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ISTANBUL SABAHATTIN ZAIM UNIVERSITY

GRADUATE EDUCATION INSTITUTE

DEPARTMENT OF ISLAMIC ECONOMICS AND FINANCE

DEVELOPING PUBLIC PRIVATE PARTNERSHIP FRAMEWORK FOR FINANCING STRATEGIC INFRASTRUCTURE INVESTMENT IN DEVELOPING COUNTRIES: THE CASE OF LIBYA

Ph.D. DISSERTATION

Ali ABDALSALAM

Istanbul

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Supervisor

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This study has been approved in partial fulfillment of the requirements for PhD Degree in Islamic Economics and Finance

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DECLARATION OF SCIENTIFIC ETHICS AND ORIGINALITY

I declare that the work in this “**DevelopingPublic Private Partnership Model for Financing Strategic Infrastructure Investment in Developing countries: The Case of Libya**” was carried out in accordance with scientific ethics and guidelines on thesis writing at Sabahattin Zaim University, and no part of the thesis has been submitted as part of the fulfillment of another qualification or degree from any other institution. I have fully referenced, in both the text and bibliography, all direct and indirect quotations and all sources I have used in this work.

Ali ABDALSALAM

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ABSTRACT

DEVELOPING PUBLIC PRIVATE PARTNERSHIP FRAMEWORK FOR FINANCING STRATEGIC INFRASTRUCTURE INVESTMENT IN DEVELOPING COUNTRIES: THE CASE OF LIBYA

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Infrastructure plays a vital role in the business ecosystems as it facilitates the smooth operation of trade and commerce, while also creating job opportunities. It is estimated that the Middle East and North Africa (MENA) area is projected to require an annual investment ranging from $75 to $100 billion, over the next two decades in order to adequately address its infrastructure demands (World Bank, 2012, p. 35).Traditionally, the responsibility for procuring and funding public infrastructure rested solely with the public sector. Nevertheless, there has been a shift towards involving the private sector in infrastructure provision through collaborative efforts with the public in many developed and developing countries around the world in a step to bridge the infrastructure gap, enhance innovation and economic efficiency. Libya is one of those developing countries that remained relatively silent toward the adoption of Public Private Partnership models.

This research examines the potential of Public Private Partnership as a framework for funding infrastructure investment in developing countries, with special focus on Libya by critically analyzes the various models of PPPs, best practices, and the dichotomy of opportunities and challenges these partnerships present in the Libyan context. To assist in detecting these challenges, the research studies the motivation factors for Public-Private Partnership engagement in Libya, and assessment of infrastructural strategic projects in Libya.

The research firstly discusses the concept of Public Private Partnership, then delves into the PPP models and their applicability in Libya, contrasting them with global best practices and drawing insights from case studies in both developed and developing countries. The challenges specific to the Libyan environment, such as regulatory hurdles and security concerns, are discussed in detail. Then, the research proposes tailored PPP model for Libya, outlining the legal, institutional, and operational frameworks required to foster a conducive environment for PPPs. The research calls for establishing a novel public entity referred to as the Libyan Authority for Public-Private Partnerships, to be a central authority that supervises all partnership projects proposed by the government. The model is positioned as a solution to bridge Libya's infrastructure gap, backed by policy recommendations and regulatory guidelines to ensure its effective implementation.

This research also delineates the necessary tasks and suggests recommendations essential for optimizing the benefits of Public-Private Partnerships. It shines a light on potential obstacle that could impede the implementation of this model and offers strategies to overcome these hurdles.

Keywords: PPP, Public Sector, Private Sector, Infrastructure Gap, Risk Allocation, Infrastructure Development, Project Finance, Economic Growth.

ÖZET

ALTYAPI PROJELERİNİN FİNANSMANINDA STRATEJİK BİR ALTERNATİF OLARAK KAMU-ÖZEL ORTAKLIĞI: LİBYA ÖRNEĞİ

Ali ABDALSALAM

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Altyapı, ticaret ve ticaretin sorunsuz işleyişini kolaylaştırırken aynı zamanda iş fırsatları da yarattığı için iş ekosistemlerinde hayati bir rol oynamaktadır. Orta Doğu ve Kuzey Afrika (MENA) bölgesinin altyapı taleplerini yeterli düzeyde karşılayabilmek için önümüzdeki 2032 yılına kadar 75 ila 100 milyar dolar arasında değişen bir yatırıma ihtiyaç duyulacağı tahmin edilmektedir (Dünya Bankası, 2012, s. 35). Kamusal altyapıların sağlanmasının tarihsel olarak yalnızca kamu sektörü tarafından tedarik edildiği ve finanse edildiği düşünülmüştür. Bununla birlikte, özel sektörün kamu sektörü ile işbirliği içinde altyapı sağlanmasına katılımı, dünya çapında birçok gelişmiş ve gelişmekte olan ülke tarafından altyapı açığını kapatmak, yenilikçiliği ve ekonomik verimliliği artırmak için bir adım olarak kullanılmaktadır. Libya, Kamu-Özel Ortaklığı modellerinin benimsenmesine nispeten sessiz kalan gelişmekte olan ülkelerden biridir.

Bu araştırma, Libya'ya özel olarak odaklanarak, gelişmekte olan ülkelerdeki altyapı yatırımlarının finansmanına yönelik bir çerçeve olarak Kamu Özel Ortaklığının potansiyelini incelemekte; çeşitli PPP modellerini, en iyi uygulamaları ve Libya bağlamında bu ortaklıkların sunduğu fırsat ve zorlukların ikiliğini eleştirel bir şekilde analiz etmektedir.

Bu zorlukların tespit edilmesine yardımcı olmak amacıyla araştırma, Libya'da Kamu-Özel Ortaklığı katılımının motivasyon faktörlerini ve Libya'daki stratejik altyapı projelerinin değerlendirilmesi çalışmada incelenen diğer bir konu başlığıdır.

Araştırma öncelikle Kamu Özel Ortaklığı kavramını tartışıyor, ardından PPP modellerini ve bunların Libya'daki uygulanabilirliğini derinlemesine inceliyor, bunları küresel en iyi uygulamalarla karşılaştırıyor ve hem gelişmiş hem de gelişmekte olan ülkelerdeki örnek olay çalışmalarından içgörüler elde ediyor. Düzenleyici engeller ve güvenlik kaygıları gibi Libya ortamına özgü zorluklar ayrıntılı olarak tartışılıyor. Daha sonra araştırma, PPP'ler için elverişli bir ortamın teşvik edilmesi için gereken yasal, kurumsal ve operasyonel çerçevelerin ana hatlarını çizerek, Libya'ya özel PPP modelini önermektedir. Araştırma, hükümet tarafından önerilen tüm ortaklık projelerini denetleyecek merkezi bir otorite olacak, Libya Kamu-Özel Ortaklıkları Otoritesi olarak anılan yeni bir kamu kuruluşunun kurulması çağrısında bulunuyor. Model, etkili bir şekilde uygulanmasını sağlamak için politika önerileri ve düzenleyici yönergelerle desteklenen, Libya'nın altyapı açığını kapatacak bir çözüm olarak konumlandırılıyor. Bu araştırma aynı zamanda gerekli görevleri tanımlamakta ve Kamu-Özel Ortaklıklarının faydalarını optimize etmek için gerekli olan tavsiyeleri içermektedir. Bu modelin uygulanmasını engelleyebilecek potansiyel engellere ışık tutuyor ve bu engellerin üstesinden gelmek için stratejiler sunuyor.

Anahtar Kelimeler: PPP, Kamu Sektörü, Özel Sektör, Altyapı Açığı, Risk Dağıtımı, Altyapı Geliştirme, Proje Finansmanı, Ekonomik Büyüme.

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ABBREVIATIONS

ADB Asian Development Bank

AFDB African Development Bank

CA Contracting Authority

EIB European Investment Bank

ESCAP Economic Social Commission for Asia and The Pacific

IDB Islamic Development Bank

IEA International Energy Agency

IMF International Monetary Fund.

LAPPP Libyan Authority for Public-Private Partnership

LPPPC Libyan Public Private Partnership Company

MOF Ministry of Finance

OECDOrganization for Economic Cooperation and Development

OPEC Organization of the Petroleum Exporting Countries

PPP Public Private Partnership

UNCE United Nations Economic Commission for Europe

UNOCHA United Nations Office for the Coordination of Humanitarian Affairs

CHAPTER I

INTRODUCTION

1.1 Overview

Infrastructure is the backbone of economic development for any country, as renaissance and development cannot take place without good infrastructure. Studies have shown that an increase in investments in infrastructure of only 1% of any country will lead to an increase in its gross domestic product (GDP) of 1.2%. The increase in GDP by 1%, resulting from increased investment in infrastructure, leads to the creation of millions of indirect job opportunities in the short term(Carbonara & Pellegrino, 2014, p. 1081)**.**

Infrastructure projects are considered the mainstay of all economic, social, political development and other activities in countries all over the world, as they play a vital role in promoting economic growth and competitiveness, through creating jobs and developing services in general. Infrastructure is deemed to be one of the most important factors that attract investments to countries in all fields (Deloitte, 2020, p. 3)Therefore, accelerating the provision of infrastructure has become one of the most important priorities in developing countries such as Libya. However, some challenges face the establishment of new infrastructure projects, as well as the development of all existing projects; this challenge is represented in the lack of financial resources. A huge amount of funding is required to fulfill infrastructure needs, and governments cannot rely solely on their national budget (Libyan Economic Salon, 2020, p. 7)

These challenges have prompted many countries to contemplate finding an alternative means to provide the funding necessary for the implementation of infrastructure projects without increasing state public expenditures or resorting to borrowing. Infrastructure financing through PPPs has emerged as a source of funding works, it is an alternative that can attract savings and provide the financial needs that are essential to finance infrastructure projects. Based on its success, many countries, all over the world, use it as an alternative to financing infrastructure investments (Kahyaoğulları, 2013, p. 251)

A few negative aspects result from the complete abandonment of the state's assets in favor of the private sector due to the privatization process. Nevertheless, there exist the inability to rely on government spending alone in establishing many public services projects, infrastructure and basic facilities. The reason is that some countries counter the exacerbation of the state's public budget deficit and high public debt (Hall, 2015, p. 22)

Provision of public infrastructure has historically been procured and funded solely by the public sector. However, a collaborative effort between the private and public sectors in infrastructure provision can be observed as far back as the 17th century in developed countries like the UK and France (OECD, 2015, p. 7) . A country such as the USA has this kind of partnership for education, utilities, and social services sectors; it was pursued by a sustainable rise in the adoption of such partnerships between the public and private sectors throughout the last quarter of the 20th century; this is due to the awake of a socio-economic and political environment, and the constraint on the budget facing the public sector (Yescombe , 2007, p 89).

Accordingly, Governments typically assume the duty of initiating, sustaining, and restoring infrastructure projects, since they are the mainstay of all economic activities, such as roads, ports, factories, telecommunications networks, electricity, and oil exploration. This leads to the fact that the percentage of spending on investment in the GDP, especially in the field of infrastructure, has decreased around the world over the last three decades. Nevertheless, due to inadequate investments in infrastructure projects and the increasing pressure on governments' budgets, a prominent trend in recent years has been the increasing prevalence of public-private sector partnerships. In addition, a widespread concern exists regarding the inefficacy of services delivered by institutions and government agencies, given that public and private partnerships have predominantly been implemented in sectors such as telecommunications, energy, and transportation. (Froud, 2003, p 571). Lately, there has been a focus on social infrastructures, including health, education, and various services. These services were traditionally administered by the public sector because of the substantial investments they entail, and governments are inclined to retain control over them, recognizing their essential role in modern societies. Nonetheless, the infrastructure services offered by the public sector often exhibit low efficiency, elevated costs, limited accessibility, and a tendency to overlook maintenance in numerous instances. (Al-Sharif & Kaka, 2003. p 7).

In recent years, PPPs have become popular across the globe with the rise of the private sector involvement in the funding and development of public infrastructure (Carbonara & Pellegrino, 2014, p. 1083). The progress of economic and social development relies on the mobilization and pooling together the potential resources and expertise from both the public and private sectors is essential for their collaboration in institutional organizations dedicated to initiating and managing infrastructure projects. The governments found that they are in a position where they do not have the sufficient resources that are necessary to fund their country’s infrastructure to the required levels for economic development (Hilary Devine, et al., 2021, pp. 10-12)

Thus, there is heavy support and strong encouragement from all developed and developing countries towards the participation of the private sector in financing infrastructure projects. The reason behind the adoption of any arrangements between public and private sectors are various among developed and developing countries. In developed countries, the adoption of the partnership is to strengthen and develop facilities and infrastructure services, with greater professional economic efficiency at less cost. It is also to get the benefit from the innovative, administrative, and financing capabilities that the private sector offers. In developing countries, however, adopting this partnership is an alternative financing solution to their growing infrastructure needs. Establishing and operating infrastructure projects is meant to accelerate the advancement of social development and the completion of national projects in a way that ultimately helps to develop the country's economic competitiveness and raise the standard of living of all segments of society and achieve the desired development rates(Kahyaoğulları, 2013, pp. 244-245).

A study by McKinsey confirms that the volume of international spending on infrastructure is close to 2.5 trillion annually, despite the fact that the world needs to spend the equivalent of 3.5 trillion annually until 2030 to maintain the current growth rate. This means that investment spending in infrastructure must increase by the equivalent of 1 trillion per annum to maintain the sustainable development goals set by the United Nations. The annual funding that developing countries need to invest upon their infrastructure procurement is between 40-60% of their public investment, yet they face a huge challenge in coping with the growing demand for infrastructure to an overall development (McKinsey Global Institute, 2013, pp. 1- 2)

As per the World Economic Forum (2019), there is a projected infrastructure gap of $15 trillion globally by the year 2040. The infrastructure gap is very large at the international level in general, and even wider in developing countries. Therefore, the traditional methods in which public infrastructure would be procured and funded by the public sector alone won't be able to close this gap; So it is necessary to think seriously in innovative ways, find a different developmental approach, in which all efforts are combined, and mobilize all available capabilities from the public and private sectors to narrow this gap (World Economic Forum, 2019, p.1).

The Public-Private Partnership (PPP) is regarded as an effective way of assessing risks and allocating responsibilities when developing infrastructure. It is seen as an effective solution to narrow the infrastructure gap in order to achieve developmental goals, especially in the presence of a deficit in the general budgets of states, palpable after the financial crises around the globe. Through a preliminary reading of some international experiences, there are indications of successes in many participation forums around the world, and some failures at the same time. The main reason behind these failures is the mismanagement of this type of participation and the inability to create an appropriate environment that guarantees success.(Matsumoto, et al., 2021, p. 22).

The peculiarities of the Libyan economy and the conditions that the country is going through today constitute a great incentive for its government to adopt this partnership arrangement as an alternative to correct the state of public finances and reduce the risks associated with it (Libyan Economic Salon, 2020, p 13).

Libya is like the rest of the developing countries which suffer from high risks in terms of their general budget, due to a high degree of dependency on a single source: oil production. This makes the economic performance vulnerable to oil shocks, low international prices and oil demand(Word Bank Group, 2019, p 36). In addition, Libya suffers greatly from the deterioration of its infrastructure: road networks, electricity, communications, water and sewage, and the low level of services.

Not counting what the financial indicators reflect in terms of clear weakness in the administrative and operational aspects of these facilities.

This has negatively affected economic and social growth since the maintenance and development of these facilities require large financial needs that the Libyan government is struggling to provide under the current circumstances. Even though

Libya's external debt ranked among the lowest globally, standing at 5.8% of GDP in 2017. However, domestic debt has seen a substantial increase in recent years, reaching 155% of GDP in 2020. (African Economic outlook, 2020, p. 117) All this makes the Public-Private Partnership approach a suitable alternative to qualify, develop, manage and operate the above mentioned facilities, provided that they are managed wisely and appropriate conditions are created for their success.

1.1 Research Problem

Traditionally, governments have been the primary financiers of infrastructure projects. Nevertheless, the substantial financial requirements and gaps, combined with budget deficits and escalating public debt, place constraints on governments' capacity to fund infrastructure projects. Therefore, the need for developing the infrastructure remains one of the most significant global challenges and the biggest issues for public policy worldwide. And because of the existence of a financial gap in the infrastructure sector at the global level, manydeveloped and developing countries around the world have moved toward PPPs as an alternative for financing this sector. The reason being that infrastructure projects are usually large and require huge investment for establishment and implementation (Chaib & Masker, 2020, p. 13).

It is worth stating that most of the developmental projects in Libya, launched before 2011, have been suspended. A large part of them has exceeded the completion rate of 60%. While the value of these projects exceeds 100 billion dinars (USD23B), most of them are currently suffering from a shortage in their financial resources, due to a persistent budget deficit in recent years. This has caused the accumulation of a government public debt that exceeds 57 billion Libyan dinars(USD13 B), (Libyan Audit Bureau Report, 2020, P. 231). Furthermore, the small size of capital expenditures compared to the needs of these expenditures has created a large gap that keeps increasing every day. In turn this matter led to the failure in establishing new infrastructure projects, or developing all existing projects in a manner that achieves the desired developmental goals. Therefore, it becomes significant to rethink a different method to provide the necessary financial resources to narrow this gap, without relying solely on the state's budget to establish or develop these projects and improve their services. This trend states that because the infrastructure sector is considered as the mainstay of all economies, the developing nations must urgently enhance their infrastructure at any expense. In this context, PPP could serve as a viable solution for countries requiring the implementation of such partnerships and place them in the context of developing countries in order to be adopted and successfully implemented. Libya, such as many other developing countries, may also adopt PPPs arrangements as an alternative source for financing the infrastructure sector. Therefore, in the light of what has been mentioned above, this research will attempt to respond to the need of improving the Libyan infrastructure sector. It will investigate whether Libya can adopt PPPs as a strategic alternative, to raise fund, knowledge and efficiency of Private investors in order to improve the state's infrastructure strategic projects.

1.2 Research Objective and Research Questions

The primary aim of the research is to develop a framework outlining the critical factors influencing the successful adoption of Public-Private Partnership, as a tool for financing infrastructure development in Libya. It is obvious that investment in infrastructure, in return, plays a crucial role in fostering potential economic development and productivity, and can also yield substantial positive effects throughout the economy. Hence, to achieve the above-said objective, the following key questions should be addressed through this research:

- What is Public-Private Partnership, their models, structuring, key success conditions, and unique characteristics?
- What are the challenges associated with the public financing of an infrastructure strategic projects in general and in Libya in particular?
- Does the current situation of the Libyan state encourage a successful partnership between the public and private sectors?

- How does PPP contribute to the provision for the necessary financing, needed for infrastructure projects in Libya?
- What are the challenges that prevent the private sector from investing in Public-Private Partnership infrastructure projects in Libya?
- What are the best global PPP practices in utilizing PPP financing to develop strategic infrastructure projects?

By answering the above sub-questions, the research will be able to respond to the primary research question: What are the tasks and policy needed to develop Public-Private Partnership framework for Financing Strategic Infrastructure Investment in Libya?

