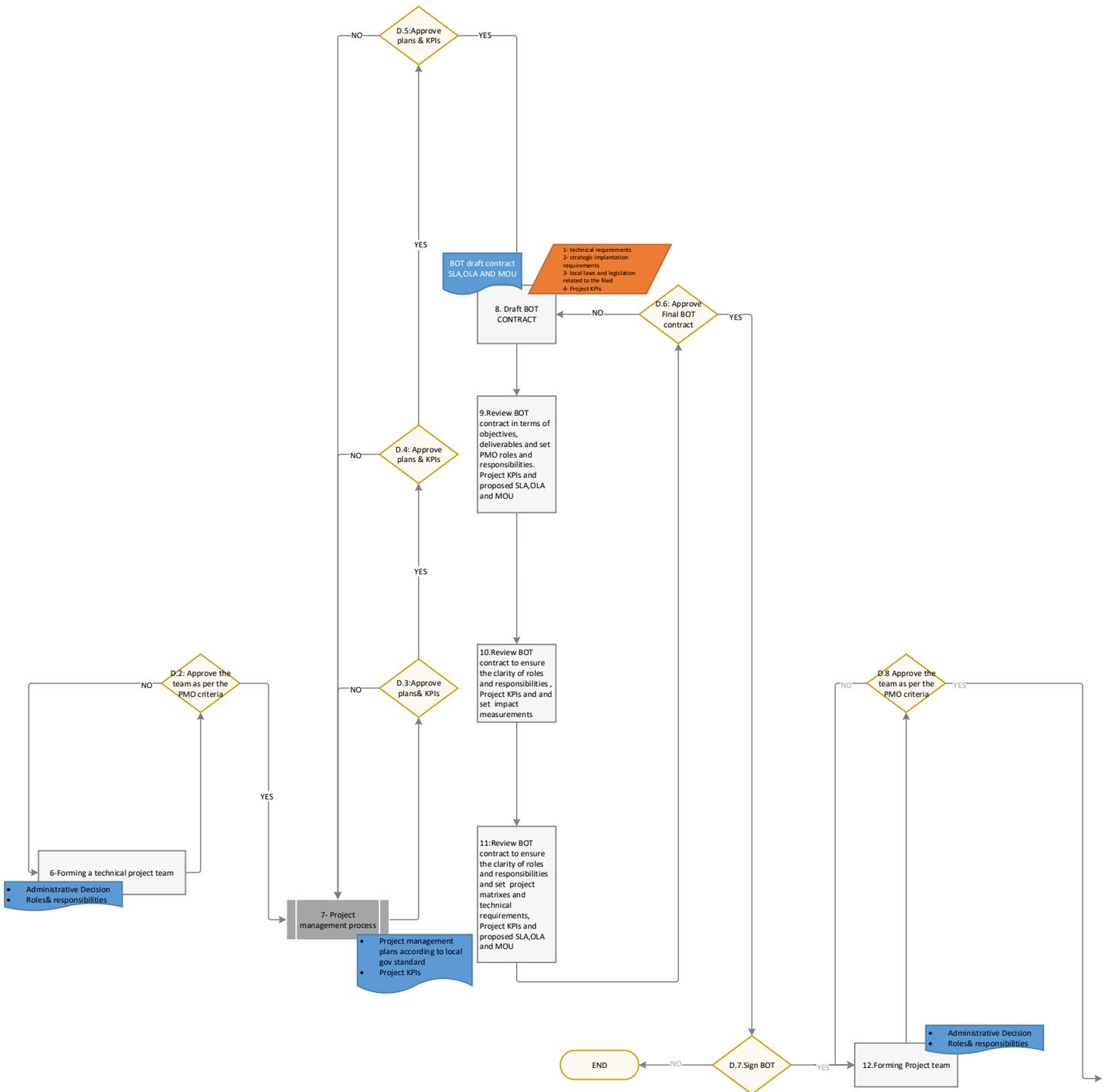


Figure 0-6: Step no. 6 to Step no. 12 of the Framework

*** Step no. 13:** This step is the most important in this stage, where the second partner begins preparing project plans in line with the requirements of the concerned local authority, the Supreme Committee and the Project Management Office in the Executive Council, taking into account all legal considerations.

The plans must be detailed and ensure that all requirements are identified by the stakeholders and that the risks and obstacles in the project are identified, with an analysis of the surrounding environment for the project in accordance with the roles approved and defined by the government and the committee.

***Decisions no. 9 and 10:** The approval of the project plans is subject to several approvals, starting with approval no. 9, which comes from the technical team. Its role is to review the plans from the technical and operational side of the project and identify the stakeholders from the technical and administrative authorities and approve the plans, with a focus on quality standards, communication, risk and stakeholder management and project performance indicators. In the event that there are notes, the partner is required to re-plan until the approval of the technical team is given.

When the technical team approves the project plan, a copy of the plans is sent to the Supreme Committee to approve all plans according to their experience and taking into account preparing plans for the impact of the project from economic, political, cultural and environmental aspects and any other aspect the government deems important, in addition to the technical side of the plans while conforming to global and local standards for similar projects.

In case the plans are rejected, the comments and recommendations are submitted to the second partner to amend the plans, bearing in mind that the refusal is in accordance with the

scope of the project in the emirate and that there are no repercussions for obtaining approvals from the neighbouring or federal local authorities. But if it requires other local or federal government Approvals for a critical issue, then it will be send to PMO for step no. 15.

When accepting and approving the plans, a meeting with the concerned parties is initiated with the Executive Council, according to step no. 14.

*** Step no. 15:** This stage and its decisions are considered one of the most critical stages in the project planning stage. As previously explained, the project plans that are prepared by the second partner are subject to several approvals, the first two approvals being given by the technical team and the Supreme Committee in the absence of any external barriers to the implementation of the plan by any external party such as neighboring or federal local governments. In the event that there are requirements for the approval of these parties.