1.3 Research Methodology

This study is dedicated to crafting a Public-Private Partnership (PPP) framework aimed at financing strategic infrastructure projects in Libya. It adopts a descriptive and analytical approach to examine the subject matter. To address the research questions, this study extensively relies on literature reviews, analysis of reports, and employs various methodologies.

The research draws upon a wealth of secondary sources, including books in both Arabic and English focusing on PPP, along with a thorough examination of numerous scholarly articles. It incorporates a descriptive analysis, sourcing data from diverse origins such as the Libyan Audit Bureau, World Bank Group reports, the African Economic Outlook, and the International Monetary Fund.

A significant aspect of this study is its comparative analysis, which includes case studies from select GCC countries, Egypt, the United Kingdom, and Turkey. The selection of the United Kingdom is due to its pioneering role in PPPs, the GCC countries represent oil-producing nations similar to Libya, Egypt and Turkey provides a geographical perspective. These regions are also recognized for their effective utilization of PPP frameworks in financing infrastructure projects.

In preparation for proposing a PPP model for infrastructure investment in Libya, the researcher engaged in discussions with academicians and relevant institutions within the country. These interactions, facilitated through social media platforms, explored the feasibility of establishing a PPP unit in Libya and its potential to enhance the development and management of PPPs. The discussions aimed to assess the impact of such a unit on fostering efficient, transparent, and strategically coherent PPPs, thereby laying the groundwork for sustainable economic and infrastructural growth in Libya.

The researcher reached out to a diverse group of 30 interviewees, acknowledging that not all would respond. The participants, experts in their respective fields with varied professional backgrounds, included academics recognized for their contributions to this domain, members of the Libyan Businessmen Council, and field specialists. Furthermore, a questionnaire was designed to capture insights from a broad spectrum of stakeholders, receiving feedback from 29 respondents. This cohort comprised private investors from the Libyan Businessmen Council, field experts, and academics, ensuring a richly diverse perspective essential for the integrity of the research.

Throughout research question formulation, model development, and testing stages, insights from diverse experts, including renowned academics, Libyan Businessmen Council members, and field specialists, were sought via open-ended questions. Feedback from 29 respondents was obtained, with interviewees consulted twice: first during research question design and later following model draft creation. The result and analysis contains questions addressed to Libyan experts whose opinions were considered.

These discussions and the questionnaire aimed to enrich the researcher's understanding of the regulatory criteria for PPPs in Libya, yielding valuable insights through the diverse viewpoints, ideas, and opinions of the participants on the topic.

1.4 The Importance of the Research

The significance of this research lies in the fact that it will offer a contribution to Enhancing Libya's infrastructure sector through the formulation of a scientifically applicable proposal of Public-Private Partnership framework in funding infrastructure projects., in order to finance the state's infrastructure strategic projects. Infrastructure project financing is the primary foundation of growth and serves as the fundamental support for the economies of both developed and developing nations., due to the significant role which these projects represent in the structure of these economies. Thus the importance of this research derives its importance from the following set of points:

- The lack of studies on financing infrastructure projects in Libya using PPPs.
- The role that infrastructure projects play in the structure of any economy.
- The identification of an alternative to financing infrastructure projects, in order to reduce the pressure on the government's budget, as infrastructure projects constitute a large financial burden on many governments.
- The contribution to enriching the research field and literature by providing a study on PPPs that may contribute to opening horizons for research and development in Public-Private Partnership formulas in funding infrastructure projects.
- The necessity for alternative financing options that can provide the required funding to bridge the infrastructure gap and close the budget deficit.

1.5 The Design and Organization of the Research

The thesis will consist of seven interrelated chapters apart from the introduction.The thesis comprises the following content:

In the first chapter, the researcher gives an introduction of the research study. It briefly outlines the research problem, research objectives and research questions, the importance of the research as well as the research structure and the methodology adopted for addressing the research questions.

The second chapter provide a comprehensive exploration of Public-Private Partnerships, with a specific emphasis on their implementation, best practices, and the distinct opportunities and obstacles they pose for Libya. This chapter presents a comprehensive overview of Public-Private Partnerships, encompassing their history, their various forms, and key factors of success, such as political willpower, robust institutional structures, and effective management of projects. This chapter provides a critical analysis of the advantages of PPP, as well as the challenges associated with these arrangements, including the limited public oversight. The chapter also discusses PPP application in different global contexts, with a focus on Libya. It underscores the opportunities for infrastructure development amid challenges like such as institutional and legal barriers.it introduce some Case studies which offer comparative insights. The chapter ultimately emphasizes that success of PPPs in Libya depends on tailored strategies and learning from global experiences, aligning policy and execution for effective implementation.

Chapter three presents the motivation factors for Public-Private Partnership engagement. This chapter explores the dynamics of public-private cooperation across four key areas. Firstly, it assesses the role of private capital in funding infrastructure projects, especially in budget-constrained countries like Libya. It highlights how private-sector partnerships can facilitate funding for infrastructure development. Secondly, the chapter considers the impact of modern technologies and skills possessed by individuals, discussing how public-private partnerships can leverage these advancements to enhance infrastructure quality and efficiency in Libya. The third aspect examines how PPPs can improve public investment efficiency, reduce costs, and optimize operational performance in project implementation. Finally, the chapter addresses the need for transparency and competition, analyzing how PPPs can mitigate corruption and lack of transparency.

Chapter four thoroughly examines the complex processes and phases crucial for the efficient development and management of PPP. It starts with the select a project selection then encompasses crucial elements such as legal issues, risk mitigation, and the significance of consistent governmental strategies. The chapter offers detailed insights into the tendering phase, with a particular focus on the nuances of evaluation methods and procurement processes. Considerable attention is dedicated to financing. This entails an examination of various avenues for securing funds, the establishment of financial structure, and the identification of key indicators. The narrative then provides guidance to the reader on the many stages involved in the development, implementation, and maintenance of these initiatives. Concluding with a concise summary that serves as a foundation for later chapters.

Chapter five aims to critically conduct a comprehensive evaluation of Libya's infrastructure landscape and investigate how PPP strategic initiatives could help to mitigate its infrastructure deficit. It starts by addressing the global infrastructure challenges, setting a context for understanding issues in developing nations (specifically Arab ones). An analysis of Libya's current infrastructure and private sector investments is presented, followed by an assessment of its infrastructure deficit. The chapter employs a SWOT analysis to gain a thorough understanding of Libya's infrastructure investment environment, the analysis aims to identify strengths to leverage, weaknesses to address, and opportunities and threats to manage. The chapter concludes by presenting an overview of the infrastructure obstacles faced by Libya and proposing the utilization of public-private partnerships as a viable financial avenue for infrastructure initiatives. The goal is to offer an in-depth overview of Libya's infrastructural status, underscoring the need for innovative, strategic, and sustainable development approaches.

The final chapter aims to outline a comprehensive Public-Private Partnership (PPP) model tailored to the Libyan context and consider the distinctive challenges and opportunities that exist within the country. In addition, it recommends a legal and institutional structures with functional frameworks that govern PPPs. The model's foundational pillars and dimensions are also described. Strategic policy recommendations and a regulatory framework are provided to enhance investor confidence in PPP investment and ensure alignment with the country’s objective.

1.6 Literature Review

Traditionally, the public sector undertakes the task of establishing and maintaining public projects. For the past few decades there has been a steadily growing demand for infrastructure development, but funds for current and future infrastructure needs are limited. This challenge has prompted various governments to consider finding alternative financing methods as a solution. It is meant to provide the funding that is necessary for the implementation of infrastructure projects and bridging the infrastructure gap without increasing state public expenditures. One of those alternative methods that a government can adopt is the engagement of the private sector through the use of a Public-Private Partnership (PPPs) mechanism; utilized as alternative to finance infrastructure projects (Li, Akintoye , & Hardcastle, 2001, P. 32)

Public-Private Partnerships (PPP) have tremendously grown globally over the last decades. This is due to insufficient resources for funding infrastructure projects and also the governments’ commitment to providing essential public services to their citizens. Public-Private Partnerships are considered one of the most convenient options to the oppression of privatization and the negative impact of exclusive public ownership. PPPs involve blending the expertise, skills, and management capabilities of the private sector with the regulatory measures and safeguarding of public interests by the public sector.

Since the 1980s, there has been a growing global acceptance of Public-Private Partnerships (PPPs) as a viable alternative to public funding for financing infrastructure investments(Mital & K , 2016, p. 25-26).Different forms of Public Private Partnership have been adopted and implemented in various countries of the European Union, United Kingdom, Central America, North America, Australia, Southeast Asia and Africa over the last three decades. In the EU for instance, more than 1300 Public Private Partnership contracts were signed between the year 1990 and 2009, equal to a capital value above 250 billion euros. This includes nearly 350 new projects worth nearly € 70 billion after having reached a financial close since the beginning of 2007 ((European Investment Bank, 2010,p . 77).

The United Kingdom has been widely shown as a leading nation in terms of private capital investment in infrastructure in recent decades, and the leading nation in delivering transport infrastructure (Siemiatycki, 2011, p. 12) The UK government states that a functioning structure can be created to provide high-quality and sustainable public services by combining together the best of the public and private sectors in a partnership

Since the 1990s, the country has implemented and evolved PPP models. The Public-Private Partnership in the UK as it exists today began in the 1992 with PFI. Following the revocation of the rules which prevented the private capital from financing public assets (Ghobadian, et al., 2004, p. 89).The Private Finance Initiative PFI, was implemented for the first time in the United Kingdom in 1992; it represented a departure from the Ryrie Rules in that it allowed for private funding, which would be additional to public funding (House of Commons, 2011, p . 7).

In 2012, the government launched a revised Private Finance Initiative PFI model called PF2, which closely resembled the PFI model with a number of extra changes that had been designed to promote efficiency, increase transparency, and encourage providing financial means from alternative sources of institutional capital. The UK government is steadfast in its commitment to the adoption of PPPs as a method of channeling investments into infrastructure projects. The Office for National Statistics shows the significant use of PPP as a mechanism of delivering investment infrastructure projects.

As per the report of 2018, there was a total of 740 PPP projects in the UK, representing a capital value of £60 bn. With the present value of future PPP payment equal to £150 billion (Office for National Statistics, 2018). Inderst (2017) P (87) contends that there will be considerable infrastructure requirements in the United Kingdom in the coming years. The anticipated demand for economic infrastructure is projected to rise to 3-3.5% of GDP or £55-65 billion annually, with social infrastructure comprising 1-1.5% of GDP.

In South Korea, the government has begun enhancing private infrastructure investments since early 1994 by launching “The Private Capital Inducement Act” (PPIAF, 2009, P.17). At that time, the goal of the country's Public-Private Partnership was to establish infrastructure facilities by the private sector in order with the aim of decreasing public expenditure and benefit from The effectiveness of private enterprises. The initial legal framework explicitly supporting PPIs was the "Private Capital Laws Legislation," formally introduced in 1994. In 1995, the country initiated its inaugural Public-Private Partnership (PPP) projects, involving an investment of 400 billion KRW (USD 356 million), primarily in PPP projects, with a focus on build–transfer–operate (BTO) endeavors. In 1999, During the time of Asia's economic crisis, the Public Private Partnership Law underwent revisions aimed at fortifying the PPP market and fostering increased private sector involvement in projects with a more transparent risk allocation. In 2005, amendments to the PPP Law were introduced, incorporating Build-Transfer-Lease (BTL) schemes for infrastructure. From 1995 to late 2008, the country witnessed an investment in PPP and/or BTO projects equal the value of W3.7 trillion (USD3.28tr) (Kim & Choi, 2011). In 2020, South Korea initiated private-sector infrastructure projects totaling 17 trillion KRW (USD 14.7 billion) to stimulate economic recovery. These projects encompass a range of initiatives, including significant developments in major roads, railways, and environment-related businesses.

In addition, in the Arab world, various governments have adopted PPPs for financing infrastructure projects. For instance,since the late eighties of the last centurySaudi

Arabia has been interested in introducing forms of partnerships between the public and private sector in funding infrastructure projects and granting a greater role to the domestic and foreign private sector. Saudi Arabia through the Council of Ministers has issued Resolution No72 in 2006 and was activated in 2007. The resolution includes the expansion PPPs in implementing infrastructure projects with a view for improving the services provided, and setting the appropriate regulatory framework for those contracts (Ministry of Economy and Planning, 2019, p . 69)

Saudi Arabia has resort to partnerships between the public and private sectors due to the insufficient government funding as a result of the international oil prices fluctuations which led to an increase in the general public deficit. Also, among other reasons that direct the Saudi government to adopt PPPs is the significant increase in demand for numerous services such as electricity, roads, and water. And to Improve the efficiency and quality of the service provided (Khalil, 2017, p. 112)

According to the Global Infrastructure Index 2020, Saudi Arabia is recognized as one of the infrastructure markets with the highest investment appeal. The county has experienced an infrastructure development similar to that of many other emerging countries around the globe. The first PPP project in Saudi Arabia was signed in 2011 to finance, develop and operate the expansion of Prince Muhammad bin Abdul-Aziz Airport in Medina. Despite the absence of a clear and comprehensive legal framework, the successful completion of this project was a reliable precedent and a guide for potential investors, which led to the announcement of more Public-Private Partnership projects in airport construction. The value of these projects, which are still in various stages of contracting, has reached 6.17 billion Saudi riyals ($ 7.4 billion). According to Med Projects, The Kingdom of Saudi Arabia is at the forefront in the region concerning the value of Public-Private Partnerships. Saudi Arabia has unveiled a total of 18 projects, amounting to approximately $9.42 billion. This represents around 21% of the value of PPP projects and private sector involvement in the Middle East and North Africa.

Resolution No. (1/1) of 2017, issued by the council of ministers in the United Arab Emirates, pertains to the guidelines for provisions and procedures governing partnership contracts between federal entities and the private sector. The primary objectives of this guide include the enhancement of investment opportunities, the improvement of governance and risk management efficiency, and the diversification of mechanisms for developing strategic infrastructure projects, all contributing to the overall enhancement of service quality. (www.investinabudhabi.ae, 2022)

The Dubai government issued Local Law No. 22 of 2015, which regulate the contracts between the public and private sectors within the emirate. Its primary objective is to incentivize the private sector's involvement in project development and foster increased investments across diverse fields. As per the stipulations of this Local Law, a partnership project can be proposed by any government agency or private sector entity. The estimated value of PPPs projects in the UAE is about $123 billion (451 billion dirhams). The percentage of future PPPs in the transportation sector in the region is 76% railways, 20%, bridges and roads, and 4% in port and transport projects (DOF-Dubai Government, 2023)

In sum, most developing countries have adopted PPPs as an alternative source of financing that can attract savings and provide the financial needs, necessary to infrastructure projects in order to strengthen and develop facilities and services with greater professional economic efficiency. As a result, the use of PPPs contributed to bridging the infrastructure gap and promoted potential economic growth and productivity. In Libya, on the other hand, the adoption of PPPs is still undeveloped and face many weaknesses such as political instability and security fears of the private sector (World Bank Group, 2020, p. 116). Thus, the report calls to develop the infrastructure sector by drawing alternative strategies to finance the infrastructure projects. Therefore, this research will attempt to respond to the need of improving the Libyan infrastructure sector by investigating whether Libya can adopt PPPs as a strategic substitute for public finance.

CHAPTER II

PPP FOR INFRASRUCTURE DEVELOPMENT

2.1 Introduction

Thepartnership between the public and private sectors represents a progressive change in the approaches to fundingeconomic growth, prompting a re-evaluation of thestate's role and its responsibilities in overseeing public services. Thiscollaboration signifies a pivotal shift from thetraditional contracting methods to a framework where the government serves as the publicpartner and the investor plays the role of the private partner. At its core, public-private partnerships utilize the management, technical, and financial expertise of the private sector to introduce or improve public assets. The essence of the concept of partnership refers to the presence of partners from the public and private sectors, agreement on goals and strategies, and the existence of Mutual benefits, major commitment of resources, diversity of activities, shared responsibility, and accountability. This chapter discusses the best practice, opportunities and challenges of Public Private Partnership in Libya. By first shedding light on overview of Public Private Partnerships in infrastructure. secondly, the chapter discusses the theoretical hypothesis of cooperation between public and private partnership in maximizing investment in the public sector through analyzing the role of the government in maximizing investment in public infrastructure and the Factors that encourage cooperation between public and private partnerships. In addition, the assessment of the private sector's possibilities to optimize investment in public infrastructure is also discussed. Finally, Public Private Partnership practices, Opportunities and challenges will be highlighted.

2.2 An overview of Public-Private Partnerships in Infrastructure:

The literature, both theoretical and applied, has explored the idea of partnership between the public and private sectors, viewing it from various perspectives. While attempts have been made at both the theoretical and practical levels to define this partnership, there isn't a universally accepted definition. For this study, the partnership between the public and private sectors will be examined from a pragmatic standpoint, focusing on its applied attributes and trait.

2.2.1 The Definition and Conception of PPP

A wide range of studies issued by international institutions referred to the concept of partnership from different angles. For example, the International Monetary Fund refers to the concept of partnership as arrangements whereby the private sector provides infrastructure assets and services that conventionally offered by the Public sector (IMF , 2004, p. 6)

The World Bank adopts a broader view when defining the concept of partnership, describing it as an enduring agreement between a private entity and a government agency, it involves the provision of public assets or services. In this arrangement, the private party assumes substantial responsibility for risks and management. Additionally, the partnership idea can encompass medium to long-term arrangements between the public and private sectors, wherein certain services traditionally provided by the public sector are offered by the private sector. This collaboration is built upon a clear consensus on shared objectives for delivering public services ((World Bank, 2014, p. 17)

According to the European Commission the Term "public-private partnership" generally refer to a mode of collaboration between public entities and the private sector. This cooperation aims to secure financing, constructing, renovating, or managing the infrastructure operations or deliver services (EC, 2004, p. 3)

The Organization for Economic Co-operation and Development (OECD) also characterizes a public-private partnership as an arrangement involving one government entity and one or more private participants. In this arrangement, the private partners provide the service in such a way that the delivery objectives of the government are consistent with the profit objectives of the private partners (OECD, 2012, p. 7)

The public-private partnership approach is well-established for the construction of social and economic infrastructure. It is also deployed in constructing infrastructures such as roads, bridges, transportation infrastructure, water conservancy facilities and the erection of social infrastructures, including learning institutions, health facilities etc. The partnership between the two sectors can cover the procurement of new infrastructure or even upgrade an existing one (Cui, Liu, & Hope, 2018, p. 6)

A consistent theme among these definitions is the emphasis on sustained collaboration effort, risk-sharing, and a commitment to fulfill contractual obligations in order to achieve mutual objectives.In this sense, Partnerships expresses an alliance between two parties that goes beyond the traditional contractual relationship, showcasing the partners' expertise and ability to achieve common goals. Despite these commonalities, definitions of partnership between the public and private sectors vary in terms of the scope and form of the arrangements (Badawi & Ismail, 2022, p. 3)

2.2.2 A Brief History of Public-Private Partnership

Public-Private Partnerships (PPPs) have emerged as a key aspect of contemporary infrastructure development and service delivery, with their historical roots predating the contemporary era. Forms of collaboration between the private and public sectors can be traced back to ancient civilizations. For example, in Roman times, private individuals or organizations provided some public goods, such as baths and roads, in return for specific rights or privileges (Wettenhall, 2003, p. 19).