*** Step no. 16** is applied by reviewing the required approvals and re-studying the project and the extent of the impact of these approvals and the possibility of obtaining them by the PMO in the Executive Council with the involvement of stakeholders from other teams and based on the analysis from PMO. For them, there will be two tracks: the amendment to the comments and minor changes in accordance with those requirements of the external governments by following step no. 16, by which the second partner amends the plans in accordance with the authorities' requirements. This will not affect the outputs or the scope of the project. The plans are then re-submitted in accordance with step no. 13.

*** Step No. (17):** This step begins after passing step 15. The presence of critical issues and changes that affect the objectives, outputs and scope of the approved feasibility study by the government means the project will be re-assessed from the legal side to study solutions and options, taking into account the comments and feedback received from PMO, the Supreme

Committee and the technical team. The consultant's role will be to study the extent of the possibility of implementing the contract in the presence of these changes and risks and to submit the recommendation to the government (the first partner in the contract) to take the appropriate decision, according to what they see is in the interests of the emirate and the country without prejudice to the rights of others.

Decision no. 11: At this stage of the approvals, the government will rely on recommendations and reports from the legal advisor and strategic and technical from the teams formed by the government, and take the appropriate decision, as this stage means that the project will require a fundamental change in one of its aspects, which may be contrary to its overall direction. The presence of risks and issues will cause other problems in the emirate and with neighbouring and federal local governments, or even externally, as the project is run by foreign companies. The government has three options at this stage: The first is to accept the changes and complete the project by implementing step 16. The second option is to request the Executive Council to re-examine the project and analyse the changes required in detail. The third and last option involves cancelling the project in case the government does not want to implement the project because of its impact on the outputs, contrary to what was previously approved.

***Step no. 14:** This is the last step in this stage. It is concerned with whether the project plan has been approved from the technical, strategic and legal sides, where the project kickoff meeting will be held to ensure that all stakeholders are aware of the project details and the roles and responsibilities assigned to them with the project goals. This will ensure the compatibility of all teams among them and a common understanding of the nature of the project and the risks and requirements related to it. It is necessary to attend project teams from the stakeholders of the first and second partner and other service agencies and remote

staff outside the county. The kickoff meeting agenda should include the following: project objectives and mission; project scope deliverables; stakeholder roles and responsibilities; communication plans and collaboration between different teams. The following figure 6-7 shows the last steps of the proposed framework.

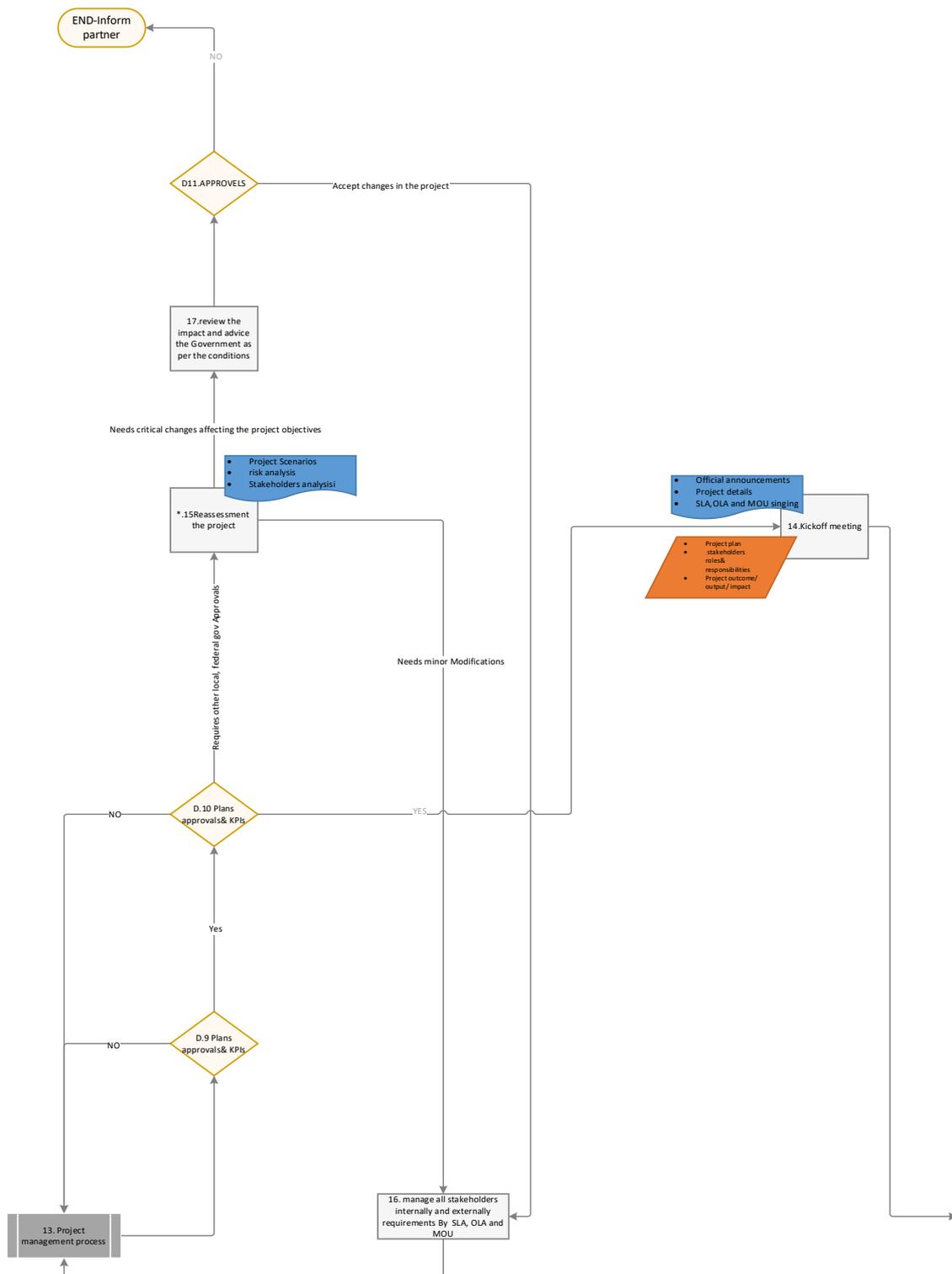


Figure 0-7: Step no.13 to Step no. 17 of the Framework

2. Project execution phase

The implementation phase of the project begins after the approval of the plans and the launch of the project by all concerned according to the terms of the contract between the two parties. This is the stage of implementing plans and handing over the final outputs.

The researcher focused on only one part, which is the requests for changes in the project considering that the integration of the stakeholders in this part was a matter of concern.

Therefore, she suggested some steps and decisions that should be followed to ensure the integration of the stakeholders in the project. This stage begins with step 18, in which the second partner executes the project and issues and circulates periodic and progress reports and also includes an update of the risk plan for the project work team, which, in turn, executes step 19 by reviewing the project and its results and following up on the implementation of plans in case there are any notes or requirements for change. Step no. 20 managing the changes by the second partner, which includes the existence of an escalation mechanism and credits.

When the technical team approves the progress reports through follow-up and control, a report is submitted by them to the Supreme Committee for accreditation and to those who analyse the results and reports. The Higher Committee to the Project Management Office in the Executive Council assesses the results achieved for the strategic goals of the emirate and the progress of the project in relation to the strategic plan, and whether the results are different and need to be changed. Step 21 is initiated by the Supreme Committee to reassess the project and assess the impact of the required changes in accordance with the requirements and directions of the Executive Board regarding the strategic plan and the achievement of its goals and the remainder of the teams' observations, if there are any. After assessing the situation and requesting the change, all concerned meet with the Supreme Committee to

discuss and measure the impact of implementing the change with the technical team and the second partner, which is step 22 in the framework. Then the change management procedures can be implemented. What is important at this stage is for the reports and postulates to be reviewed by the technical team, the higher committee and the project management office to ensure that the project goals are achieved in line with the emirate’s strategic, technical, economic and other directions, according to the nature of the project. This sequence in the approval of reports ensures that the data is available to everyone and can decisions and project governance can be carried out as appropriate as shown in Figure 6-8.

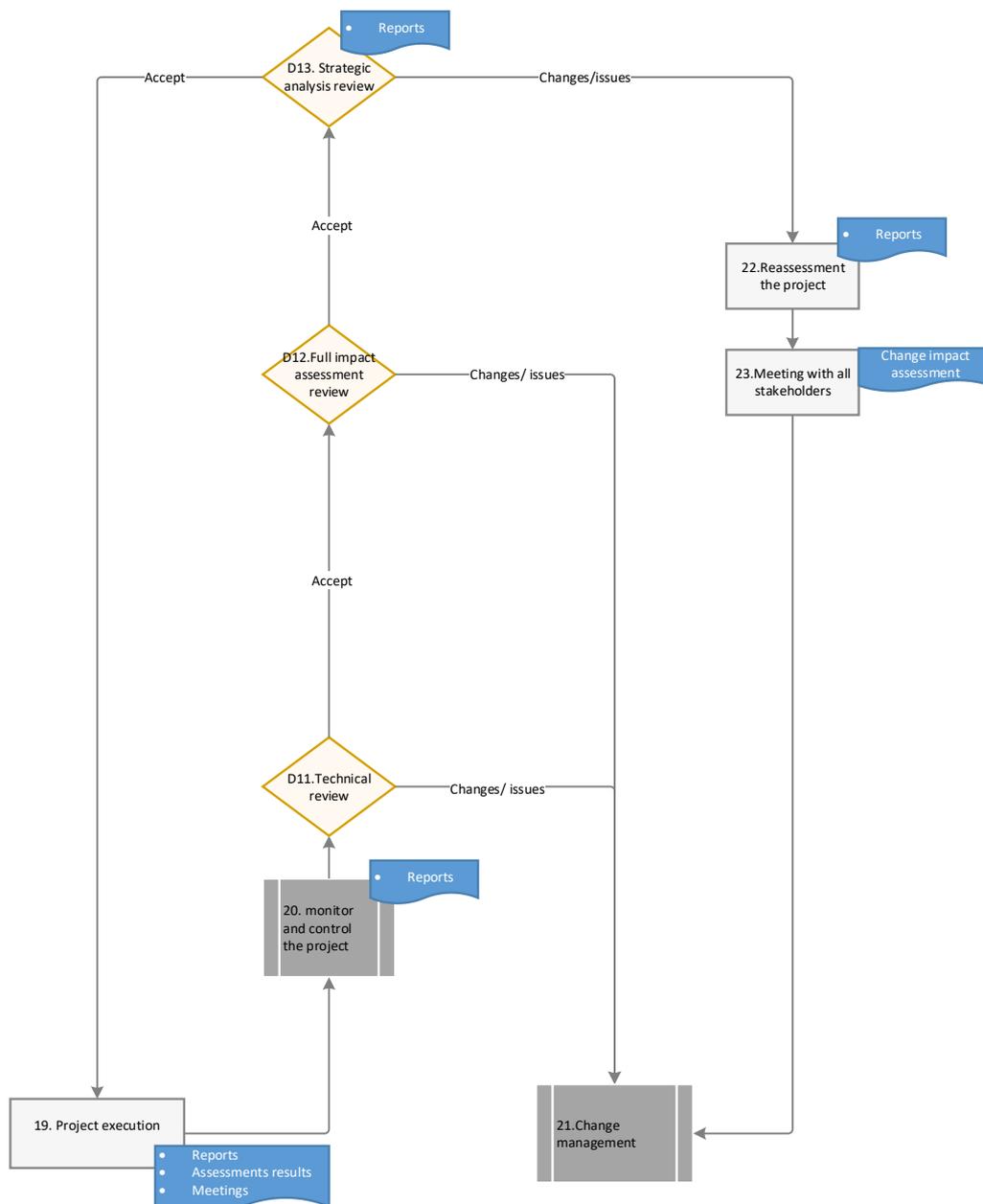


Figure 0-8: Step no.18 to no. 23 of the Framework

6.3.4 Validation of the framework

The framework was developed based on literature and the case study of PPP innovative infrastructure projects in Northern emirate , hence, the framework is premised on the features of transportation projects, solicited type of BOT contracts according to northern emirates and country regulations and requirements. It is therefore essential to consider these features when applying the framework in other contexts.