Historically, The PPP model has a long history that traces back to the Roman Empire, which ruled over Europe roughly two thousand years ago. the concept was used to develop a network of postal address stations in order to enable the Roman legion's significant extension of the roadway network. The initiative facilitated the establishment of postal stations in workshops, warehouses, military quarters, and large stables. the Romans also adopted the PPPs system when developing and running ports and harbors. However, in 476 AD, with the fall of the Roman Empire, the PPPs system was rendered obsolete. It reemerged in the Middle Ages to build new fortified towns and occupation of the new land in southwestern France between the 12th and 13th centuries (Hodge & Greve, 2017, pp. 12-13). This was an early form of collaboration which had its challenges, but it established the pattern for a shared responsibility approach among public and private partners.

Advancing to the era of the industrial revolution, the nineteenth century witnessed a rise in infrastructural development. As cities grew in size, so did the demand for better roadways, ports, and railway network systems. Because of the vast scale and complexity of these projects, they frequently need both governmental supervision and private funding. During this time, the notion took root that while the government could act as a facilitator or enabler, the private sector could contribute to providing both; financial resources and expertise (Hodge & Greve, 2017, p. 17)

The late 20th century, notably throughout the 1970s and 1990s marked a revival for PPP. During this period, there was a clear trend toward governments all over the world adopting various PPP models. The effort to change the traditional method to public procurement was tied to the advent of neoliberalism. PPPs were promoted as a solution to concerns about increasing public debt in the 1970s and 1980s (Whiteside, 2016, p. 61). in addition, Economic downturns, along with economic restraints on governments, prompted the search for alternative funding mechanisms for public infrastructure and services. Nations including the United Kingdom and Australia pioneered new PPP models, experimenting with structures ranging from build-operate-transfer (BOT) to more sophisticated joint venture arrangements (Grimsey & Lewis, 2004, p. 7). In 1992 the Private Finance Initiative (PFI) was implemented by the Conservative administration of John Major in the United Kingdom. The initial structured initiative was designed to promote collaborations between the public and commercial sectors.The 1992 program's main goal was to lower the amount of borrowing required by the public sector, although as has previously been noted, the impact on the public accounts was mostly fictitious (Grimsey & Lewis, 2004, p. 145). Since 1992, the PFI model in the UK has garnered significant global attention, leading other countries to evolve the model into various forms of PPP contract types (Leigland, 2018, p. 108)

While PPPs were initially introduced in developed nations, they rapidly attracted a considerable attention in developing nations. This traction because PPP framework promised to provide a new source of financing options for infrastructure projects in emerging nations, potentially resulting in employment opportunities and economic growth (Whiteside, 2016, p. 67). According to Eduardo et al. acknowledging of these models' effectiveness led emerging economies to adapt and refine them to cater to their distinct requirements in the twenty-first century. Countries such as India and China have leveraged PPPs not just for infrastructure projects, but also health, education, and technology ventures. The consistent goal has always been to utilize private sector's efficiency, innovation, and capital in order to fulfill public service commitments (Eduardo , Fischer, & Galetovic, 2010, p. 3).

However, PPPs' roadway of hasn't entirely smooth. Controversies regarding their effectiveness has been sparked by issues of transparency, risk allocation to either party, or concerns over public interests. While supporters emphasize their role in accelerating project delivery and promoting innovation, critics contend that they might occasionally favor private profit over the public interest. It is also worth mentioning that the implementation of public-private partnerships in emerging economies was challenging, mainly due to the lack of legislation protecting investor rights, commercial confidentiality rules, and committed state investment in public infrastructure within these countries(De Mastle, Farquharson, & Yescom, 2011, pp. 15-16). Despite these difficulties, PPPs continue to be an essential instrument in the arsenal of governments all over the world, emphasizing cooperation and shared objectives in the delivery of public services.

2.2.3 Forms of Public Private Partnerships

Public-Private Partnerships are involving collaborations between the public sector and private enterprises, aimed at funding, designing, implementing, and managing infrastructure projects and services. Over the years, a verity of Public-Private Partnership (PPP) structures has been introduced in response to diverse project requirements and objectives(Sarmento, 2010, p. 2). The following are some of the most common forms:

2.2.3.1 Service Contracts

Service contracts represent the most basic type of PPP. In this arrangement the private partner does not engage in managing any public assets, but merely enters into a contract with the government to deliver a particular level of service. These contracts normally last 1-3 years, such contracts are frequently used in the road maintenance and healthcare industries(ADB, 2018, p. 29)

In service agreements, a public agency and a private organization agree to carry out specific tasks. Service agreements are useful for meeting operational needs and may focus on acquiring, operating, and maintaining new equipment. These contracts include responsibilities such as toll station installation, collecting toll fees, and reading water meters. Government agencies award service contracts on a competitive basis, that may be renewed for several months or even years (Hodge & Greve, 2019, p. 64). These types of contracts offer several advantages to governmental agencies, including enhanced expertise from private sector collaborators, handling of staffing issues, and possible cost reductions for projects. However, despite their benefits to both parties, service contracts can still face financial and managerial challenges arising from inadequate organizational governance (ADB, 2018, p. 29)

2.2.3.2 Operation and Management Contracts

A formal agreement between public and private parties, granting the private sector the authority to oversee either all or a portion of a public enterprise. Such contracts enable the incorporation of private sector expertise in various aspects, including service design and delivery, operational control, labor management, and equipment procurement. Nevertheless, it is important to note. The public sector retains ownership of the facility and equipment. Typically, the private sector is allocated specific responsibilities related to a particular service, with limited expectations for assuming commercial risk. The private party receives compensation in the form of a fee for the purpose of overseeing and executing certain tasks. Typically, the remittance of those payments is contingent on performance (ESCAP, 2008, p. 18). And if there is risk sharing, a profit sharing incentives. Typically, O&M contracts are executed in short-term between two and five years, however, they extend for longer periods than service contracts (Hodge & Greve, 2019, p. 60). And for big and sophisticated operating facilities, like ports or airports, longer durations are occasionally employed (ADB, 2018, p. 31)

2.2.3.3 Leasing Contracts

In the leasing agreement, a public entity leases an asset to a private corporation, which manages the asset, generates revenue, and pays a lease charge to the public entity. According to Hodge and Greve (2019, pp. 67). This type of agreement places management and upkeep of the infrastructure and services under the operator's (the leaseholder) authority. Typically, there aren't any big financial commitments required of the operator in this setup. Yet, this model can be combined with other approaches, such as build-rehabilitate-operate-transfer (BROT), when this occurs, the contract period is often extended and a significant sum of investment from the private sector is necessary.

In lease arrangements, the operator leases both infrastructure and machinery from the government for a predetermined duration. Typically, the government retains responsibility for investing and bears the associated investment risks, while the operator assumes the operating risks. The operator takes the operating risks. Nevertheless, within a lease agreement, certain assets might undergo a permanent transfer for a duration surpassing the economic life of the assets. Fixed facilities and land are commonly leased for extended periods compared to mobile assets (World Bank , 2017, p. 11)

Lease agreements have a resemblance to management contracts; yet since the private entity pays the leasing charge and receives money only from the asset's utilization, they include a greater transfer of operational risk. These contracts usually span 8-15 years(ADB, 2018, p. 33)

2.2.3.4 Build-Operate-Transfer (BOT)

In the BOT model, private partners are in charge of designing, funding, establishing, and running a facility for a certain amount of time. At the expiration of PPP contract the facility's ownership returns to the public sector (World Bank , 2017, p. 11)While the operating and financial risks can be shared by both the public and private partners, the demand risk must be borne entirely by the private partner. The duration of contracts are frequently 20 to 30 years, permitting a return on investment. BOT is often utilized for greenfield projects, which include the procurement of brand-new assets and facilities.(ADB, 2018, p. 37).

2.2.3.5 Build-Own-Operate (BOO)

The Build-Own-Operate (BOO) model of PPP assigns responsibility for the asset's development, finance, and management to a private entity. The project is permanently owned by the private entity under the BOO. Such an arrangement is typically used in sectors where long-term operations can justify the initial investment costs and also employed for new construction projects, and the payment method is often users-pay (ADB, 2018, p. 38)

2.2.3.6 Build-Own-Operate- Transfer (BOOT)

BOOT model is a derivative of the BOO model, although under the BOOT model, the private party doesn't retain permanent ownership of the asset; instead, ownership is transferred to the public entity after a predetermined timeframe. This transfer mechanism mirrors the BOT model(ADB, 2018, p. 40). However, the key difference between the two models is that, under the BOT model, the private party does not OWN the asset while it is being operated. It is important to note that some writers contend that the terms "Build-Operate-Transfer" and "Build-Own-Operate-Transfer" can be used synchronously(Jens K. Roerich, 2014, p. 112).

2.2.3.7 Build-Own-Operate- Transfer (BOOT)

In this paradigm, the private sector's roles begin with project design and proceed through construction and operation while adhering to a set of previously agreed-upon outputs. The asset is owned by the public parties, who also paid for its construction. It is also known as design-build-operate-maintain, while it is argued that maintenance need not be explicitly stated because it can be assumed to be a component of operation. This strategy is employed for greenfield initiatives, particularly when the private party is unfamiliar with the project(Grimsey & Lewis, 2004, p. 11)

2.2.3.8 Design-Build-Finance-Operate(DBFO)

In the DBFO framework, the private partner is in charge of planning, funding, building, and managing the infrastructure. The private participant is expected to comply with particular performance established by the public sector, to ensure that the project's adherence to set quality and expectations (World Bank, 2014, p. 7)

2.2.3.9 Build-Lease-Operate-Transfer (BLOT)

Under this approach the private entity designs, finances, and constructs the facility before leasing it to the government for an agreed-upon period of time. Ownership passes to the government when the duration of the lease is concluded (Jens K. Roerich, 2014, p. 113).

2.2.3.10 Concession

In this type of PPP, the public party grants the private party (concessionaire) the indefinite right to operate an asset. The ownership of the asset remains with the public, which reverts at the end of the concession period (ESCAP, 2008, p. 23). Concession contract transferring the greatest possible amount of risk—such as those associated with demand, operations, investment and finance—to a private operator in exchange for a special operating permit. Contracts typically call for new investments in order to extend services, and they could even entail the assumption of current assets. These PPPs are the most complex and need careful planning and oversight. Typically, contracts last between 20 and 30 years (ADB, 2018, p. 34)

2.2.3.11 Joint Venture

Joint ventures enable the public and private sectors to jointly control and operate infrastructure projects as Joint ventures serve an alternative to full privatization. In this scenario, the partners may establish a fresh company or purchase shares in an existing business to become co-owners. (ADB, 2018, p. 41)

Joint ventures must preserve their autonomy since the government must act as both a part-owner and a regulator while also maintaining good corporate governance. Because the government, according to the joint venture, serves as both a part owner and regulator, there is a chance that it may meddle in the business' activities for political reasons. But the government also has a stake in the company's success and longevity, which can assist overcome this obstacle (ADB, 2018, p. 41)

The choice of which PPP form to choose frequently relies on a number of variables, including the project's nature, the partnership's specific objectives, the intended level of private sector involvement, and the degree of control the public body wants to retain. As seen by these many models, PPPs have developed to be flexible and adaptive to fulfill the various demands of public infrastructure and service provision. A Scale and scope of private and public responsibility is shown in the figure 2.1 below:

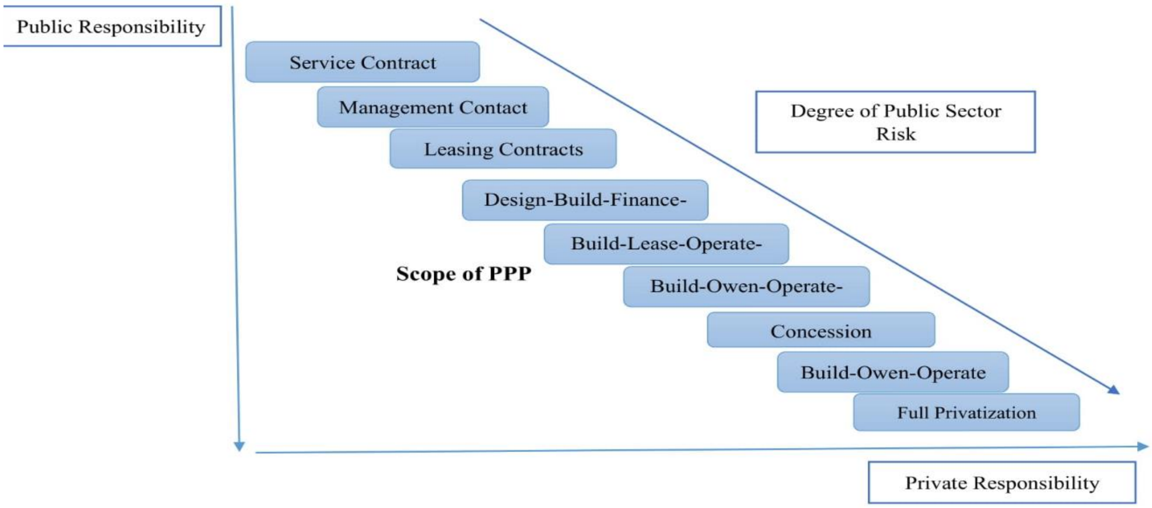

Figure 2.1 Scale and Scope of Private and Public Responsibility

Source: Jens K. Roerich, 2014

The figure 2.1 above shows the level of responsibilities for both public and private sector according to the scope of PPP that is utilized.

2.2.4 Structuring of Public Private Partnerships

Standard PPP designs may become fairly complicated, encompassing contracts between numerous stakeholders such as the government, sponsors of the project, financiers, operators of the project, suppliers, designers, contractors, third-party entities, and clients. The development of an independent business enterprise known as a Special Purpose/Project Vehicle (SPV) is a crucial component of the majority of PPPs. The SPV is a legally recognized organization that executes projects and mediates all contracts among different parties. SPVs are preferred mechanism in situations where there's limited or no recourse, where the lenders are primarily dependent on the project's cash flow and asset collateral as the only method of loan repayment. A simple PPP structure is shown in the figure 2.2 below. However, a PPP's precise structure relies on specific kind of the partnerships as will be discussed later.

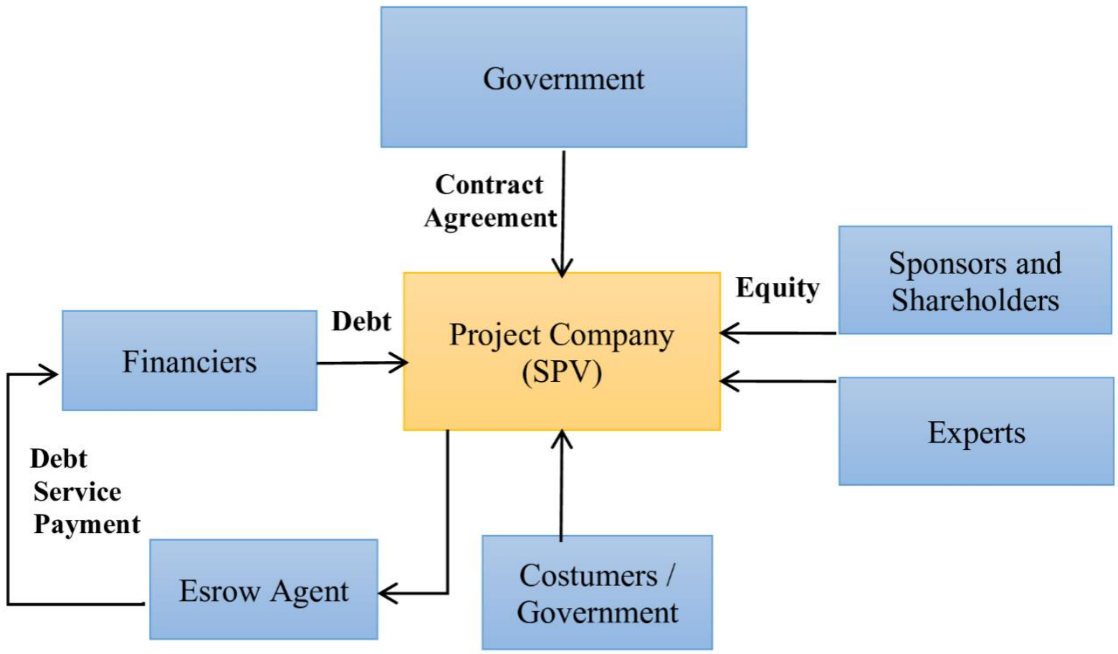

Figure 2.2 Typical Structure of PPP Project

Source: UNESCAP, 2008

Typically, according to the structure above, the SPV is often established by the private concessionaire/sponsor(s), who provides the equity capital over the long term and undertake to oversee the project in return for shares that signify ownership in the SPV. The Government may also invest in SPV's long-term equity capital in exchange for shares. When this happen, the government receives the same rights and interests in the SPV's assets as other shareholders from the private sector, and the SPV is established as a joint venture between the public and private sectors(ESCAP, 2008, p. 14)

In certain instances, governments may wish to guarantee their continued involvement (with or without controlling stake) especially in the management and operation of infrastructure assets, particularly those with strategic importance such as ports and airports, or those requiring a sizable financial input from the state. Under these circumstances, a joint venture is a feasible option. A joint venture is an operational corporation that is co-owned by a government body, a private entity, or a group of private companies (this could include multiple entities, including foreign companies if authorized by legislation). The SPV is frequently created as a partnership between an expert construction firm and a service operations firm that have the capability of running and maintaining the project. (UNESCAP, 2008, pp. 14-15)

"Structuring a public-private partnership (PPP) project" refers to determining the responsibilities, rights, and risks for each participant in the PPP agreement. The contract specifies this allocation in great detail. the project structure usually evolves through an extended process, instead of immediately drafting an exhaustive contract. The process starts by refining the initial project concept into essential commercial terms which includes an overview of the expected outcomes, the obligations and risks each party will assume, and the method by which the private party will be compensated. These primary commercial terms are usually comprehensive enough to allow stakeholders to evaluate the proposed PPP before devoting the necessary resources to create a detailed draft of the PPP contract (PPPLRC, 2020, p. 38).

The starting point for PPP structuring is the project concept: which includes the project's physical layout, the technology it is anticipated to utilize, the products it will produce, and the beneficiaries. These are often developed before choosing whether to carry out the project as a PPP.

Determining output specification in the PPP contracts is covered in Designing PPP Contracts. The main focus of PPP project structure is the identification and distribution of risks. This makes sense given that many of the PPP Value Drivers listed in PPP Value Drivers are motivated by adequate risk allocation. Consequently, the risk allocation is the root of the other PPP structure components, including the responsibility allocation and the payment system, originating from this risk allocation. For instance, the private party may be allocated the responsibility for managing the risk associated with construction because they are better equipped to handle it. This implies that all decision-making authority and duty should be given to the private party to make all decisions related to construction. The strategy to assign commercial risk to the private entity might be implemented through a user-pays payment system.

In the PPP structure, it is important to identify and rank project risks (Identifying Risks), then explain how risks are allocated (Allocating Risks), and finally explain how the risk allocation relates to other project structure components (Translating Risk Allocation into Contract Structure).