The aim of validation of the framework was to assess the suitability of the framework from industry professionals' perspective and for external validity, the validation of the proposed framework was to ensure that the research actually identified stakeholder integration issues in PPP projects and to assess the suitability of the framework in addressing these issues from industry professionals' perspective. Also, the validation of the framework was to extend the confidence within the framework, its reliability and evaluate how truthful the results are (Golafshani, 2003; Kennedy *et al.*, 2005).

To achieve the objectives of the validation of the framework, an interview method was adopted with five participants and it were conducted separately. During the interview, the researcher presented and explained the aim of the research; proposed framework; the different stakeholders' categories; and the aim of the validation. After the presentation, the participants asked questions and made useful recommendations for the framework.

Overall, five participated in the validation of the proposed framework: one from Executive council concerned with all matters of the Council, and two from different local governments CEL, Director from federal government, Legal Consultant from private sector in the same filed of the research and PPP Senior Advisor with different experience in public and private sector. These participants were not involved in the case study interview except the CEO, who

was involved in the HAT project in the earlier stages only. These participants were selected based on their knowledge and practical experience in large – scale innovate projects and stakeholder related issues in intergovernmental projects and PPP projects.

During the interview, participants assessed the framework and made recommendations to improve the framework, as they assessed the framework in terms of its completeness, relevance and strength and weaknesses. There was no major disagreement on the framework. The main areas discussed and recommended were practicality of the framework; stakeholder criteria; federal government presentative and the duration of the supreme committee.

the participants gave positive assessment of the framework as follow:

1. The main recommendation and comment of Executive council senior manager stated:

“I went through the framework it is straight forward and clear to me as someone from the field. As it’s related to the government it may require a level of flexibility and dynamism to adapt to any situation and gov decisions Like crashing some steps or running them in parallel”

From past experiences most projects got delayed or failed because if the lack of coordination between local and federal. I do not see anything regarding that synergy or cooperation, Other than this I didn’t see any major thing to mention.

The research explained the level of the decision and its focusing only on the development phase, and the researcher’s results were discussed with the participant and the agreement that, in fact, there was no integration between the stakeholders and each has its goals and requirements and a level of different experiences among them. The researcher refines the framework by clarifying the steps where the changes made after assessing the federal and local requirements (step 16).

2. Similarly, a CEO of local authority compared the proposed framework with the process followed in new PPP project in the same emirate by the government:

"It seems that the search took a lot of time with you to get all this information accurately and link the events as some things did not occur to me, the reflection of this information and the link in the framework is clear and justified"

This framework is useful. Currently, we are facing a problem with the stakeholders in a PPP project and the reasons seem to be repeated. Indeed, these projects need experts within a committee that is formed and exercises its tasks throughout the project period and not for a short time, perhaps if it is confirmed within the framework that the committee will be continuing in Project Evaluation would be better

The participant found that the framework is acceptable and easy to follow for now and implemented in the new project if possible, and no modification to it is required

3. The federal authority director took the framework to review it as shown in Figure 6-9 and later we had an meeting to discuss each steps and explains the documents types as well, her question was:

"How you can ensure the that all of the authorized representative either from the local government itself or from others will be commitment to provide all these requirements on time with high quality?" I recommend you require ;A service-level agreement (SLA)that it's about a commitment between a service provider and a client; operational-level agreement (OLA) that is the interdependent relationships in support of a service-level agreement and A memorandum of understanding (MoU) is a type of agreement between two (bilateral) or more (multilateral) parties"

This recommendation was similar to one of the interviewees from local government regarding the solution and recommendation for HAT project, which means that there are a common understanding on the level of commitment in these project between different parties

that requires other official agreements to ensure they are willing to execute their tasks.

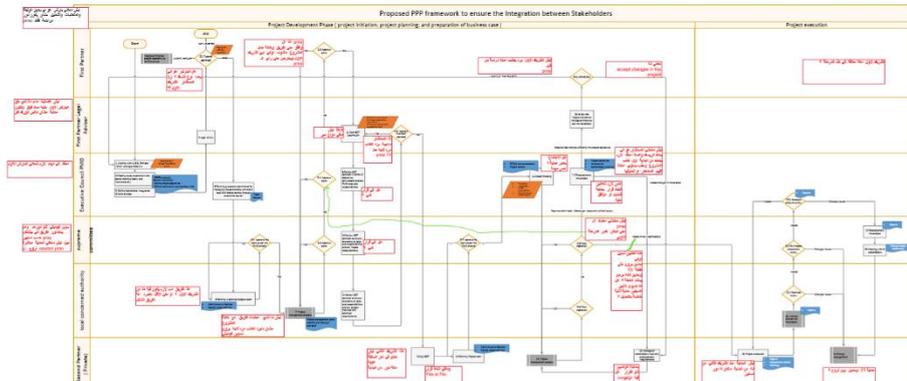


Figure 0-9: Participant comments on the proposed Framework

4. The fourth expert is as a senior advisor in the field of partnership with experience in federal, local and private sectors. He reviewed the framework and to understand the framework, he requested a clarification on the nature of the project and the scope of the use of this framework. Accordingly, the expert made some recommendations to amend the framework by adding measurements for different items:

“Measurements, project planning are essential for governments to monitor BOT”

“two things are required for operator: funding (lots) and Knowhow”

The expert’s recommendations were adopted and amended on the framework, and it is noted that these recommendations were in line with the problems that faced the project in the planning stage, which is the lack of knowledge, funding issued and linking with KPIs or as the researcher indicated the strategic direction of the project was not present or any indicators are set to achieve these strategic goals of or even the operational.

5. The framework was presented to the an legal consultant of private company working on major development projects in the country, where it expressed interest in research and its

importance in promoting the culture of these projects in the country in general and in the northern Emirates in particular, which will help them in developing the infrastructure faster and inexpensively. The expert emphasized that the framework is clear and can be adhered to by everyone, and that it is necessary to present it to the second partner during the contract in order to realize the importance of compatibility and complementarity between all SH. He also pointed out that such an administrative hierarchy gives the project its strength and makes all parties reassured to work with the government or with the second party from the private sector, especially since all roles are clear and linked to targets that the government periodically checks on by a neutral party.

There was a request from the participant to define a special law for partnership projects that is clear and circulated through the official channels of the government, which is one of the research recommendations that will be mentioned in the next chapter, which will lay down a clear legal framework for everyone before the proposal is even submitted.

The most common recommendation from the participants to refine the proposed framework was including clear steps for federal and other local governments cooperation with the local governments, in addition to define the type of the studies required from each stakeholder and adding different type of agreements between stakeholders and KPIs. Regarding the legal recommendation, the researcher cannot provide an ideal legal process, otherwise the researcher set the recommendation for government policy makers to develop it according to the best practices in chapter seven.

Due to the feedback and recommendations stated earlier, the proposed framework was revised four times. All the Recommendations have been added to the data that are considered inputs or outputs for each step of the process, in addition to focusing on identifying critical

problems related to the requirements of other parties., the revised framework is presented in Figure 6-4.

6.4. Contribution to knowledge and implications

This research has contributed to the existing body of knowledge in the following areas' projects, stakeholder management and innovation. This study has numerous important implications for the PPP literature. also the study contribute to the knowledge by a comprehensive literature review to identify the success factors for the three areas and the challenges associated with them, This study expanded existing knowledge by introducing combined factors and challenges for managing innovative infrastructure PPP projects.

Moreover, this study investigates a holistic view of the influence of SI on the delivery of Successful PPP project in infrastructure sector that deliver innovation in the countries that are new in this type of projects. Additionally, most previous studies explored the topic related to specific domains in countries with existing laws of managing PPP project or project in general. Nevertheless, there was no research that was conducted specifically on project that will be influenced by different laws like the federal laws and local laws at the same time and the absence of project management process and procedure. In addition, The research addressed the issue of legislation impact on projects, lack of strategic alignment, not having KPI and using different agreements between the stakeholder Hence, this research revealed that these projects must be linked to strategic objectives and their achievement will be measured by the stakeholders to ensure the integration of results and obtain the buy in of all concerned.

The results of this study confirm that stakeholder influence the delivery of successful PPP projects. Given that there is a lack of studies that have examined of the impact of SH on PPP innovative project or defined SI. In addition to that, the research contributed to enriching

knowledge in managing innovation for PPP projects, as these projects require the participation of stakeholders mainly in all stages of innovation, which will be associated with the stages of the project, as the presence of acceptance of those involved in innovation and its results contributes to the success of projects and vice versa. Finally, the study added to the existing literature of the areas by developing a framework to ensure the SI in PPP projects by considering SI components that was introduced by the study, also the study added to the existing literature SI definition. The SI components can be considered in every project either PPP or not in different sectors, which will help the managers to manage the integration level of the stakeholder while analysing them and assigning roles and responsibilities in different project phases.

Moreover, this study adds to the perspective of stakeholder integration as part of stakeholder management in PPP projects. This deepens the understanding of stakeholder management in innovative infrastructure PPP projects and expands the scope of stakeholder integration in the planning phase. Also, this study adds empirical evidence to the growing body of knowledge of stakeholder management principles in PPP projects across different countries within the same context as the case study undertaken.

6.5. Relationship with existing literature

This study has demonstrated its relationship with existing research and fulfils the criterion of contributing to the body of knowledge. In making a contribution to knowledge, the research gap was identified and the contribution was made in chapters 2 and 3 in relation to the SH management in PPP and project management in addition to the research findings in chapters 5 and 6.

This research began with an intensive literature review that aimed to identify what has been studied and discovered in SH and PPP projects, while focusing on the identified gaps. The

literature review added to the development of knowledge in the following ways:

1. This study carried out an empirical study of innovative PPP projects in the UAE context. This is an original attempt: no evidence was found of previous studies that have undertaken a similar study of a failed innovative PPP infrastructure project. Additionally, there was no framework to ensure that SI had been previously developed to address the challenges identified.
2. The study defines the CSFs for PPP innovative projects by combining the factors from other research and adding this study's findings.
3. It adds to the stakeholder management and stakeholder integration body of knowledge via the SI definition and SI Variables identified, as shown in Figure 6-2.

Through the literature review, it was noted that the UAE is experiencing significant challenges in PPP projects as this concept is relatively new in the region (Dulaimi *et al.*, 2010). In that context, it was considered important to understand the causes of such challenges and failures. Therefore, this research identified leading causes of innovative, large-scale PPP project failure and associated lack of SI, as presented in Chapter 6, section 6.1 as illustrated in figures 36.

Through the alignment and mapping of the identified cause of failures and CSFs, the study has provided a clear sense of understanding about the causes of events related to SI and developed a framework to ensure SI in future PPP projects. This research has fulfilled one of the objectives for contributing to the body of knowledge by developing a new framework and defining new factors affecting the success of PPP projects.

The study also confirms the success factors in the literature, according to Table 4, in terms of managing PPP projects. These are: political stability and support; economics stability; communication; clear roles and responsibilities; unifying a specific vision; a strong private

consortium; effectiveness of governmental approval process and good governance.

6.6 Chapter summary

This chapter showed how this thesis has answered the research questions and achieved its objective related to SI. The thesis has discussed the results considering the existing literature on PPP, stakeholder management and project management & innovation. Further, this chapter has presented the development and validation of a framework for stakeholder integration in a PPP project that supports the success of UAE PPP projects and other related countries within similar contexts. It also explained the need, aim and objectives for such a framework. The framework was developed based on findings from the case study and is supported by a set of literature on stakeholder management and PPPs. The findings from the framework's validation were presented, which showed that participants acknowledged the usefulness and relevance of the framework to manage stakeholders in PPP projects especially considering the challenges related to SI factors.

Finally, in light of the identified findings, SI theory and factors was developed and explained, six factors define the level of SI between the stakeholder to ensure the integration, harmony and interdependences identified. Also, the study implications have been explained in order to explicitly draw out the key contribution to knowledge. This leads us to the conclusion of this research, limitations faced by researchers, and finally, the recommendations for project practitioners, government policy makers, organizational executives & managers and future research, which are presented in the next chapter.