2.2.5 Necessary Conditions for a Successful PPP

2.2.5.1 Political Will

The collaborative endeavors between public authorities and the private sector effectively utilize the unique expertise and operational efficiency of the private sector while also incorporating public supervision to guarantee the achievement of social objectives. However, the success of a Public-Private partnership (PPP) is dependent on a wide range of variables. This section discusses the necessary conditions for a successful Public-Private Partnership (PPP), drawing from relevant academic literature and international best practices. The delivery of infrastructure and services by the private sector is a significant shift from conventional practices. In several societies, the notion of the private sector taking charge of public amenities is unfamiliar. Hence, obtaining support for PPPs calls for strong political leadership (Flor, 2018, p. 78).

Companies seeking to get into a new PPP market seek robust political endorsement from top government echelons, such as the President or Prime Minister. This assurance becomes even more crucial considering they borne have significantly more risk in a PPP compared to standard public procurement contract (World Bank, 2015, p. 119).

2.2.5.2 Robust Institutional, Legal and Regulatory Framework

The establishment of a comprehensive legal and regulatory framework that provides a clear delineation of the roles, duties, expectations of all involved parties and promotes public-private partnerships (PPPs) that is applicable to privately financed infrastructure projects, would enhance private investments in PPP projects, minimize transaction costs, provide suitable regulatory oversight, and establish legal and economic procedures to assist the settlement of contract disputes. Countries that possess robust public-private partnership (PPP) frameworks have a tendency to attract a greater influx of private investment due to their ability to provide a stable and predictable environment (Yescombe & Farquharson, 2018, p. 40).

An effective PPP framework exemplifies strong governance, indicating a government's dedication to sustainable and cost-effective long-term infrastructure investment. Simultaneously, it establishes a transparent legal foundation for PPP projects, mitigating the risk of conflicting laws and regulations. A strong PPP framework demonstrates excellent governance, signals to investors The government's pledge to make sustained investments in infrastructure that is affordable and sustainable, and provides a solid legal foundation for PPP projects that removes the possibility of incompatible laws and regulations (World Bank, 2022, p. 11)

2.2.5.3 Competitive and Transparent Procurement Processes

A transparent, competitive procurement process enhances the credibility of the PPP initiative. Ensuring fairness and openness not only builds trust among potential bidders but also ensures value for money for the public sector (ADB, 2018, p. 25)

Transparent bidding processes with precisely stated bidding requirements draw potential bidders, boosting greater competition and offering better value for the government. while some projects may be granted through direct negotiation to bypass the lengthy bidding duration, such an approach often provides strong position for the private investor during negotiations, this can subsequently cause delays and excessive costs for the government. Therefore, an equitable and transparent procurement procedure is always preferred (Baig, 2017, p. 5).

2.2.5.4 Selecting the PPP Right Project

According to Baig (2017, pp. 7) Not all projects can be executed via PPP. Hence, initiatives must be carefully chosen using sensible economic criteria. The goal of choosing a project for PPP is to guarantee that the investments undertaken provide good value for the money spent. The value for money refers to the optimal available outcome for society when implementing PPP taken into account all benefits, costs, and risks during the lifespan of the project. In this case, value for money means advantages gained from the project surpass its expenses.

2.2.5.5 Sound Project Preparation:

A well-prepared project that is supported by credible financial predictions and feasibility studies is more likely to be successful. In addition to identifying possible risks early, good project planning also allows for effective risk mitigation (Delmon, 2017, p. 42)

2.2.5.6 Risk Allocation:

Successful PPPs transfer risks to the party most qualified to handle them. For instance, the private entity frequently manages construction risk the best. On the other hand, public sector entities could be better suited to take on political and regulatory risks. Effective risk allocation ensures Project viability and longevity (Engel & Fischer, 2010, p. 16)

2.2.5.7 Whole Life Costing Perspective

In PPP projects, the private sector is required to provide services for an extended period of time at the most cost-effective rate. This is due to the knowledge that the cost of long-term maintenance might affect the quality of construction. The private sector thus frequently adopts a "Whole Life Cost" perspective, where they may initially pay slightly more to assure higher quality of construction while reducing long-term expenses (Baig, 2017, p. 9)

2.2.5.8 Stakeholder Participation and Public Support:

Reeves, 2008 believes that gaining public support for PPP initiatives is essential. Stakeholder engagement is also important. By including stakeholders early on in the project, societal concerns are guaranteed to be addressed, lowering the potential of implementation challenges. (Reeves, 2008, p. 81)

2.2.5.9 Effective Dispute Resolution Mechanisms:

PPP contracts have a lengthy lifespan and are complicated, thus disputes are unavoidable. Mechanisms for resolving disputes in a fast, efficient, and impartial manner are necessary to maintain stakeholder confidence and project viability (World Bank, 2022, p. 108)

2.2.5.10 Capable Private Partner

In general, a well-organized public authority is required to guarantee more efficient PPP initiatives; at the same time a capable and powerful commercial partner are needed for a PPP project to be more successful. In this context, a capable private partner is one who has the knowledge and resources necessary to complete PPP projects on schedule and within budget. Given the favorable economic conditions that exist in the developing nation, finding a suitable private partner may not always be difficult; however, this is not the case in developing nations like that. As a result, the participation of locally based private investors is crucial to the development of PPP in the nation. For local developers to manage PPP projects, especially those started at the local government level, it is crucial that the government provide support (Yang & Nisar, 2017, p. 161)

2.2.6 The Characteristic that Make PPPs Different

Public-Private Partnerships (PPPs), which differ from conventional public procurement techniques in several ways, have become a unique approach for delivering public services and infrastructure. Here are several key characteristics that make PPPs unique:

2.2.6.1 Shared Responsibilities:

In contrast to conventional public finance, which assigns full project responsibility to the government, Public-Private Partnerships (PPPs) entail shared duties between public and private entities. In PPP the private sector frequently has responsibilities that extend beyond the scope of construction, encompassing activities such as project design, financing, operation, and maintenance (Hodge & Greve, 2019, p. 48).

The parties involved in a PPP typically agree to share responsibilities for the execution, operation, and management of an infrastructure project through legally binding contract or other arrangement. This partnership or collaboration relies on the area of expertise of each participant and effectively addresses explicitly identified public needs by appropriately distributing risks, resources, duties, and rewards.

It is crucial to stress that a PPP is not a remedy for issues with infrastructure services. Instead, it rather workable strategy for the execution of a preferred alternative solution (ESCAP, 2008, p. 67)

2.2.6.2 Risk Allocation:

In traditional public financing, the government bears the majority of the risks. PPPs, on the other hand, are distinguished by a strategic risk allocation, where risks are delegated to the party most qualified to manage them. According to Engel, Fischer, and Galetovic (2010), this distribution improves project efficiency and could lead to cost savings (Eduardo , Fischer, & Galetovic, 2010, p. 21).

2.2.6.3 Increased Efficiency

When compared to traditional public sector projects, increased efficiency in Public-Private Partnerships is considered as a differentiating feature. PPPs utilize the expertise, innovation, and resources of the private sector to provide public infrastructure or services. By doing so, they often improve operational practices, achieve better project timelines, and enhance value for money. Due to the private sector's drive to maximize return on investment and the strict performance requirements established in PPP contracts, there is an increase in efficiency. The high level of efficiency observed in this context can be attributed to the private sector's strong motivation to maximize return on investment, as well as the stringent performance standards outlined in public-private partnership (PPP) agreements (World Bank , 2017, p. 34)

2.2.6.4 Holistic Approach

According to Ma, Li, & ke, (2019, p. 17), the private sector, by its participation in several project stages such as design, build, operate, and transfer, embraces a comprehensive approach to costing that takes into account the whole lifespan of the project. This method aims to ensure quality is maintained throughout every step (Ma, Li, & ke , 2019, p. 17)

2.2.6.5 Enhanced Innovation

Due to the highly competitive nature of public-private partnership (PPP) bidding processes and the long-term commitment involved, the private sector is motivated to bring creative solutions, hence promoting efficiency and potential reductions in costs (Roumboutsos & Anagnostopoulo, 2008, p. 758)

2.2.7 Advantages and Disadvantages of Public Private Partnership

According to World Bank Report, both developed and developing nations have a renewed interest in public-private partnerships as a result of the 2008 financial crisis. Governments are aware of the importance of infrastructure investment in promoting economic growth despite constraints on public resources and budgetary flexibility. They are therefore increasingly turning to the private sector as a supplemental and alternative source of finance for funding the budget deficit. Governments are looking at collaborations with business entities (World Bank, 2015, p. 11)

Public-private partnerships (PPPs) have grown in popularity as a cooperative strategy for tackling social difficulties in recent years. PPPs have the potential to provide improvements to infrastructure, services for the public, and initiatives to boost the economy by fusing public resources and experience with private sector creativity and efficiency. To guarantee the effective implementation of PPPs, it is crucial to take into account both the potential advantages and risks related to these agreements.

2.2.7.1 Advantages of Public Private Partnership

A. Increased Efficiency and Innovation

Empower governments to carry out projects at every stage of their lifespan in an efficient and effective manner. This entails making sure that (i) environmental, social, and inclusive aspects are taken into account and adequately monitored and addressed, as well as (ii) financially responsible and environmentally conscious strategies are implemented in alignment with public investment and spending management systems (World Bank, 2015, p. 16)

Involving the private sector with the Public sector frequently results in enhanced service delivery and lower costs through increased efficiency, new technology, and management techniques (Almeida, Cassang, Lin, & Abe, 2020, p. 12) As an illustration, the building of the Melbourne CityLink project in Australia was finished earlier than planned and on budget, the private partner used cutting-edge technology and building techniques, which shortened construction deadlines and reduced costs. attributing the credits of this accomplishment to the cooperation between the government and private sector (Cox, 2014, p. 3)

B. Risk-sharing and Financial Leverage

Public Private Partnerships offer governments the chance for financial and risk-sharing with the Private Partner. Governments can shift a portion of the expenses and related risks to the private market by collaborating with private entities. Private partners that are motivated by profit incentives provide investment money and take financial risks, putting less strain on public finances. This would certainly enable government to utilize the resources of the private sector, Financing important initiatives and the construction of infrastructure that could otherwise be postponed off or abandoned owing to budgetary constraints. Public Private Partnerships allow Governmental organizations, especially those with limited financial resources to have access to sources funding. It provides a chance for the public sector to redistribute its current resources (World Bank, 2022, p. 14).

C. Improved Project Life-Cycle Management and Quality

When the private sector is involved in a project's design, construction, and operations, it brings important experience that can help provide better outcomes and improve long-term management. Private partners are often motivated by strong incentives to uphold asset integrity and optimize performance, leading to enhanced service levels (OECD, 2012, p. 13). Incorporating private sector expertise into project design, construction, and maintenance can result in better long-term value for the general public. Involvement of Private sector would often increase and track productivity, raise the level of quality of public services, and use effective management techniques for developing and monitor such services (Cuttaree & Perrott, 2011, p. 42)

D. Faster Project Delivery

PPPs can shorten project deadlines and expedite project timelines which is essential for addressing urgent social requirements by streamlining decision-making procedures and lowering bureaucratic obstacles. Projects can be accomplished more quickly and efficiently by using private sector project management techniques, which benefits the public by allowing for more rapid access to Improved infrastructure or services (Jay, Kim, Shin, & Lee, 2011, p. 39)

***E.* Transfer of Knowledge and Expertise**

Transfer of knowledge and expertise from the private sector to the public sector, as well as training and accreditation of employee working for Contracting Authorities and related Government Entities to manage and run Projects (Jay, Kim, Shin, & Lee, 2011, p. 10). While Public Private Partnerships have many benefits, it's crucial to be aware of any possible disadvantages and challenges this cooperative approach may present.

2.2.7.2 Disadvantages of Public Private Partnership

A. Limited Public Control and Accountability

The engagement of private entities in the provision of public services raises concerns about the possible reduction of public control and accountability. The ability to make decisions might be given to private partners, which would diminish transparency and public involvement in the process of making decision(OECD, 2007, p. 12)

B. Profit-Driven Focus

Private sector partners' primary focus is on making profits, which might be at odds with goals related to providing public services. The pursuit of financial rewards may cause people to put their own interests above those of the general public, consequently reducing the quality or value of service (Grimsey & Lewis, 2004, p. 94)

C. Increased Expenses and Potential Liabilities

Despite the fact that PPPs have the potential to transfer certain financial risks to the private sector, governments may still be subject to potential liabilities. Governments may need to intervene and incur extra expenses or liabilities in situations such project failures or financial difficulties experienced by private partners (IMF, 2006, p. 30). This was seen in Edinburgh Tram project, where the public sector was burdened by contractual disputes and cost overruns (Lowe, 2011, p. 8)

D. Lack of Competition and Market Distortion

The absence of competition and the possibility of market distortion are two risks that might arise from public-private partnerships. PPP contracts might have limited competition depending on their format and length, especially if they are long-term. When a single private organization or a limited number of businesses control the market, the benefits of competition in terms of innovation, efficiency, and value for money are reduced (OECD, 2016, p. 7) For instance, a government may enter into a long-term PPP agreement with a certain private telecoms provider to provide cellar network and high-speed internet access in a particular area. If the deal is exclusive and there are no provisions for competition or market entrance, in this case the Consumer options may be limited and the incentives for innovation may be diminished. in the absence competition consumer costs may increase, and the private partner may be less motivated to invest in infrastructure improvements or consistently raise the quality of its services. Governments must carefully design PPP contracts in these situations, making sure to include provisions for competition and frequently reviewing and evaluating the performance of private partners to reduce the danger of market distortion (IMF, 2006, p. 15)

To maximize the benefits and reduce possible risks, governments must carefully weigh the risks and rewards of PPPs and implement strong governance systems, open procurement procedures, and efficient risk management measures. For the benefit of society as a whole, successful PPP implementation depends on striking a balance between public interest and private sector participation.

2.3 Case Studies: Overview

Public-Private Partnerships (PPPs) have become an effective strategy in diverse sectors across global economies. These partnerships symbolize an inventive method that allows public entities to work with private companies to implement projects that would otherwise pose significant challenges if undertaken by the public sector alone. Below will shed the light on some experiences of implementation of PPP for infrastructure investment.

2.3.1 United Arab Emirates

United Arab Emirates is a nation with visionary leadership and strategically located on the crossroads of the world, has embraced PPPs as a tool to fuel its development goals and diversification strategies. PPPs play a crucial role in the United Arab Emirates government's strategy for infrastructure enhancement. The government places substantial focus on expanding the private sector and boosting national employment figures. PPPs facilitate the creation of strategic projects and services, promising cost-efficiency and guaranteed quality. In line with the UAE's commitment to tackle climate change, as outlined in the UAE Vision 2030, PPPs have been successfully applied in the renewable energy sector. Additionally, other sectors, such as social infrastructure, are also gaining more visibility within the PPP framework (Sambidge, 2022)

The legal and institutional framework of PPP in the United Arab Emirates operates with authorities on two levels: federal and individual emirates. Federal authorities hold jurisdiction over the entire UAE, which encompasses all seven emirates. Simultaneously, each emirate maintains its own authority to establish laws and delegate the enforcement of these laws within its territorial boundaries (Hanson & Oliver, 2023, p. 2).

In 2017, the UAE Cabinet introduced resolution (1/1), focusing on outlining the protocols for cooperation between federal organizations and the private sector. The resolution, essentially a comprehensive manual, aims to expand the methodologies for enhancing strategic infrastructure projects and boosting service quality. Furthermore, it presents a broad structure for the various stages of project progression when collaborating with private entities.

In September 2022 The UAE's Cabinet of Ministers revealed a federal law intended to control Public-Private Partnerships (PPPs). It's unclear how exactly this law will affect present PPP regulatory structures because it's not obvious whether any of the existing systems will be repealed or changed. This law's main objective is to promote PPP adoption in emirates other than Dubai and Abu Dhabi, who already have established PPP legislation and regulatory frameworks of their own.

The regulatory framework in Dubai:The Government of Dubai has issued Local Law No. 22 of 2015, which regulates partnership contracts between the public and private sectors in the emirate. The objective of the law is to encourage private sector involvement in project development and enhance investments across various fields. As outlined in the provisions of this local law, a partnership project can be suggested by any government or private sector entity. The law also establishes specific conditions for partnership contracts between the two sectors, including: The project should be economically, financially, technically and socially feasible. The law does not allow the partnership contract to exceed (30 years) from the date of implementation (Hanson & Oliver, 2023, p. 4).

As per the Law No. (22) of 2015 Regulating PPPs in Dubai. The law provides a framework for PPPs by specifying project selection criteria, partnership types, partnership agreements, dispute resolution mechanisms, and financial management guidelines to ensure transparency and fairness. The law mandates that Partnership Projects must serve the interest of both the Government and public, be economically, financially, technically and socially feasible.

Partnership types that could be implemented include service contracts, management contracts, BOT contracts, BOOT contracts, lease contracts, franchise agreements or any other type agreed upon by both parties. Additionally, the law provides guidelines for financial management and dispute resolution mechanisms to ensure transparency and fairness in public-private partnerships in Dubai (Law No. (22) of 2015).

The regulatory framework for PPP in Abu Dhabi:The Government of Abu Dhabi has approved two new laws; Abu Dhabi Law No1 of 2019 for the establishment of ADIO ((Abu Dhabi Investment Office)) and Abu Dhabi Law No 2 of 2019 for governing the operation of public-private partnerships in the emirate (Abu Dhabi PPP Law). It was a positive milestone and an obvious indication of willingness to increase the usage of Public Private Partnership in the Emirate of Abu Dhabi when the PPP Law was adopted. ADIO responsibilities also include serving as the private organizations' point of contact with regard to PPP investment in the emirate and assisting government entities (procuring entities) with the ongoing management and oversight of PPP projects in Abu Dhabi. PPP initiatives in the emirate can be supervised and made easier to implement due to the wide range of authority held by ADIO. Every agreement the government has with the private sector in the Emirate of Abu Dhabi are subject to the PPP Law in the emirate, with the exception of partnership agreements that was made before the law's effective date (Law No1 of 2019) the United Arab Emirates, notably Dubai and Abu Dhabi, have shown encouraging advancements in their engagement with Public-Private Partnership (PPP) initiatives. In 2021, during the Dubai International PPP Conference, the Dubai Department of Finance revealed plans for new PPP projects valued at around US$6.81 billion. These initiatives involve 30 projects spanning infrastructure, transport, and urban development. A long-term care center is currently being developed in Dubai through a PPP arrangement by the Dubai Health Authority.

In parallel, the Abu Dhabi Investment Office (ADIO) disclosed in February 2020 their intention to implement infrastructure projects worth US$2.72 billion using the PPP model. In cooperation with the Abu Dhabi Department of Municipalities and Transport, ADIO awarded the second phase of the Road Lighting LED PPP project in December 2022 to a joint venture, Nojoom, established by EDF Renewables and ENGIE. Moreover, in May 2022, the Zayed City Schools PPP was awarded to a consortium spearheaded by BESIX and Plenary Group, an initiative undertaken by ADIO alongside the Abu Dhabi Department of Education and Knowledge.