Chapter 7: Conclusions and Recommendations

7.1 Conclusions

The purpose of the current study was to investigate and explore the impact of SI in delivering successful, innovative, large-scale PPP infrastructure projects in the northern emirates by reviewing the existing literature on project types related to the study scope and project management aspects related to SH management and identify the success criteria of each and identifying the sources of misalignment between different stakeholders in the selected case study and compare between them.

A group of success factors and the challenges faced by the authorities in implementing these projects were collected, which the researcher considered in the case study approach by using interviews and Observations methods and the document review as well. after analyzing the data and create codes out of it, it was found that many of these factors were identified by the stakeholders and participants in the research, except that there was more focus On the weak role of the stakeholders and their differences and the impact of this difference on the project's failure, as the researcher reached the importance of the integration of stakeholders for the success of such complex projects in order to overcome obstacles.

Most of the sources place stakeholder management as one of the most important factors in large-scale project, innovation and PPP projects success, This study has clearly shown that There is a need to delve deeper into this factor and study the impact of integration between the stakeholders on project success. Therefore, the research designed a framework to ensure this integration and the correct selection of stakeholders for governments that are beginners in the field of PPP and present it to experts in government authorities to assess the possibility

and effectiveness of this framework. In addition, the research data analysis results and by reviewing the literature review, the researcher was able to define SI and most affecting factor on the level of the SI in PPP projects.

7.2 Achievement of research objectives

This section highlights the achievements of the research aim and objectives developed in Chapter 1. The aim of the research was to ‘investigate and explore the impact of SI in delivering successful, innovative, large-scale PPP infrastructure projects in the northern emirates’. There were four research objectives developed to achieve the research’s aim.

- **Research Objective 1:** Provide a comprehensive review of the existing literature relating to SI, PPP, large-scale projects, and innovation management.

This objective was achieved through an extensive review of literature and the findings were presented in chapters 2 and 3. Chapter 2 examined three types of project: PPP projects, large-scale projects and innovative projects. The chapter began by exploring the meaning of PPP and CSF and the challenges associated with them. Success factors were combined and compared to challenges in addition to success factors for BOT contracts and other project categories, helping the researcher realise the importance of the integration of stakeholders as an important component in the success of these projects. However, the research found that most of the literature defines the success factor in PPP according to specific sectors, while there still are some repetitive factors, such as political stability and support, communication and a strong private consortium. Although there are generally different factors affecting the success of PPP, BOT contracts and large-scale project, there are similar factors to: government support, government policies, financial capital, commitment to success, an effective governmental process, an innovation business strategy, availability of information

for different SH, effective communication and political, economic and legal stability.

The literature review continued in Chapter 3 in relation to project management and stakeholder management specifically, due to a lack of studies in these areas. It began by looking at project management in general and defined the success factors in general. Also, the planning stage and the success factors associated with this stage of a project were detailed. It was found that these are similar to the success factors in project management as good planning correlates with project success.

The concept of SH identification evolved into various classifications based on SH theory, such as internal and external SH. Although there are generally two types of SH, there are different ways to assess and analyse SH based on their power and interest and SH typology. However, there has been very little study conducted on the management of stakeholders in PPPs:

- **Research Objective 2:** To Identify the sources of misalignment between different stakeholders in innovative infrastructure PPP projects and propose solutions that can be adopted to address the misalignment.

The misalignment refers to the incorrect arrangement of something in relation to something else. In this research, the source of misalignment was between different SH that affected the progress of the PPP project, such as the misalignment of objectives, skills and experiences, tools and procedures, and policies and requirements.

The PPP projects requirements and resources must be aligned with the project objectives to utilise them in a way that lead to success and achieving the objectives, especially between the main partners and concerned SH with a lot of power and interest. The researcher defined the misalignment in Figure 6-1 as it is considered to be the causes of innovative, large-scale PPP project failure.

- **Research Objective 3:** Ascertain key PPP success criteria that can be used by the local government to achieve a successful stakeholder integration during the delivery of innovative PPP infrastructure projects.

This research objective was achieved through the literature review in Chapter 2 and the case study examined in chapters 5 and 6, where the findings of the analysis are presented. This research explored and examined the PPP CSFs that are related to SI.

The findings revealed that different CSFs affect PPP success, and these factors relate to overall situation, not to the level of the stakeholder. For example, in the case study, some stakeholders had a lack of knowledge of the organisation itself, where the organisation has the knowledge and the experience. Therefore, when it came to communication between individuals, there were issues and conflicts.

Furthermore, the findings showed that there are some critical factors affecting the level of SI, as shown in Figure 6-2, which the researcher considered to be CSFs for PPPS also.

These findings suggest the need for a structured framework for SI in PPP projects to ensure these factors are considered.

- **Research Objective 4:** Propose an appropriate framework that can be adopted by the local government to ensure the successful integration of stakeholders on innovative infrastructure projects.

This objective was achieved through the case study analysis (Chapter 6) of single case analysed in Chapters 5 and supported by the literature and the development of a framework for stakeholder management in PPP projects, as presented in Chapter 6. There were two objectives for developing the framework, which were highlighted in Section 6.3.2. The framework comprises 22 stakeholder management steps, the roles of six SHs and two project

phases. The framework highlights the interrelationships of the 22 steps across the different SH and project phases.

In addition, a framework was validated through five interviews with concerned authorities and expertise in PPP. The Participants assessed the framework and made useful suggestions and recommendation on improving the framework. Overall, participants agreed that the framework was practical, appropriate, and suitable for ensuring stakeholder integration in PPP projects in the planning phase in similar case study contexts. Subsequently, the proposed framework was refined. A framework for ensuring stakeholder integration was presented in Section 6.3.3

7.3 Recommendations

In this section, the researcher provides specific recommendations for improving the management of stakeholder in PPP projects with innovative deliverables in the infrastructure sector as they are the CSFs in these types of projects, specifically the integration between them.

Stakeholder integration requires a combination of the main stakeholder skills, knowledge, experience and other related attributes in the field of the project, following the laws in the specific context. This can be achieved through following the proposed framework that ensures the selection of the team members and other stakeholder according to a combination matrix.

It is recommended to pay greater attention to stakeholders in PPP projects by defining them and assessing each one of them not as a group but individually. Also, it is important to consider all the CSFs for innovative, large-scale PPP projects and set these factors as requirements that are linked to a project's KPI, in addition to activating the agreements between the stakeholders according to their roles and responsibilities. Below are a set of

recommendations for researchers, project practitioners, government policymakers, and organisational executives and managers.

7.3.1 Project practitioners

The findings of this study have several important implications for future practice to be adopted by the practitioners in the field. The proposed framework identified a clear set of processes and criteria to be considered when managing PPP projects in the government sector and, more specifically, when managing these projects with existing, similar projects. In particular, it is essential to choose those concerned according to specific and clear criteria, considering that the work team must possess high skills and a lot of experience for such projects, in addition to the importance of applying project management steps clearly and uniformly among all concerned using a unified electronic system, such as an enterprise project management system, which would give all concerned the authority to review the progress of the project on addition to r problems.

Moreover, practitioners should familiarise themselves with other aspects of projects, such as the economic, political, security and cultural aspects, when dealing with the rest of the stakeholders and obtain information and experiences from them, spreading this knowledge to the others to ensure the project's long-term integration, rather than being only being acquainted with knowledge and expertise on the technical side

7.3.2 Government policymakers

The research presented a framework to ensure the integration of stakeholders in infrastructure PPP projects, and the importance of the legal aspects in such projects has been identified in different processes due to the increasing trend towards carrying out PPP projects around the world.

The nature of these projects is complex, and their results are sensitive to both sides, whether the impact is positive or negative and extends for long periods. So, it is important that a law be enacted in the emirate for such projects, such as some of the neighbouring emirates have, along with special policies for such projects.

In general, it is important to compare and review legal practices with others before establishing this law in the emirate in order to benefit from their experiences and lessons learned. This law would preserve the right of both parties in addition to encouraging investors and developers to work and implement major development projects in the region due to the sense of security achieved.

Moreover, it is essential to develop criteria for governments to choose project managers and team members according to the requirements and nature of each project and to develop plans to qualify employees in governments to develop their skills and knowledge in order to attain these skills.

7.3.3 Organisational executives and managers

The findings of this study suggest that the specific steps should be followed in the proposed framework in all major and innovative large-scale projects because it is important that everyone is agreed on the importance of these projects and the desire to use their results and repeat them in other projects. This can only be done in conjunction with achieving the strategic goals and the development of indicators to measure the achievement of these goals.

In fact, the strategic alignment should not be limited to the strategic goals of the entity, but also to the emirate and the country, as all strategic goals at the local level are linked with the federal government. This contributes to achieving competitive indicators, and this linkage makes the project important in the eyes of all concerned, even foreign entities, for achieving

the goals of sustainable development. The strategic objective and related KPIs must be cascade to the stakeholder either internally or externally and be measured regularly by the executives.

Furthermore, the researcher recommends strategic linkages in all projects and the selection of project participants by them to ensure the integration of stakeholders and their convergence in skills, knowledge and behaviours by developing these skills within a project resource management plan in addition to qualifying the authorities for such projects by reviewing best practice and benefiting from it. The researcher also recommends that in the absence of experts in the same organisation, it is possible to contract with experts throughout the project period, with the work team remaining on the authority, as it would contribute to the project being carried out effectively and the sharing of knowledge to the rest of the team.

7.4 Limitations and future studies

The researcher experienced several limitations that influenced the study. The main limitations of this research are explained below:

- a. There was a difficulty in communicating with the stakeholders from the private company as they changed the location of their offices several times in addition to their presence within the country. Others left their work on the project, and the researcher had trouble communicating with them at the same time, which affected the time of collecting data and reviewing them again with them.
- b. The research is limited to one case study in the northern emirate in the UAE and therefore the research is within the UAE context. Also, the research participants were from within the UAE governments and three private company related to the second

partner of the BOT contract. This number is relatively small to empirically generalise the research findings to a wider context. However, the findings will be relevant to other countries that have similar federal and local laws, and economies, and are new to PPP structures.

- c. The research was limited to an infrastructure project in the transportation sector. Therefore, it was necessary to consider other sectors' peculiarities when applying the findings of this research. However, the findings are relevant for managing a wide range of stakeholders in other sectors considering that the transportation sector is known to generate the widest publicity and interests.
- d. This research considered stakeholder integration from project pre-development phase when the private sector prepared and presented proposals. However, the findings of this research are relevant as the proposal will still undergo a project development phase, where the public sector conducts a feasibility study.
- e. Considering the private sector's confidentiality concerns in relation to HAT projects, their willingness to participate in this study was limited. Some private partners were not willing to be interviewed unless there was a legal consultant present while others did not want to respond. In addition, that federal authorities and other local governments were not willing to be interviewed and answer some question by phone led to a loss of valuable information. Fortunately, this limitation was identified early.

The thesis provides a framework for managing stakeholder integration in innovative PPP projects in the UAE. It is one of few studies that covers the stakeholders' integration in such countries by considering the laws for PPP innovative projects. Further studies could be undertaken to cover the following:

- The researcher sees the future direction of conducting research in terms of using the finding of this study to come up with a valid instrument that could be used in a quantitative study to quantitatively verify the findings.
- The research should be replicated in other northern emirates in the UAE and similar countries to determine differences and similarities. This will help intensify and refine the findings of this study and help in assessing the generalisability of the stakeholder integration management in PPP projects presented in this study.
- Research should be conducted to investigate how the private sector do their feasibility studies in other countries by taking into consideration stakeholder requirements and the laws of these countries that have federal and local structures.

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Appendices

1. Interview Consent Forms in English (1)

Informed Consent to Participate in Study

Title: The impact of stakeholder integration on large-scale, innovative PPP infrastructure projects

Researcher's name: Hooriha AL Balooshi

Supervisor's name: Professor Ashly H. Pinnington

University: British University in Dubai

Email: 2014232178@student.buid.ac.ae

Dear,

For the purpose of writing the final Ph.D. Thesis, I would like to request permission to conduct a research study. It will be helpful to collect data from your organization to achieve the aim of the study, which is to develop a framework to manage stakeholder integration in intergovernmental innovation projects.