Both emirates are continuing to encourage PPP tenders in the power and water sectors, with ongoing and anticipated projects including the Mirfa 2 Independent Water Project, Shuweihat 4 RO Independent Water Project, Abu Dhabi Waste to Energy Power Plant, Al Ajban Solar Photovoltaic Power Plant (PV 3), and the Abu Dhabi Islands Independent Water Project in Abu Dhabi. Meanwhile, Dubai has recently procured PPPs in similar sectors, including the Hassyan Sea Water Reverse Osmosis Plant. Sharjah is also in the process of acquiring a seawater reverse osmosis plant at Hamriyah.

The diverse array of available PPP structures in the UAE, outlined in the Public Private Partnership Provisions and Procedure Manual (PPP Manual) issued by the federal government of the UAE is evidence of the flexibility of the legislative framework in the UAE relating to PPPs. Simple service or management agreements to more elaborate ones are available, and some examples include (but are not limited to) 1. finance and lease; 2. Build, Lease and Transfer; 3. Build, Operate and Transfer; 4. Build, Own and Operate; 5. Build, Rehabilitate, Operate and Transfer; 6. Design, Build, Finance and Operate; and 7. Own, Operate and Transfer.

2.3.2 Kuwait

During the first decade of the twenty-first century, interest in public-private partnerships (PPPs) in Kuwait started to pick up significantly. During this time, the necessity of diversifying the nation's heavily dependent on oil economy became increasingly clear. Despite the enormous wealth produced by oil profits, it was understood that relying too heavily on one resource posed serious economic concerns, particularly given the volatility of oil prices and the global movement towards more sustainable and renewable energy sources.

In addition, there was an urgent necessity to upgrade and modernize Kuwait's infrastructure. The accelerated pace of urbanization, increasing population, and evolving demographics in the country, along with its citizens' desire for an elevated living standard, called for significant enhancements in key sectors like energy, water, transportation, and housing.

The legal and institutional framework: Consistent with the general orientation of the Government of the State of Kuwait towards stimulating the role of the private sector developmental projects through public-private partnership program, complementing of the private sector's vital and effective role in driving sustainable development. The government of the state of Kuwait has developed a regulatory framework governing PPP projects' implementation. This framework, established through a series of laws and regulations, aims to uphold the highest standards of the private sector's vital and effective role in driving sustainable development. Taking into consideration that successful PPPs require a robust regulatory environment, the government has taken initiatives to establish a comprehensive legal and institutional framework.

In 2008, the Government of Kuwait enacted Law No. 7, which marked the official start of its path towards the institutionalization of Public-Private Partnerships. This legislation established the foundational legal framework for PPPs, outlining the duties and obligations of both public and private entities, defines the role of the Council of Ministers, the Higher Committee for PPP, and the technical body which is Kuwait Authority for Partnership Projects “KAPP” to study development projects, initiatives, and public agencies that wish to put forward a project for investment in accordance with the partnership system, as well as putting in place procedures for the launch, implementation, and supervision of projects.

In 2014, Kuwait further strengthened its commitment to PPPs with the passage of Law No. 116, which replaced and improved the Law No. 7 of 2008. The new law aims to offer a more comprehensive and detailed framework for PPPs, providing clearer procedures, enhancing transparency, and establishing more effective mechanisms for risk allocation and dispute resolution. The provisions of Law No. 116 of 2014 include:

- Establishment of “Higher committee for Public Private Partnership Projects” which was established based on this Law. This committee is responsible for approving the projects proposed by KAPP and consists of representatives from various government bodies.

- Establishment of the Kuwait Authority for Partnership Projects (KAPP) which was previously identified as the Partnerships Technical Bureau, KAPP is considered as the main governmental body responsible for managing the execution of PPP projects in Kuwait. KAPP’s main role includes identifying potential PPP projects, preparing feasibility studies, managing the bidding process, and overseeing project execution.Furthermore, KAPP provides a range of services including project management, technical support, and various other assistance to ensure the successful implementation of PPP projects.

According to an ambitious plan unveiled by the government of Kuwait in 2017, the government of Kuwait is intended to emerge as a regional financial and cultural hub by the year 2035. This vision is articulated in the Kuwait National Development Plan, known as "New Kuwait," which delineates the country's long-term strategic development roadmap., captures this progressive vision. The main goal of the New Kuwait program is to make Kuwait into a hub of financial and commercial activity that attracts investors from across the world. This vision includes a scenario in which the private sector dominates the economy, encouraging competition and supporting high levels of production. A pivotal strategy towards fulfilling the program's goals involves redefining the state's role to pave the way for more active private sector participation.

The development of the legal structure for PPPs is a proof of the government's commitment and strategic plan for fostering PPPs.

The Supreme Council for Planning and Development has committed to executing and advancing approximately 38 large-scale infrastructure projects during the 2020-2021 fiscal year. A budget ofUSD Billion 26.5 has been allocated and is being deployed for these 38 projects, some of which are strategic ventures intended to support the New Kuwait program. While the government is directly procuring some of these projects, others are being undertaken in collaboration with the private sector, signifying the integration of PPPs.

The most substantial of these undertakings are primarily in the oil industry, including notable projects like the Clean Fuels Project, Al Zour Petrochemicals Complex, the Al-Zour Refinery, and other projects such as Az-Zour North IndependentWater and Power Project (IWPP), Kuwait International Airport Terminal 2.

- Al-Zour Refinery: This project entails the building of a brand-new oil refinery in Kuwait possessing capacity of 615,000 barrel-per-day. It is being created by a group of national and international businesses, and it is valued at USD 13 billion.

- Az-Zour North Independent Water and Power Project (IWPP): This Project is being developed by a consortium of local and international companies. The private sector (comprising ENGIE, Sumitomo Corporation, and Abdullah Hamad Al-Saqer & Brothers Company) owns 40% of Shamal Az-Zour Al-Oula Company for the construction, implementation, operation, management, and maintenance of the Az-Zour North Station, Phase One. The remaining shares are owned by the General Authority for Investment (5%) and the Public Institution for Social Insurance (5%). The Authority for Partnership Projects between the public and private sectors offered 50% of the shares for public subscription to Kuwaiti citizens.

According to Biygautane (2016), the implementation of Public-Private Partnerships (PPP) in Kuwait signifies the advent of a transformative period characterized by the ability to enhance the nation's infrastructure, elevate the quality of public services, and invigorate the economy.

2.3.3 Qatar

In 2008 the government of Qatar has enacted Emiri Resolution No. (44) setting the country's future roadmap under QNV 2030The State of Qatar's extensive development outlook, encapsulated in "Qatar National Vision 2030," underscores that achieving progress and prosperity for citizens is the central objective of comprehensive development. Qatar Vision 2030 strives to elevate Qatar into an advanced nation capable of sustained development, ensuring a decent life for its people across generations.

According to Qatar National Vision 2030, it is anticipated that projects valued at approximately US$85 billion will be granted. In the oil and gas project market, projects worth more than US$12 billion are either in progress or in the planning stage. Major developers like Barwa, Qatari Diar, and Msheireb Properties have already significantly contributed to Qatar's development by completing substantial projects or bringing them near completion. The Qatari government's commitment to PPPs is further evidenced in its National Vision 2030, a comprehensive plan to diversify the economy away from oil and gas. This vision outlines an increased role for the private sector in the economy and identifies PPPs as a key mechanism to achieve this. It is expected that the emphasis on Public-Private Partnership (PPP) projects will maintain and even accelerate this growth trajectory.

The legal and institutional framework: in order to promote and facilitate PPPs.The Qatari government passed the PPP Law No. 12 of 2020. With the intention of bringing in more international and domestic investment and diversifying the economy of the nation, this law establishes the regulatory framework for the creation of PPPs in Qatar. Contracts for the finance, development, management, operation, maintenance, and enhancement of a project entered into between public and private parties.

According to this law, Qatar's PPP projects are implemented by the Ministry of commercial and industry under the supervision of the Public-Private Partnership Department. The department's duties include formulating general policies, advising the public sector on how to conduct PPP projects, and aiding with the creation of feasibility studies and tender papers.The law stipulates that the partnership between the government and private sectors represents an agreement between the government entities and the private sector to implement and finance business or providing services, according to the partnership contract in accordance with the provisions of this law and the general partnership policy that is approved by the Council of Ministers based on proposal by the Minister.

According to the Law No. 12 of 2020of Public Private Partnership.The PPP shall be in accordance with one of the following Models: 1- Allocating land through lease License for development through usufruct granted to the private sector; 2- BOT; 3- BTO. 4- BOOT; 5- OM; 6- Any other system approved by the Cabinet of Ministers, according to the proposal commercial and Industry’s Minister.

Since the official release of the new PPP law (Law No. 12) in 2020, Qatar has made progress in its quest for economic diversification. One example is the signing of the Al Wakrah & Al Wukair Sewage Plan project, which had a total project cost of QAR5.4 billion (US$ 1,9 Billion) and secured QAR2.7 billion, or 50% of the project's capital funding, through international private finance.

A PPP pilot project to build 45 new public schools across the state of Qatar at with budget of more than $1 billion was started in January 2021, providing 34,000 extra student seats. This Pilot stands as a milestone since it represents an initial significant and large effort by the Qatari government to implement a PPP approach for a project beyond the water and power infrastructure sub-sectors, which fall under the purview of the Qatar Public Works Authority and the Electricity and Water Authority.

According to Public-Private Partnership Department in Ministry of commercial and industry The State of Qatar has provided an opportunity for the private sector to participate in the design, construction, operation and maintenance of two health centers located in Khalifa city (reconstruction) and Umm Ghuwailina (replacement), A budget of QAR 476 Million (estimated US$ 130 million) has been allocated for these projects with the aim of providing enhanced primary care to patients. This opportunity will present the benefits of partnership with the private sector, specifically in terms of providing high-quality, patient-centered care with better health outcomes for the population.

Qatar has heavily used PPPs for the FIFA World Cup 2022 Infrastructure, the nation needed to build new stadiums and other infrastructure, and collaborations with private organizations were essential to making this happen. As per the information provided by the Ministry of Commerce and Industry, the Qatari government is actively planning to introduce additional projects via the Public-Private Partnership (PPP) model. These projects which the government of Qatar is attempting to implement using the PPP model will reportedly feature cutting-edge technology and industries, such as endeavors related to solar energy and the development of storage spaces in the new free zone region. The newly introduced PPP legislation will be applicable to all sectors and industries.

2.3.4 Saudi Arabia

The concept of engaging in collaboration with the private sector has been documented in official Saudi government records since the late 1970s. Public-private partnership initiatives have been intermittently considered in the Kingdom of Saudi Arabia. With no sign of clear interest in this area in the past, due to the nation's reliance on oil and not suffering from any financial pressures that necessitating private sector involvement, predominantly the government depended on government funding for various infrastructure projects. However, with the decrease in oil prices in recent years and the occurrence of financial upheavals on a global scale, such as the 2008 financial crisis. The partnership initiatives between the public and private sectors have gained significant attention in the context of Saudi Vision 2030. This is due to their crucial role in driving the country's growth and facilitating the implementation of new financial management regulations. Consequently, the government was compelled to seek the expertise and skills of the private sector in this area, leading to the establishment of a legislative framework that is relatively conducive to this objective. Consequently, the ruling constituted a comprehensive framework aimed at regulating the private sector's contribution to the supply of power and water.

The Saudi National Centre for Privatization (NCP) published a discussion draft of the "Private Sector Participation Law" (PSP Law) in July 2018. This legislation governs both public-private partnership (PPP) programs and asset sale transactions

(Privatization). The NCP also extended an invitation to the general public to provide their comments on the document.

The PSP Law received approval from the Council of Ministers in March 2021 and afterwards underwent publication. The Kingdom of Saudi Arabia has a longstanding history of implementing public-private partnerships and privatization initiatives. However, it is crucial to remember that these initiatives have been subject to the regulations outlined in the Government Tenders and Procurement Law, unless they have been explicitly exempted from its scope. The PSP Law aimed to establish a structured framework that enables the public sector to engage in direct participation with a project firm, while also preserving the interests of private partners involved in the venture.

Additional factor that renders collaborations between the public and private sectors an appealing choice is the guarantee of leveraging specialized expertise to ensure the delivery of superior quality services (e.g., transportation, housing, health care, and education) in a more expedient and more efficient service provision.

Saudi Vision 2030, which was unveiled in April 2016, seeks to increase the amount that the private sector contributes to the GDP from 40% to 65%. In light of the growing need for services and a shortage of supply in several economic sectors such as housing, healthcare, and education, it made sense for the government to concentrate on cultivating collaborations between public and private sectors. The goal of this strategy is to increase the private sector's influence and participation in the Saudi economy.

According to the Global Infrastructure Index 2020, Saudi Arabia is recognized among the most attractive markets for infrastructure investments. The county has experienced an infrastructural growth comparable to that of many other developing nations worldwide. The first PPP project in Saudi Arabia was signed in 2011 to finance, develop and operate the expansion of Prince Muhammad bin Abdul-Aziz Airport in Medina. Despite the absence of a clear and comprehensive legal framework, the successful completion of this project was a reliable precedent and a guide for potential investors, which led to the announcement of more Public-Private Partnership projects in airport construction. The value of these projects, which are still in various stages of contracting, has reached 6.17 billion Saudi riyals ($ 7.4 billion)According to statistics sourced from

MEED Projects, Saudi Arabia emerges as a leading country in the Middle East and North Africa area in terms of the value of public-private partnership initiatives. The kingdom has initiated a total of 18 projects, with an estimated value of around $42.9 billion. These projects represent approximately 21% of the whole value of such initiatives throughout the area.

2.3.5 Egypt

Egypt is widely recognized as a leading nation in the realm of public-private partnerships, having embraced Anglo-Saxon partnership models across diverse sectors including education, healthcare, wastewater management, and transportation infrastructure development. The Egyptian government, recognizing the private sector's crucial role as locomotive of development for any government, enshrined this belief in the 2014 Constitution of Egypt. Article 36, which detail the economic framework, stipulates that it is the responsibility of the state to promote the involvement of the private sector in fulfilling its social obligations, contributing to both the national economy and societal welfare.

The preexisting legal structure was not favorable to the growth of several initiatives. Therefore, in 2006, the Egyptian government implemented a comprehensive plan aimed at fostering partnerships between public and private sector organizations, with a specific focus on infrastructure development. This led to the creation of a specialized entity, known as the Public-Private Partnerships Central Unit (PPPCU), under the Egyptian Ministry of Finance in 2010 by passing a new law. The specific law pertaining to collaborations between the public and private sectors was officially enacted and approved by Parliament in. This was marked by the issuance of Law No. 67 of 2010, which established regulations for the involvement of the private sector in infrastructure projects. As Prime Minister’s Decision No. 238 of 2011 was also issued containing the executive regulations of the law.

the Law mandated the establishment of a Supreme Committee for PPP Affairs, which will operate under the Prime Minister's jurisdiction. The primary objective of this committee is to develop a comprehensive national PPP policy. Additionally, it is responsible for approving the utilization of the PPP framework for projects involving administrative authorities. Furthermore, the committee is tasked with monitoring the allocation of financial resources to fulfill the obligations arising from PPP contracts.

The PPP Central Unit (PPPCU) was created to serve as a hub of expertise, responsible for providing technical, financial, and legal advice to both the Supreme Committee for PPP and the PPP satellite within the Administrative Authority. Its major purpose is to verify that proposals for partnership projects are founded on a solid analysis of the actual needs and the projects' value.

Aligned with the governmental agenda to stimulate the economic growth of the country and promote the advancement of energy and infrastructure, the proposed approach involves harnessing the expertise, knowledge, and efficiency of the private sector. This is aimed at enabling the prompt and cost-effective acquisition of public utility services. It's noteworthy that Egypt has seen a significant increase in public-private partnership projects. According to World Bank data, the transportation sector represented around $5 billion of the $5.23 billion total spent on public-private partnerships in infrastructure in 2021. Notably, investments in the railway project reached $4.5 billion.

In 2021, Egypt allocated $49 million towards a public-private partnership in waste and sanitation treatment at the Jabal al-Asfar water treatment plant. A four-year contractual agreement was established, wherein the French infrastructure company Suez and Arab Contractors have been assigned the responsibility of overseeing the operations of the plant and executing strategies to improve its energy efficiency. A public-private partnership agreement was also signed for the Kom Ombo solar power plant during the year 2021 at a cost of $165 million for a solar power plant with a capacity of 200 megawatts, which is a cooperation between the Saudi renewable energy company ACWA Power, the Authority for New and Renewable Energy and the Egyptian Electricity Transmission Corporation under Build Own and operate model for 25 years.

2.3.6 United Kingdom

The United Kingdom has been extensively recognized as a noteworthy nation in terms of private capital investment in infrastructure during the past few decades, and has emerged as a global leader in the delivery of transport infrastructure (Siemiatycki, 2011, p. 12) According to Ghobadian et al (2004), the UK government asserts that an effective framework may be established to deliver public services of superior quality and long-term viability through a collaborative approach that integrates the best of the public and private sectors in a partnership.

Since the 1990s, the country has implemented and evolved PPP models. The Public-Private Partnership in the UK as it exists today began in the 1992 with PFI. Following the revocation of the rules which prevented the private capital from financing public assets (Ghobadian, et al., 2004, p. 89).The Private Finance Initiative PFI, was implemented for the first time in the United Kingdom in 1992; it represented a departure from the Ryrie Rules in that it allowed for private funding, which would be additional to public funding (House of Commons, 2011, p . 7).

In 2012, the government introduced a modified version of the Private Finance Initiative (PFI) known as PF2. This revised model closely resembled the original PFI, but incorporated several additional modifications aimed at enhancing efficiency, promoting transparency, and encouraging the utilization of alternative sources of institutional capital for financing. The United Kingdom government maintains its steadfast commitment to the adoption of PPP as a means of facilitating the allocation of investment towards infrastructure initiatives. The Office for National Statistics has provided evidence highlighting the substantial utilization of PPP as a means of implementing investment infrastructure initiatives.

Based on the 2018 report by Office for National Statistics, the United Kingdom witnessed the existence of 740 public-private partnership (PPP) projects, which collectively accounted for a capital value amounting to £60 billion and the current value of future PPP payment is at £150 billion. According to Inderst (2017, p.87), there is a substantial requirement for infrastructure in the United Kingdom in the forthcoming years. It is anticipated that the demand for economic infrastructure would rise to around 3-3.5% of the country's GDP, equivalent to £55-65 billion annually. Additionally, social infrastructure is projected to account for 1-1.5% of the GDP.

2.3.7 Turkey

Turkey began experimenting with PPP in the early 1980s, and despite the fact that the program did not achieve the desired progress as planned, Turkey continues working toward improved PPP practices. This makes Turkey an exemplary case for an emerging nation that has some experience in adopting and executing PPP policies, yet with more to learn.in its 2012 vision statement. The International PPP Platform in Turkey highlights that Turkey seeks to emulate the UK's methodology and emphasizes the UK as the primary implementer of effective PPP programs. (UNDP,2006, P .39) and the Ankara Metropolitan Municipality (2011) have underlined that Turkish ministries and public institutions have facilitated this by hosting a variety of events and inviting UK specialists to share their expertise and experience.

Public-Private Partnerships (PPPs) in Turkey have a history that dates back to the 1980s, marked by the "Decisions of 24 January 1980." This period initiated a significant shift towards economic liberalization, focusing on transitioning from import substitution to export-led growth. These changes were actually intended to stimulate the market and foster competition as part of a larger plan for economic stability (Orkunoğlu, 2010, p. 8).

Reviving Turkey's economy was the primary goal of the decisions executed in response to the global fuel crisis, which involved liberalizing pricing and, as a long-term plan, privatizing several state-owned enterprises. To develop a comprehensive privatization strategy, the government collaborated with entities such as Morgan Guaranty Bank of New York. Around the same time, Turkey entered into its 13th and 14th stand-by agreements with the IMF in 1983. Turkey and other emerging nations were subject to requirements from international lenders, which included stringent monetary policies, currency depreciation, and steps to lower public debt. International organizations, especially the IMF, emphasized that a major contributor to the government's budget deficit was the public sector's inefficiencies, which were frequently monopolistic or dominating in several industries (Kahyaoğulları, 2013, pp. 253-254)

Following the advice of foreign organizations and in line with the worldwide ideological change of the 1980s, the Turkish government initially initiated a major privatization drive. Subsequently included Public-Private Partnerships as an integral part of this broad privatization agenda (Orkunoğlu, 2010, p. 10)..Law No 3096, passed in 1984, was the first law governing PPP particularly in the electricity sector. The main focus of these early PPP models was concession agreements.

Currently the provision of public services by the private entities is primarily facilitated by several models, including Build-Operate-Transfer (BOT), Build-Operate (BO), Build-Lease-Transfer (BLT), and Transfer of Operational Rights (TOR) (EKER, 2007, p. 62). Among the many types of agreements, the BOT agreements exhibit the most prevalence, with the BO agreements closely following behind. In Turkey, Public-Private Partnership (PPP) ventures are primarily focus on investments in key sectors such as transportation, energy, water supply, and general administration. Additionally, following the enactment of Law No. 5396 in 2005, pertains to PPP applications in healthcare, the government has initiated a variety of PPP projects associated with social infrastructure.

Since the 1980s, the regulations governing Public-Private Partnership models in Turkey have been delineated in a range of distinct primary and secondary legislation. Currently, PPPs are governed not only by the Privatization Law but also by other sector-specific regulations, such as Law No. 4283, Law No. 3096, Law No. 3996, and Law No. 3465 (Kahyaoğulları, 2013, p. 255). The coordination of the PPP system involves entails a multifaceted network of regulatory entities, which encompass the Finance Ministry, Privatization Administration, State Planning Organization, Public Procurement Agency, Line Ministries, and sometimes municipalities. The participation of these entities in the PPP process is contingent upon the type of PPP and the specific sector in which it operates, with typically two or three institutions that assume a role in each PPP initiative.

Turkey received the second highest ranking in private sector participation according to the World Bank's infrastructure database for the year 2015. Turkey comes second after Brazil in the study, which covered 139 emerging countries. The value of the 17 new Turkish projects, which include the privatization of energy plants and the construction of new highways and new ports, amounted to investments worth 12.5 billion US dollar (Republic of Türkiye Investment Office - Invest in Türkiye, 2023)

Between 2003 - 2015, Turkey allocated a total of 253.3 billion Turkish lira towards the development of transportation and communication infrastructure. Out of this substantial investment, 23.1 billion Turkish Lira were specifically designated for projects involving partnerships between the two sectors. The Government of Turkey involves the private sector in establishing infrastructure investment projects, especially the transportation sector, and among the most important projects between the public and private sectors the following:

Marmaray Project: It is a railway transportation project in Istanbul. It is a double canal dug at a depth of 50 meters under the Bosphorus and has a length of 14 km. The Marmaray Project was designed to transport 75,000 railway passengers per day, per hour, in both directions between Europe and Asia. In July 2004, a Turkish-Japanese partnership headed by Taisei Corporation was given the construction contract for the project. The Japanese business Kumagai was a part of the collaboration and the Turkish companies Gama Industries and Nurol Construction. The Sultan Selim I Bridge: Was constructed to connect the Asian and European sides of Istanbul. Construction began in 2013 and was completed by August 26, 2016. The project was undertaken by two companies İçtaş& Astaldi JV) Spanning 2,164 meters across the Bosphorus Strait. Avrasya Tunnel: It is a car tunnel located in Istanbul, connecting the Asian and European sides under the bottom of the Bosphorus Strait. It was officially opened on December 20, 2016. The Avrasya tunnel extends over a distance of 14.6 km, and the cost of the project which was granted to private local and foreign companies under BOT model About one billion 245 million and 122 thousand dollars. The new airport in Istanbul: In May 2013, a joint group of Turkish companies won one of the tenders for implementing the third airport project in Istanbul. These companies will pay 22.1 billion euros to the government in addition to taxes in exchange for obtaining the right to operate the airport for 25years. Invest in Türkiye(www.invest.gov.tr, 2023)

2.4 Conclusion

This chapter included a comprehensive exploration of Public-Private Partnerships, with a specific emphasis on their implementation, best practices, and the distinct opportunities and obstacles they pose for Libya. The chapter started by providing a clear understanding of PPPs, revealing their historical development and studying diverse forms, such as Service Contracts, Leasing Contracts, and Build-Operate-Transfer (BOT) models, among other examples. Key to the success of PPPs, as discussed, are factors such the presence of political willpower, a robust institutional and legal structure, transparent procedures for procurement, and effective project selection and preparation. The unique feature of Public-Private Partnerships is in their approach towards shared responsibility, risk allocation, efficiency, comprehensive planning, and innovation.

The chapter critically balanced the advantages of PPPs, including efficiency and enhanced project management, in comparison to the disadvantages associated with limited public oversight and potential market distortions. The aforementioned paradox highlights the necessity of careful planning and implementation of Public-Private Partnership initiatives. Considerable focus was placed on the utilization of PPPs in various global contexts in both developed and emerging nations, including Libya. The best practices framework for PPP implementation emphasizes the significance of policy and legal frameworks, organizational responsibilities, and financial management techniques.

In the context of Libya, this chapter identified significant opportunities for PPPs in the realm of infrastructure. These chances arise from several factors, including the country's reconstruction needs, its abundant natural resources, advantageous geographical position, international support, technological advancements. However, it also acknowledged the presence of obstacles such as inadequacies in organizational and institutional structures, legal barriers, and concerns over transparency that must be effectively addressed in order to ensure the successful implementation of PPPs. Concluding by presenting case studies from several countries, including the UAE, Kuwait, Qatar, Saudi Arabia, Egypt, the UK, and Turkey. These case studies give a comparative perspective that can provide valuable lessons and insights relevant to Libya's context.

In essence, while PPPs offer a promising avenue for Libya's infrastructure development, their success largely depends on a deep comprehension understanding of their complexities, customizing approaches to fit Libya’s specific circumstances. and assimilating learning from both regional and global experiences. The chapter highlights the potential of PPPs in Libya, emphasizing the importance of aligning policy, strategy, and execution for their successful implementation.

CHAPTER III

MOTIVATION FACTOR FOR PUBLIC-PRIVATE PARTNERSHIP ENGAGEMENT

3.1 Introduction

This chapter delves into an examination of several factors that drive the engagement of public-private cooperation, with particular emphasis on four distinct domains. The initial aspect of the study assesses the availability of private capital investment. It evaluates the viability of public-private partnerships as a feasible means of funding infrastructure projects, with a specific emphasis on countries like Libya that face budgetary constraints and fiscal deficits. This first section examines the possible role of private-sector alliances in easing the acquisition of necessary funding for infrastructure development. The next section delves into the availability of contemporary technologies. This statement stresses individuals' frequent possession of novel technologies and skills, which has the potential to significantly improve the efficient implementation of infrastructure projects. This section discusses the potential of public-private partnerships (PPPs) in leveraging technology advancements to improve the quality and efficiency of infrastructure development in Libya.

The third component focus on the efficiency of public investment, development, and operation. it examines the potential advantages of the collaboration between the public and private sectors in enhancing the efficiency of project implementation, decreasing costs, and improving operational efficiency. This section examines the potential of PPP in Libya for enhancing resource allocation and project management, facilitating the effective execution of infrastructure projects. The necessity of transparency, greater competitiveness, and reduced corruption concerns is highlighted in the fourth section. it examines the challenges pertaining to corruption and the luck of transparency in infrastructure projects, while also analyzing the potential contribution of public-private partnerships in addressing these concerns. This section pertains to the worldwide best practices associated with the implementation of public-private partnerships in the domain of infrastructure project financing. The main objective of the chapter is to present an analysis of the factors that motivate individuals and organizations to engage in public-private partnerships in the context of infrastructure progression in Libya. This paper examines the potential benefits and challenges associated with these collaborations and provides valuable insights into internationally recognized strategies that can be applied in the context of Libya.

3.2 Access to Private Capital Investment

The prospect of having access to private financial investment serves as one of the main primary motivators for the adoption of public-private partnerships in Libya. the funding source for infrastructure projects is of utmost importance, given the constraints that governments frequently face concerning their financial resources and budgetary deficits (Al-Sifao & Mohamed, 2022, p. 280). Through forging cooperation between public and private sector, the Libyan government can attract in private investment to back infrastructure efforts, thereby mitigating the financial shortage and facilitating the advancement and realization of imperative infrastructure efforts.

The reality of private capital investment plays an essential role as it improves the motivation factor and provides a significant source of funding for infrastructure projects. Construction of infrastructure projects in Libya has been hampered by a lack of financial resources and the presence of a budget deficit (Abdelkader E. , Zayed , El Fathali, Alfalah, & Al-Sakkaf, 2023, p. 6). in turn, the use of public-private partnerships is of critical significance to address these obstacles. Public-private partnerships are crucially important in addressing the funding deficit by encouraging the resumption of interrupted projects and the launch of new ones, private capital investment is essential in bridging the funding gap.

Furthermore, the increase in private capital investment helps to increase efficiency in this sector of infrastructure development. Private investors tend to have significant knowledge and expertise in project management and financial planning, this would boost Infrastructure projects implementation. This unique combination of expertise and knowledge enhances the success rate of PPPs and ensures that infrastructure projects are completed within stipulated deadlines and budgetary limitations (Kong, Ma, & Lv, 2023, p. 299) The availability of private capital investment has a significant influence on the participation of both sectors in the development of Libya's infrastructure through private-public partnerships.

The main motivation for the adoption of public-private partnerships (PPPs) in Libya stems from the potential to secure private financial investments. The significance of securing funding for infrastructure projects is of utmost importance, considering the inherent challenges faced by governments in terms of their financial resources and fiscal deficits. According to Ullah (2019), the Libyan government has the potential to acquire private funds for the purpose of financing infrastructure projects through the establishment of agreements with the private sector. This approach has the potential to address the current shortfall in funding and enhance the progression and implementation of major development projects (Ullah, 2019, p. 11).

The attraction of private capital via public-private partnerships (PPPs) can be achieved through many methods. Private investors are often attracted to public-private partnerships (PPPs) primarily because of the prospect of generating sustained revenue over an extended duration. Infrastructure projects, such as toll roads or ports, has the capacity to generate sustained revenue by means of collecting user fees or service charges. The numerous types of revenue represent an appealing investment prospect for those seeking stable and predictable returns on their invested capital (Ghorbany , Noorzai, & Yousefi, 2023).Moreover, public-private partnerships (PPPs) may provide private investors with an opportunity for enhancing the diversity of their investment portfolios. Infrastructure investments are widely regarded as possessing a high level of stability and exhibiting a limited connection with other asset classes, such as stocks or bonds. This may hold significant interest for institutional investors, such pension funds and insurers due to their emphasis on long-term investment strategies and investment diversification (Ullah, 2019, p. 18).

Additionally, public-private partnerships (PPPs) offer private investors the opportunity to avail themselves of government guarantees or subsidies. These incentives have the ability to mitigate investment risks and provide a sense of confidence to private enterprises that are planning infrastructure projects in Libya. Government guarantees encompass a range of forms, with revenue guarantees being particularly prominent.

These guarantees necessitate that the government provide compensation to entrepreneurs in instances when anticipated income falls short. Similarly, the implementation of completion guarantees serves to assure the successful conclusion of projects, even in the event of financial difficulties faced by the private partner (Akitoby & Hemming, 2007, p. 12).Furthermore, the attraction of private-public partnerships (PPPs) in Libya for private investors may arise from the potential to collaboratively take project risks and responsibilities alongside the government. This partnership facilitates the equitable distribution of project design, development, implementation, and upkeep risks between the public and private sectors. The practice of risk-sharing has the potential to attract private investors who may have challenges in independently undertaking large-scale infrastructure projects (Abdelkader, Zayed, & Fathali, 2023, p. 28)

Many countries have witnessed Cases of successful public private agreements that have efficiently attracted private investment. These collaborative alliances have played a crucial role in the advancement of public transportation systems, including railways and metro networks, the establishment of energy infrastructure, including nuclear plants and renewable energy initiatives, as well as the enhancement of water and wastewater management systems. Private investors have been attracted by the prospects of long-term cash stream, government guarantees, and risk-sharing mechanisms (Keulertz & Mohtar, 2022, p. 21). In essence, one of the main impetuses behind the pursuit of public-private partnerships in Libya is the prospect of getting access to private capital investment. Through public-private agreements, the Libyan government has the potential to successfully fill the finance deficit in infrastructure initiatives and facilitate the growth and execution of imperative infrastructure endeavors. This goal can be achieved by providing extended periods of sustained income, exploring different options for diversification, securing support from authorities, and establishing procedures for the allocation of risks (Al-Sifao & Mohamed, 2022, p. 282)

3.3 Access to Advanced Technology

The engagement of public-private partnerships in Libya's infrastructure development is significantly influenced by the accessibility of innovative technologies. It refers to the potential of the collaboration to utilize technology advancements in order to enhance the efficiency, effectiveness, and sustainability of infrastructure projects. The introduction of modern technological solutions into infrastructure projects has become imperative for nations, particularly those in a developmental phase such as Libya, due to the rapid advancement of technology. The basis for this claim lies in the integration of advanced technology, which is expected to significantly contribute to the improvement of effectiveness, efficiency, and sustainability of infrastructure systems. PPPs offer the Libyan government an opportunity to leverage the expertise and resources of private sector partners, who frequently possess cutting-edge technology that may have been costly or challenging for the government to acquire independently (UN, 2022, pp. 83-84) Public-private partnerships facilitate the transfer of knowledge and expertise between the public and private sectors, leading to the adoption of innovative concepts and techniques in the realm of infrastructure development.

employing public-private partnerships (PPPs) to acquire cutting-edge technology has the potential to yield numerous benefits of for infrastructure projects in Libya. First and foremost, implementation of PPP approach can have a positive impact on Infrastructure quality and efficiency, leading to improved service delivery and better customer satisfaction. The utilization of advanced technology can facilitate deploying intelligent infrastructure solutions, such as intelligent transport systems or smart energy grids, with the aim of optimizing resource allocation and improving operational effectiveness (OECD, 2014, pp. 30-34). Additionally, the incorporation of modern technology holds the capacity to boost the sustainability of infrastructure initiatives. In the current global context, the pursuit of sustainability has become a paramount objective, as the integration of advanced technology presents opportunities for achieving objectives related to environmental, social, and economic sustainability. integration of renewable energy technologies into power generation projects can effectively mitigate the reliance on fossil fuels and reduce the release of greenhouse gas emissions.

Moreover, through the utilization of modern technologies, PPPs would have the chance to boost project viability and financial sustainability. Adopting innovative technological approaches typically leads to cost reductions, improved revenue generation, and improved risk management capabilities (OECD, 2014, p. 26) . These factors have the ability to entice private sector investors, due to their perception of the prospect for larger financial advantages through investments in modern infrastructure projects.

In the framework of the public-private partnership's involvement in Libya, there are several avenues that provide access to innovative technology. First off, including the private sector in infrastructure projects provides valuable knowledge and access to advanced technologies that may be effectively utilized. Through the creation of partnerships with private businesses, the public sector may effectively leverage its skills and ability of integrating cutting-edge technology into project designs, constructing techniques, and operational systems. Additionally, PPPs might also hasten the transfer of technology and foster communication between the public and private sectors. By working together, the public and private sectors can embrace cutting-edge technologies that would not otherwise be accessible (OECD , 2007, p. 33). As a result, the public sector's knowledge of local issues and skills may be useful to the private sector, enabling the effective implementation of technology-driven solutions.

The accessibility of advanced technology plays a crucial role in promoting private sector engagement in Libya, as it enables effective resolution of various difficulties encountered within the infrastructure sector. The utilization of certain measures has the capacity to improve productivity, reduce expenditures, optimize service delivery, and increase the overall quality of infrastructure projects. The importance of this matter is particularly pronounced in a country like Libya, where efforts to improve infrastructure are being pursued despite the existence of financial constraints and limited availability of funding options. Furthermore, the availability of contemporary technology can play a role in alleviating infrastructure finance deficit in Libya (World Bank, 2023, pp. 14-17) The integration of technical innovations has the capacity to augment project performance, optimize revenue streams, and foster private investments within public-private partnerships (PPPs). The advancements in technology possess the capability to provide cost savings at different phases of the project's duration, therefore mitigating the financial burden on the public sector.

However, it is imperative to address specific challenges that arise when considering the procurement of advanced technology through a Public-Private Partnership (PPP) arrangement in Libya. The challenges involve a multitude of significant factors, including the necessity for a legal framework that promotes and supports innovation, proficient human resources who can efficiently harness advanced technologies, and the establishment of dependable data and communication infrastructures to enable technology-based solutions. The pursuit of cutting-edge innovation serves as a prominent driver for private sector engagement in the enhancement of Libya's infrastructure (COMCEC, 213, p. 31). By leveraging advanced technologies, public-private partnerships (PPPs) possess the opportunity to efficiently address infrastructure obstacles, reduce financial gaps, and enhance project outcomes. strong partnership between the public and private sectors is needed for Effective integration of technical improvements into infrastructure projects in Libya. In the context of Libya's infrastructure development, the presence of easily available contemporary technology serves as a significant incentive for engagement in Public-Private Partnerships. This technique enhances the government's ability to tap into the experience, resources, and innovative solutions offered by the private sector. However, it may not be easily available through conventional government financing mechanisms (Alsharaa, 2020, p. 42). Libya has the ability to expedite its infrastructure development, improve service quality, and achieve sustainable, efficient, and financially viable infrastructure systems through the utilization of new technologies facilitated through private-public agreements (PPPs).

3.4 Efficiency in Public Investment, Construction and Operation

An acceptable efficiency level in public investment, development, and operation is crucial in ensuring a satisfactory degree of successful execution of PPP activities in many nations. The primary aim of placing emphasis on this specific component is to achieve optimal asset utilization, cost reduction, and enhanced performance in infrastructure projects. Efficient allocation of financial resources is of utmost importance in the realm of public investment, necessitating the need for optimization strategies. The inclusion of the private sector in the financing of infrastructure projects serves the purpose of mitigating the burden on the government's budget, hence enabling a more efficient allocation of funding to other significant sectors. Furthermore, the participation of the private sector plays a significant role in providing valuable expertise and specialized knowledge in areas such as project management and financial resources, hence improving the efficient allocation of funds (Geng, Moehler, & Kolar , 2023, p. 218).