It will be beneficial to allow me to conduct a survey, interviews and focus group to collect the required data for analysis. There are no threats associated with participating in this study. All the responses in the survey, interviews, and focus group will be recorded anonymously. Involved Employee, who volunteer to participate, will be given a consent form to be signed and a copy of the questions (attached).

Your approval will be greatly appreciated

Sincerely,

Researcher: Hooriha Ahmed AL Balooshi

Ph.D. PM Student

2. Interview Consent Forms in English (2)

Consent Form

I

I have received all required information related to the study and understand the contribution required from me. The procedures regarding confidentiality have been clearly explained (e.g. Use of names, pseudonyms, anonymization of data, etc.) to me.

I hereby consent to my participation in this study.

Participant Name : _____

Participant Signature : _____

Date : _____

Researcher's Signature: _____

Date: _____

3. Samples of Initial Coding

The guest: the most damaging for the have changed, including the land. Be specific land area but this area has decreased area, and the considerations for the not taken into account...so they decreased over and again, also some in the local residents, the farms and local factors contributed to changes and most concerned.

Hooriah: Would you say that this comp

The guest: Yes. They didn't study it w initial necessary approvals from the beg that needed to be taken approvals (wh mistake by not anticipating all these thought they got approval from one p can proceed but it doesn't work this v has to be taken into account.

we presented two times at th aviation...the federal civil aviati one ...(t)hey accept stage two a (aviation) ...we presented to civ that time we had two issues , and local government of this ei

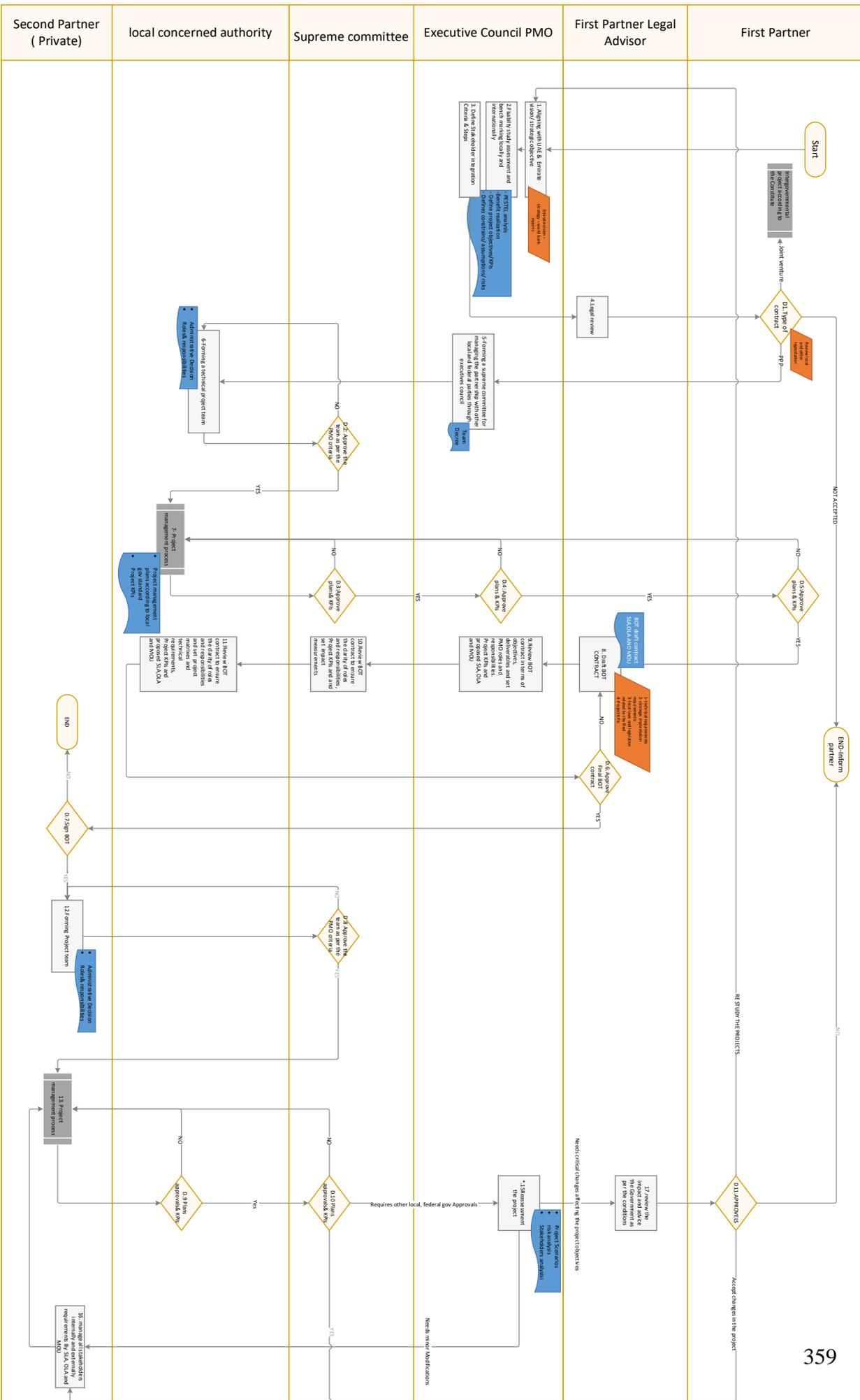
One is the (my job) is technic political issue and the federal go to 2015 we presented full proje technically perfect presented fu , the political issue is and milita the job of government of Ajn pushing nobody finish this mat approval

Lucky we are starting the proj problem in between border ar

4. Framework

Proposed PPP framework to ensure the Integration between Stakeholders

Project Development Phase (project initiation; project planning; and preparation of business case)



Start-End

Process

Subprocess

Decision

Document

Data

Project Execution Phase