The pursuit of efficiency in the construction industry is of the utmost importance in guaranteeing the timely and cost-effective completion of infrastructure projects and economical conclusion. The incorporation of the private sector entails the utilization of competitive bidding protocols, the implementation of enhanced project management techniques, and the optimization of construction operations. This phenomenon has the potential to result in a decrease in project timeframe, a mitigation of cost overruns, and a change in the overall quality of construction. The consideration of operational process efficiency is also crucial. The engagement of the private sector in the management and upkeep of a country's infrastructure enables the prioritization of performance-based contracts and service-level agreements (Mansaray & Coleman, 2021, p. 3). The execution of this strategy ensures the effective upkeep of infrastructure, timely delivery of services, and the sustained value for money of assets over the long term.

In the particular situation of Libya, where there is a pressing need to address the financial deficit and boost infrastructure development, it becomes evident that the need of enhancing efficiency in public investment, creation, and operation is further emphasized (IMF, 2023, p. 7). Through the utilization of public-private partnerships (PPPs), Libya has the potential to make use of the knowledge and financial resources of the private sector in order to achieve the best use of money, ensure timely project completion, and establish long-term operational sustainability. Yet, it is vital to recognize and address those obstacles that need to be resolved in order to achieve maximum efficiency in these areas. In order to effectively execute PPP projects, it is important to address certain obstacles that may arise (Rushdi, 2008, p. 1188). These challenges comprise maintaining of transparency and fairness in procurement procedures, effective management of project risks, harmonization of the interests of all stakeholders, and enhancement of the public sector's ability to participate in public-private partnership (PPP) projects. According to Al-Sifao and Mohamed, Libya has the potential to address the aforementioned challenges and attain favorable outcomes by focusing on enhancing efficiency in public investment, construction, and operation through active involvement in public-private partnership initiatives. This particular component is anticipated to exert a significant impact on reducing the discrepancy in infrastructure economics, enhancing the implementation of projects, and providing enduring gains for both the public and private sectors. (Al-Sifao & Mohamed, 2022, p. 282)

Enhancing efficacy in the realm of public investment, development, and operation serves as a fundamental impetus behind the engagement of public-private collaborations (PPPs) infrastructure projects. A lack of effectiveness may be observed in several nations, including Libya. An effective strategy for promoting efficiency in public investment and construction involves improving the efficacy of project planning and risk management networks (Rahman & Di Maio, 2020 p. 50). This involves the implementation of comprehensive feasibility studies, the identification of possible risks and challenges, and the development of efficient mitigation strategies. The successful execution of a project may be significantly improved via the implementation of a comprehensive and meticulously designed plan. This approach can effectively reduce the likelihood of delays and cost overruns.

Another point that facilitates improving efficiency is the optimization of procurement and contracting methods. This includes the adoption of transparent and competitive bidding procedures, the guarantee of fair assessment methodologies, and the establishment of unambiguous and enforceable agreements. The implementation of a proficient and transparent procurement system has the potential to enhance the capacity of projects to attract more participation from the private sector, while simultaneously diminishing the duration and costs associated with contractor selection (OECD, 2014, p. 4). finally, it is important to establish thorough monitoring and evaluation strategies in order to ensure maximum efficiency throughout the construction stage of infrastructure projects. This encompasses the activities of observing the private partner's performance, tracking the achievement of goals and deliverables, and evaluating the overall effect and outcomes of the project.

According to IMF (2015) The implementation of rigorous evaluation and monitoring procedures facilitates the prompt detection and rectification of errors and inefficiencies, hence enhancing outcomes and guaranteeing the overall success of the project. Thus, several strategies might be employed in order to address the prevailing obstacles in public investment, development, and operation. These encompass enhanced project planning and risk management strategies, optimized procurement and contracting methodologies, and robust monitoring and evaluation mechanisms. The implementation of these strategies is anticipated to improve the efficiency of infrastructure projects, resulting in enhanced outcomes and greater success in public-private partnerships (IMF , 2015, p. 50)

3.5 Enhancement of Transparency

The emergence of PPP is mostly motivated by the need for greater transparency in infrastructure investment. Transparency plays a primary role in facilitating the provision of relevant data on the project to all key stakeholders, including its financial sources, expenses, and potential risks. The reinforcement of transparency within the project fosters public trust and confidence, thereby mitigating the potential for corruption and improper distribution of funds (COMCEC, 213, pp. 62-63). Analysis have demonstrated that countries that demonstrate elevated levels of transparency in their infrastructure initiatives are more likely to exhibit a greater propensity to attract private investors and get financial support.

The creation of a healthy competitive environment serves as a significant driver for the use of Public-Private Partnerships. According to OCED (2007), governments could effectively enhance project quality and cost efficiency through the stimulation of competition among possible investors by promoting private sector participation in infrastructure projects. Competition assumes a vital role within the selection process, as it serves to foster the discovery of superior alternatives, stimulate innovation, and ultimately enhance the outcomes of projects. The findings of the research indicate that the addition of competition into the Public-Private Partnership (PPP) model can lead to cost reductions and improved value for money for both the public sector as well as the private entities involved. (OCED, 2007, pp. 10-13)

According to Bavington (2021) the mitigation of corruption risk is of utmost importance in order to effectively handle and prevent unlawful activities within various systems and institutions. Corruption is a serious issue within the context of infrastructure projects, particularly in developing countries. Participating in PPP can serve as an effective means of tackling the issue of corruption through the implementation of systems that promote accountability, transparency, and the formation of checks and balances. The inclusion of private sector investors that adhere to their internal control processes can enhance the level of inspection and be better scrutiny and monitoring throughout every stage of the project cycle. This approach has the ability to mitigate corrupt behaviors and enhance the overall integrity of the project (Bavington, 2021, p. 28)

Currently, several infrastructure initiatives in Libya are facing challenges due to a scarcity of financial resources and persistent budget deficits. Consequently, there is a growing discrepancy between the demands for infrastructure development and the available fund at hand. The current circumstances necessitate a strategic shift, and it must be done in order to thoroughly evaluate the feasibility of utilizing Public-Private Partnerships (PPPs) as a funding mechanism. However, the existence of low vulnerability, lack of competition, and susceptibility to corruption pose substantial challenges in the effort to attract private sector investment. (Hamed, 2020, p. 23)

Several nations have effectively utilized Public-Private Partnerships to deal with comparable difficulties. An illustration of this phenomenon may be observed in the case of Colombia, where the introduction of a transparent bidding procedure for its fourth-generation (4G) Road Concession Program resulted in increased competition and cost reductions. Similarly, the National Highways Authority of India actively engaged in the implementation of PPP along the objective of facilitating road infrastructure development. The aforementioned objective was successfully achieved by the implementation of a competitive bidding process and the enactment of stringent controls, both of which played a pivotal role in safeguarding the principles of transparency and accountability (Paola A. Larrahondo C. & Larrahondo, 2017, p. 25).

In order to improve transparency, it is imperative for governments to set forth unambiguous and comprehensive legislation and standards pertaining to public-private partnership initiatives. This measure would guarantee the accessibility of financial information relating to these initiatives to the general public. Additionally, the implementation of extensive supervision protocols and the establishment of independent regulatory bodies may effectively promote adherence to legislation and limit the potential for corrupt activities. In order to enhance competitiveness within PPP, governments can implement transparent and equitable bidding processes, hence facilitating the participation of a wide range of experienced business sectors (UNECE, 2008, p. 46). The provision of explicit performance measures and standards has the capacity to cultivate competition and incentivize entrepreneurs to make investments in order to get superior outcomes.

The mitigation of corruption risk necessitates the adoption and enforcement of stringent anti-corruption legislation and regulations, with the introduction of comprehensive due diligence procedures checks on prospective private sector. The implementation of risk management measures and the establishment of transparent procurement procedures has the potential to significantly reduce prospects for corruption. In summary, enhancing transparency, fostering an efficient market environment, and mitigating corruption risks are the key factors for attaining success in private-public partnerships (UNECE, 2008, p. 36)The implementation of efficient approaches and the adoption of internationally recognized best practices may support countries such as Libya in addressing budgetary constraints, attracting investments from the private sector, and ultimately improving their infrastructure development.

3.6 Conclusion

In summary, the advantages associated with the engagement in PPPs for the purpose of enhancing Libya's infrastructure development mostly revolve around the access to private capital and the employment of cutting-edge technology. The capacity of the Libyan government to draw in private capital has the potential to overcome financial limitations and fiscal shortfalls, consequently alleviating the funding deficit and allowing the implementation of crucial infrastructure projects (Rushdi, 2008, p. 1193). Moreover, the availability of cutting-edge technology contributes to improving infrastructure systems, creating greater service provision, increased operational efficiency, and higher financial sustainability. Through PPP, the public sector can make use of private organizations' resources and knowledge. hence enabling the exchange of technology and information and bringing innovative solutions in infrastructure development (Suhandri, Khalifa, & Hmeda, 2020, p. 7). Despite encountering some obstacles, such as the need for robust legal frameworks and a skilled workforce, the presence of private capital investment and cutting-edge technology provide significant opportunities for the formation of PPPs in Libya. By harnessing the underlying advantages of collaboration between the public and private sectors may be significantly leveraged to effectively propel the advancement of infrastructure initiatives, which will substantially make enormous contributions to the general progress and welfare of the entire nation.

Furthermore, it is imperative to augment transparency, foster competition, and mitigate the possible hazards of corruption in order to effectively engage in PPPs within the realm of infrastructure initiatives. Governments may encourage increased private sector investment and achieve optimal project outcomes through the implementation of clearly defined legislation, the establishment of robust regulatory frameworks, and fostering a culture of accountability (ADB, 2018, pp. 3-6). Despite encountering several challenges, nations such as Libya have the potential to overcome economic constraints and effectively tackle their infrastructure shortfall by leveraging lessons from successful international precedents (Sofia et al., 2021). Governments have the ability to cultivate an environment that is characterized by transparency and competition, therefore facilitating the involvement of the private sector, cost savings, and the delivery of high-quality services for the benefit of the public. This may be achieved through the adoption of internationally recognized standards.

CHAPTER IV

OVERALL PROCESS AND BASIC PILLARS OF PPP PROCESS

4.1 Introduction

The implementation and sustenance of Public-Private Partnerships (PPP) are fundamental cornerstones in driving growth and development in modern societies. As governments seek to augment their capabilities, especially in the sphere of infrastructure, the importance of PPPs has grown exponentially. This chapter delves into the multifaceted processes and stages integral to the successful formulation and operation of PPPs. Starting with the project selection, the narrative moves to address crucial areas such as legal considerations, risk management, and the significance of long-term government strategies. The tendering phase is also detailed, highlighting the intricacies of evaluation methods and procurement. The importance of financing, which forms the backbone of PPP projects, is comprehensively discussed, shedding light on sources, structures, and financial indicators. Subsequent sections navigate through the actual construction, operation, and maintenance stages of the projects. The chapter culminates with a brief summary, encapsulating the core insights discussed, paving the way for deeper explorations in subsequent chapters.

4.2 Project Planning and Feasibility

4.2.1 Project Selection

The initial step of the collaboration between the two sectors (Public and Private) is the Project Selection stage, which serves as a strategic approach for financing infrastructure projects. During this phase, governments identify and give priority to infrastructure projects that are aligned with the nation's development objectives and have the potential to yield social and economic advantages. During this particular phase, the government engages in comprehensive market research and needs assessment in order to get valuable insights into the existing infrastructure deficiencies and people's general requirements (Batjargal & Zhang, 2021, p. 8). This facilitates the identification of key elements that necessitate investment.

Once the government has identified priority projects, it proceeds to define the scope and objectives for each infrastructure project. This entails the identification of precise objectives and outcomes that need to be achieved during the implementation of the project. Additionally, at this phase, stakeholders are identified, including government agencies, industry entities, and the community. The active engagement and commitment of stakeholders are crucial for facilitating effective project management and successful implementation.

Subsequently, a full feasibility investigation is conducted to evaluate the technical, economic, environmental, and social viability of the selected projects. This evaluation enables the understanding of possible hazards associated with the project and an examination of its overall viability. Following the completion of a feasibility assessment, a project implementation plan is generated. The present plan outlines the essential tasks, timelines, and resources required for the project to be implemented effectively. Additionally, the establishment of key performance indicators (KPIs) serves the objective of monitoring and assessing the progression of a project, ensuring its alignment with the intended goal (Oyieyo, 2020, pp. 2-3). During this stage, both regulatory and legal issues are handled together. This process incorporates formulating, creating, and negotiating essential contracts and approvals to facilitate the execution of the PPP initiatives following the appropriate legal statutes and regulations.

Governments progressively redirect their focus towards developing a comprehensive and sustainable governmental agenda aligned with the broader economic objectives of the nation. The implementation of this strategy ensures the ongoing presence of Public-Private Partnership (PPP) initiatives and their positive impact on the nation's potential GDP growth and progress. The plan incorporates multiple considerations, such as maintenance and operations, prospective sources of finance, and strategies to mitigate risks. The initial stage of the public-private partnership (PPP) process encompasses several essential elements, including project selection, feasibility studies, legal and regulatory considerations, and long-term government planning (ESCAP, 2011, pp. 13-14).The carrying out of these phases holds utmost importance in providing an adequate foundation for the effective execution of public-private partnership initiatives, ensuring their alignment with the broader national development objectives.

4.2.2 Legal and Regulatory Considerations

The subject matter pertaining to legal and regulatory matters holds paramount importance within the academic and professional realms. This comprises a range of issues related to regulations, rules, and laws which regulate many aspects of society. Once a project has been determined, it is imperative for governments to integrate legal and regulatory considerations into their long-term governmental planning in order to effectively execute partnership agreements. The most significant task is in guaranteeing the safeguarding of the rights and interests of all relevant parties. In order to effectively support the execution of public-private agreements, it is vital to have a comprehensive set of laws and regulations that specifically address the unique requirements and complexity that accompany PPPs (World Bank , 2009, pp. 15-16).The legal requirements need the explicit specification of the rights and responsibilities of all parties implicated, along with the creation of mechanisms for the resolution of disputes. In connection with the current legal framework, the establishment of clear and expeditious rules and regulations by the government is necessary to facilitate project approval, contracting, and mediation of disputes. This practice ensures that all parties involved have an in-depth knowledge of the sequential procedures and criteria in process of PPP, hence reducing the likelihood of delays or disagreements (ADB, 2018, p. 49).

(Almeida et al., 2019) highlighted that, establishment of a comprehensive Public-Private Partnership framework requires the establishment of explicit guidelines concerning the involvement of the private sector, allocation of risks, and execution of contracts. The purpose of these proposals is to clearly outline the distinct functions and roles played by the private sector, while also considering the allocation of risks between the two sectors (public and private). For instance, the regulations may specify that the private sector bears the responsibility for the economic elements and physical execution of the infrastructure task, while the government maintains ownership and assumes the duties of overseeing and maintaining the project (Almeida, Cassang, Lin, & Abe, 2020). To illustrate the concept of contract management, governments hold the capacity to develop a complete deal that clearly delineates the scope of the project, performance criteria, payment terms, and mechanisms for resolving disputes, so exemplifying the notion of contract management (Batjargal & Zhang, 2021, p. 6). The incorporation of monitoring and evaluation methodologies is of utmost importance in order to guarantee that the private sector effectively performs its commitments as stipulated in agreements.

Typically, the initial phase of initiating a PPP involves the process of project selection and the validation of a legislative and regulatory framework that facilitates its implementation. This entails the execution of legal statutes and regulatory actions, as well as the adoption of transparent methods of regulation. Furthermore, this process encompasses the formulation of explicit rules pertaining to the engagement of the private sector, distributing of risks, and the management of contractual arrangements (UNECE, 2008, p. 30). Through the implementation of this strategy, Libya possesses the capacity to allure investors to engage in infrastructure endeavors, while ensuring the protection of the rights and interests of all stakeholders.

4.2.3 Government Long-Term Planning

The primary objective of Long-Term Government Planning is utmost importance in creating an optimal setting for initiating PPP in the realm of infrastructure development. An in-depth assessment is conducted to determine the prioritization of projects by examining their economic, social, and environmental impacts. The plan should take into account the distinctive requirements of the country, existing deficiencies in infrastructure, and the goals for sustainable development (ADB, 2018, p. 25). The instrument enables the optimization of investment decisions and enhances the efficacy of infrastructure projects.

A comprehensive regulatory framework is designed with the aim of encouraging and promoting private sector investment should be established. This framework must delineate the legal, financial, and operational dimensions of PPP, ensuring transparency and equity in their implementation. Ensuring clarity for investors and promoting equitable conditions for all stakeholders are crucial elements of the scenario. The framework should incorporate issues regarding risk allocations, methods for dispute resolution, and regulations pertaining to norms for procurement.

Kociemska (2019) Well-defined guidelines and requirements are developed to provide direction for allocating public sector support and financial funds towards infrastructure projects. These regulations delineate the specific duties and obligations of diverse governmental bodies, outline the criteria and benchmarks for project priority, and provide the guidelines for providing financial and operational support. As an illustrative instance, policies have the ability to foster private sector engagement by means of tax subsidies, land distribution, or revenue-sharing agreements. (Kociemska, 2019, pp. 42-43)

There have been significant endeavors to promote the private sector's engagement in infrastructure development subsequent to the establishment of the necessary regulatory framework, regulations, and standards. This aim can be achieved by the implementation of competitive bidding procedures, whereby private organizations expressing interest in conducting the project are required to submit their proposals for the execution of the project. The design of the selection criteria is crucial in ensuring that the chosen private partner have the necessary expertise in technology, financial capacity, and skill to successfully provide high-quality infrastructure. In the process of project implementation, it is crucial to build a positive connection and open dialogue among the public and private sectors. In order to ensure punctual delivery and effective allocation of resources, it is essential to establish project management procedures that exhibit both transparency and efficiency. The duties involved in this domain include monitoring, reporting, and evaluating success (Eduardo , Fischer, & Galetovic, 2010, pp. 21-22)

In summary, the implementation of Public-Private Partnerships as a strategic option for funding infrastructure projects requires the adoption of a rigorously coordinated and organized approach. The aforementioned process involves the careful selection of projects, the implementation of efficient government planning over an extensive duration, the establishment of a regulatory framework that fosters support, the development of exact norms and procedures, and the successful engagement of the private sector in project execution. By adhering to these criteria, Libya may make use of knowledge, expertise and resources of the private sector in order to address its infrastructure shortcomings and foster long-term, sustainable economic development.

4.3 Risk Analysis and Management

The implementation of a PPP necessitates the inclusion of risk analysis and management as integral components. This phase encompasses the methodical Evaluation of all potential risks associated with the implementation of PPPs project. This analysis concentrates on the examination of the environmental, economical, and natural catastrophe risks that have an impact on the nations such as Libya. In order to comprehensively evaluate potential risks, it is imperative to adhere to a systematic method. The steps that follow can be implemented:

4.3.1 Identification of All Possible Risks

The initial phase involves the identification of potential hazards that might have an influence on the Private Partnership project in a nation and Libya is not exceptional. This comprises the assessment of all risks concerns, including climate change, pollution, and resource constraint. It is also vital to consider various financial risks, notably credit risks, interest rate fluctuations, and currency depreciation, as it considers of utmost importance (Ismail, 2020). Furthermore, it is crucial to take into account the possible risks associated with natural disasters, including earthquakes, floods, and cyclones (Ismail, 2020, p. 169).

Subsequent to their identification of all possible risk. It is of the highest priority to evaluate the probability of risks materializing and the possible consequences they may have on the public-private partnership (PPP) initiative This process involves the examination of historical data, conducting studies, and seeking expert viewpoints in order to assess the likelihood of dangers and their associated possible outcomes (World Bank , 2017, p. 172)

After conducting a comprehensive study of the risks, it is imperative to establish a prioritization framework based on the assessment of their likelihood and potential consequences. Certain dangers may have a higher possibility of occurring but result in less severe effects, whereas others may have a lower probability but lead to more significant impacts. The practice of prioritizing risks enables individuals to focus on the most critical concerns and develop feasible strategies for mitigating those risks. Given the importance of risk prioritization, it is crucial to develop appropriate strategies for managing those risks. Various strategies can be utilized to address possible risks, including risk minimization, risk transfer, risk avoidance, and risk sharing. In relation to environmental risks, a variety of approaches may be utilized to effectively tackle these concerns ((Phoek & Tjilen, 2019, p. 11). Potential approach that can be employed encompass the integration of sustainable design concepts, the utilization of environmentally friendly materials, and the execution of mitigation measures. When considering strategies to mitigate financial risks, it is advisable to consider a range of measures, including but not just hedging, insurance, and diversification of financial sources.

It is crucial for enterprises to consistently maintain a state of heightened awareness and periodically reassess their risk management measures. The perception of risk analysis and management as a singular event rather than an ongoing process should be reconsidered. The prioritization of continuous risk monitoring during the whole lifecycle of PPP project is of the highest priority, as it enables the prompt detection and evaluation of potential risks. Hence, it may be necessary to modify and revise the risk management techniques in order to adequately address and minimize these risks. This method facilitates the timely identification and mitigation of emerging risks, hence preventing adverse consequences on the project. (Osei-Kyei, 2017, p. 69)

This phase of Risk Analysis and Management is of paramount importance as it enables the proactive evaluation and resolution of any risks that may hinder the successful implementation of PPP program in countries including Libya. By conducting a systematic evaluation, the project stakeholders of the project may ought to develop suitable strategies for risk management to try to mitigate or minimize the impact of probable risks. According to (Kuwora, 2020). Consequently, this enhances the financial feasibility and long-term sustainability of the public-private partnership risk, ensuring its effective implementation.

4.3.2 Implementation of Mitigation Measures

The Establishing of risk mitigation strategies aimed at reducing the probability and impact of potential risks is an essential factor of the PPP phase. This is of utmost importance in ensuring the efficient implementation of infrastructure projects in emerging markets, such as Libya. The evaluation and minimization of risks associated with financing infrastructure projects through public-private partnerships have significant importance. This risk may include a variety of element, including but not limited to political, legal, practical, environmental, and social elements (Carbonara & Gunnigan, 2015, pp. 3-4) .The potential implications arising from the inherent unpredictability of the political environment in a nation such as Libya can significantly influence the results of infrastructure initiatives. By acknowledging these kinds of potential risks, suitable actions may be enacted to mitigate them, so safeguarding the interests of both public and private stakeholders.

In order to mitigate the probability and consequences of potential risks in the future, it is vital to engage in extensive risk assessments. This may include employing experienced experts to do a comprehensive analysis of the specific risks and consequences. Once the risks have been identified, it becomes critical to develop suitable measures in order to minimize their impact. Possible strategies that can be employed encompass insurance coverage, contingency planning, legal measures, and financial reserves.

The incorporation of this step is important as it provides a systematic approach for tackling possible risks that may arise at various stages over the life-cycle of the project. The act of recognizing and addressing possible risks can play a significant role in minimizing uncertainties and potential obstacles, hence increasing the likelihood of attaining project success (Prizhennikova, 2019). Moreover, it facilitates the establishment of trust between public and private institutions, so establishing a solid foundation for a sustainable and advantageous partnership.

Research findings indicate that the ease in political and security issues caused by Libya's continuing transition is of major significance for the nation. Through the active engagement of local stakeholders, authorities, and communities, valuable knowledge could be acquired regarding distinct risks, which allows the development and execution of specific strategies to minimize these risks. Furthermore, it is important to point out that international organizations and development banks can engage in providing Libya assistance in terms of technical knowledge and financial support to identify and manage risks efficiently. By acquiring an in-depth understanding and implementing proactive measures to address potential risks, stakeholders may enhance their likelihood of achieving success in projects.

This approach also facilitates The formation of a long-lasting collaboration between the public and private sectors, ensuring the sustained growth of infrastructure in the country. (Wilson Centrer , 2022, pp. 2-4)

4.3.3 Risk Allocation Among Parties

The process of assigning risks to the parties engaged in Public-Private Partnerships (PPP) based on their skills and experience has considerable importance within PPP legislation. This stage entails the Identification and allocation of risks linked to infrastructure projects to the appropriate parties. The typical stages of a public-private partnership encompass the initial recognition of the project, the process of choosing private sector partners, the formulation of contractual agreements, the implementation of the project, and the ongoing operation and maintenance of the project. However, the allocation of risks is a crucial intermediate process that happens throughout the contractual negotiation process (Osei-Kyei, 2017, p. 56).

Walwyn & Nkolele (2018) delineate two primary objectives of risk allocation. One approach involves the implementation of incentives that encourage the involved parties to effectively mitigate risk, leading to enhanced project benefits or decreased costs. the second approach is to mitigate the total financial burden of project risks by providing insurance coverage to parties that are unwilling to assume such risks. The allocation of land acquisition risk is often a substantial risk factor in (PPP) investments.

A fundamental tenet of risk allocation is the assignment of each risk to the party most capable of effectively managing it. The principle of guarantees and PPP risk is defined in a more exact manner. It asserts that each risk must be allocated to the respective party involved.

A fundamental tenet for the allocation of risk is the assignment of every risk to the party most capable of effectively managing it. The principle of guarantees and PPP risk is defined in a more exact manner. It asserts that every risk must be allocated to the respective party involved (Walwyn & Nkolele, 2018, pp. 3-4).

- The private party is often tasked with the responsibility of project construction due to its broad expertise, thereby improving its capacity to efficiently handle the likelihood of risk occurring. Moreover, it is crucial for this party to take on the responsibility for any extra costs arising from construction delays or budget overruns.

- The most successful method for minimizing the impact of risk on project outcomes involves conducting thorough assessments and proactive identification of hazards, followed by the implementation of appropriate mitigation strategies. In situations in cases like earthquake risks when the seismic risk is beyond any party's control, a private company responsible for project design can apply several tactics in order to reduce the potential earthquake damage.
- when it is not feasible to control the probability and impact of risks, having the capacity to absorb risks at minimal cost is beneficial. A party's risk-taking costs in bearing risk are determined by a number of factors. These include the extent to which the risk is associated with the party's other assets and liabilities, the party's ability to assign the risk to others (via price adjustments to customers or insurance to outside entities), and the nature of the final bearers who assume the risk. For instance, the capability of governments to distribute risk among taxpayers, which may lead to lower risk-taking cost as compared to private businesses, where risk is ultimately assumed by the owners.

According to the OECD's report on risk sharing and value for money PPPs the application of these principles does not entail the complete transfer of maximum risk to the private sector. The act of transferring risks to a private entity, which possesses more control and mitigation capabilities, can effectively reduce the entire project cost and enhance the value for money. Nevertheless, as the extent of risk transferred to the private party increases, the corresponding return or risk premium demanded by equity investors also rises, so making it more challenging to get debt financing (OECD, 2008a, p. 49–50).

In the backdrop of Libya, a country often constrained by significant financial limits that impede the provision of assistance from private sector for infrastructure projects, Public-Private Partnerships might be seen as a potentially effective and strategic approach for securing the required finance for such ventures. However, this stage is not without its challenges. One notable challenge is in determining of the appropriate capacity and talent of each individual involved in the project (World Bank, 2023, p. 19). The insufficient proficiency and structural capacities in executing public-private agreements in Libya may impede the adequate assessment and allocation of risks.

4.4 Tendering Stage

The bidding stage occupies a significant role in the public-private partnership process, encompassing several standardized steps. The tendering process consists of many elements, including the pre-qualification of potential bidders, the issue of tender documents, Invitation for Expressions of Interest, Request for Qualifications, the organization of a pre-tender conference, the reception and evaluation of bids, and the ultimate determination and allocation of the contract. During the bidding process, a comprehensive tender document is carefully prepared and disseminated to solicit bids from interested parties. Similarly, it delineates the sequential structure, procedure for submission, and pertinent costs for potential bidders.

4.4.1Evolution Methods and Procurement Modes

The procurement of Public-Private Partnerships differs significantly from typical public sector procurement processes due to the nature of PPPs as long-term agreements for providing services rather than one-time supply of products or materials. This distinction underscores the rationale why several nations when launching innovative PPP initiatives and policies as an integral aspect of their PPP infrastructure have incorporated fresh PPP procurement criteria as a fundamental component of their PPP framework.

The selection of the suitable procurement technique is contingent upon two factors: (1) the evaluation method and (2) the procurement modes available. Each alternative has its unique merits and challenges, which will be delved into in the following sections (World Bank , 2015, p. 5).

4.4.1.1 PPP Procurement Evaluation Methods

The process of conducting an in-depth review of bids and selecting the best competent private partner based on pre-established criteria plays a significant role in the Public-Private Partnership framework. This stage frequently follows the process of requesting bids from potential private partners, involving a thorough assessment of these bids to determine the best appropriate match for the project.

When assessing proposals, the evaluator has the option to employ either a pass-fail approach or a weighted composite scoring system. When adoption the implements a pass-fail approach a certain set of minimal technical criteria must be satisfied by each bidder in their separate technical submissions. Only bidders who can meet the minimal technical criteria will proceed and have their financial offers taken into consideration. The selection of the winning bid by is contingent upon the submission of the most favorable commercial and financial close.The utilization of a pass-fail approach offers a more simplified and transparent assessment of bids and is suitable for projects in which the predetermined minimum performance standards are well-defined, recognized, and universally agreed by all potential private competitors. This would result in a restricted range of technical offers from bidders, thereby eliminating any motivation to surpass the minimal output performance criteria (World Bank , 2015, pp. 5-6)

In contrast, employing a weighted composite score technique for calculating a composite score, which is derived from the weighted average of the technical proposal score and the financial proposal score together. The computation of the proposal's technical score is based on a predetermined set of technical parameters. The financial proposal score is determined by evaluating the bid that offers the most advantages.

Nevertheless, the process of assessing applications and choosing the most suitable partner can be inherently complex and pose significant challenges. A primary concern is ensuring transparency and impartiality during the assessment in order to minimize the potential for inherent bias or preferential treatment. Ensuring the validity and reliability of assessments necessitates the instituting robust evaluation methods, fostering a clear evaluation ethos, and incorporating external or third-party evaluators become essential to maintain the assessment's credibility and integrity (Walwyn & Nkolele, 2018, pp. 6-7). Additionally, another obstacle arises in the task of ensuring that the assessment criteria adequately encompass the unique specifications and preferences of both the infrastructure project and the originating nation. The establishment of assessment criteria that align with the objectives of the project and the socio-economic conditions of the country.

4.4.1.2 PPP Procurement Modes

Choosing the right procurement method for any project necessitates the evaluation and selection of the most appropriate approach to involve the private entities in the planning and implementation of an infrastructure project, while operating within the framework of public-private cooperation (Iossa, Vellez, & Spagnolo, 2007, pp. 62-63). The choice of the procurement method should align with the unique characteristics, complexity, and intended results of the project.

a) The Open Tender - Single Stage Tender Process

The open tender process, also known as a single-phase tender approach, calls for all potential bidders to present their respective proposal. This means every potential private partner collaborator are given an equitable opportunity to compete and bid for the project, which includes the simultaneous presentation of their financial and technical proposals. The competitive procurement approach is designed to adhere to the values of transparency and equity, giving every contender an equitable opportunity to clinch the project by demonstrating their ability to meet the project's requirements (World Bank, 2022, p. 81).

b) Open Tender with Pass/Fail Pre-qualifications - Two Stages Open Tender

This procurement mode necessitates dividing the tendering procedure into two clear stages. The first phase involves a preliminary assessment of potential bidder, where they are judged based on certain set criteria or qualifications, such as technical proficiency and economic soundness. To move to the next step, where they can submit their technical and financial close, only individuals who successfully complete the pre-qualification procedure are considered (World Bank , 2015, p. 7). This bifurcated approach refines the efficiency of the bidding process, ensuring that only the most qualified contenders advance to the next round.

c) Restricted Procedures (Short Listing with One Bid)

When executing procurement operations, consider utilizing the Restricted Procedure when a market analysis indicates several potential bidders may meet your criteria and are capable of submitting a proposal. The Restricted Procedure unfolds in two distinct stages. The initial phase focuses on a selection process where bidders are assessed based on their competence, capability, and prior experience relevant to the contract. The subsequent phase involves issuing the Invitation to Offer and scrutinizing the bids to pinpoint the one that offers the best economic value. Only those bidders who passed the initial phase receive this invitation. Such a streamlined process not only reduces costs but also benefits both the bidders and your organization (PPIAF, 2016, p. 103)

d) Negotiated Process

Following the compilation of a short list, interested parties are requested to submit bids, and further negotiations may take place with any or all of the successful candidates for the position. It is standard practice for bidders to submit many offers before being asked for their final offer; yet the last offer may be the only one that is taken into consideration. After that, the winning bidder can be approached for further talks. Instead, the offers are reviewed in phases to narrow down the pool of potential customers.

This particular variation of the technique is commonplace in a variety of legal systems and is termed the Negotiated Process with Best and Final Offer (BAFO). During the interaction, the finalist bidder will present and deliberate technological solutions, very similar to how the conversation and interaction phase procedures are structured in two-stage bidding processes. In contrast, a legally binding technical proposal together with the price will be offered via the process of negotiation. Two individuals are selected from the pool of candidates based on their performance during bid assessment phase, (typically a pass/fail rating for the technical proposal and the most competitive price quote). The two selected competitors will each make new proposals, which are known as their BAFO, based on the distribution of risk and technical requirements that were agreed upon with the two bidders in tandem. In the majority of instances, the bidder that submitted the lowest price will be chosen as the preferred bidder.

It is feasible to see the negotiated process as a subset of the former sort of process since every negotiated process is often also a limited process (PPIAF, 2016, p. 103)

4.4.2 Preparing the PPP Tender Documents

This phase entails the development and dissemination of an Invitation for Expressions of Interest (EoI) without conducting an assessment of the level of interest demonstrated by potential private partners. The initial phase of preparing the PPP tender documents holds significant importance within the framework of the PPP system. The procedure in this stage involves the development of comprehensive tender documents that outline the project requirements, request of qualification, request for proposal and drafting agreement as follow:

4.4.2.1 Invitation for Expressions of Interest (Eol)

During the phase of developing and disseminating an Invitation for Expressions of Interest (EoI), the primary objective is to evaluate the extent of enthusiasm within potential private business partners in collaborating with PPP initiative. This step is not always obligatory in the procedure, but it can be strategically beneficial to connect to the market of possible investors and informs private players about the forthcoming PPP procurement.

Expression of Interest (EoI) is document that encompasses details such as: specific characteristics of the (PPP) under consideration, the range of services that are anticipated to be offered by the private sector, the proposed distribution of risks between the public and private entities involved, he desired level of expertise from the private sector, including their experience within the industry and geographical region assessment criteria, and submission requirements for potential private contributors. The document serves as a template for articulating interest and serves as the foundation for assessing the eligibility of potential bids (World Bank , 2015, p. 9).

4.4.2.2 Request for Qualification RFQ

The process of pre-qualification serves the purpose of verifying the qualifications of potential bidders in relation to their ability to undertake the required work. These qualifications encompass several aspects such as technical expertise, facility design capabilities, project management proficiency, capacity to secure long-term financing, and competence in provision of public services over an extended period of time. Frequently, these attributes encompass talents, proficiencies, and expertise that are possessed by a limited number of companies inside the private industry (World Bank , 2009, pp. 42-43). During the Request for Quantification (RFQ) stage, the project authority reviews and assesses qualification documents that interested parties have submitted.

The project authority thoroughly evaluates these specifications to select the most qualified entities, who are subsequently invited to participate in another stage. While an RFQ may not encompass all the precise particulars of the final PPP, it is expected to provide a sufficient amount of information on the project. This allows prospective bidders to evaluate the congruence between their experience, credentials, and the project's required output standards and related risks (World Bank , 2015, p. 7)

4.4.2.3 Request for Proposal RFP

The RFP outlines the specifications for the offer, the evaluation, and any other essential issues like government protection. It provides a thorough description of the tender process, including the method for posing questions, the conduct of one-on-one meetings during interactions (in processes that involve dialogue and interactive processes), the deadline for submitting a proposal, the length of the proposal's validity period, the requirements for the signature of the contract, as well as many other conditions. There are a number of annexes that may be found attached to the main body of the RFP. The majority of the information requested in the RFP is included in these annexes (World Bank , 2009, p. 43).

4.4.2.4 Draft PPP Agreement

The draft PPP agreement, set to be formalized between the two entities, outlines the duties, obligations, and accountabilities of both parties during the PPP project's execution. This includes timelines, deliverables, output/performance-driven criteria (highlighting key indicators of the performance), and the payment structure for the project, among other aspects. The drafting process necessitates extensive collaboration between the public and commercial sectors, as it involves the discussion and eventual completion of the terms and conditions of the deal (World Bank , 2015, p. 12)

4.4.3 Implementing the PPP Procurement Process

4.4.3.1 Qualifications Assessment

In order to participate in the PPP project, prospective bidders re required to provide details showcasing technical and financial capabilities to effectively execute the (PPP) project. Each bidder is authorized to submit a single application/qualification package, either on their own or as part of a consortium. A clarification meeting may be organized to enable bidders to ask questions and offer suggestions regarding the project. The process of assessment involves assessing whether the application envelopes that meet the specifications listed in the RFQ/RFP that is, if it: (1) include all mandatory documents; (2) the submission has been receive by the specified deadline; (3) is free of any conditions or qualifications present. If needed, the applicant may be approached for any further clarification. Should the bidder not reply within the specified time frame or fail to provide the requested details or documents, then deem the application can be deemed as non-responsive and subsequently might be dismissed (World Bank , 2015, p. 12).

In order to assess the technical proficiency, it is necessary for the applicant to present details on pertinent projects that highlight their experience. This should be accompanied by certificates issued by clients, which explicitly confirm the successful fulfilment of contracts and the level of quality achieved in the executed work. In order to gauge the financial ability of the application, it will be necessary for the applicant to provide details regarding their net worth and other financial metrics. These should be backed by audited accounting records that accurately reflect the applicant's financial standing.

Following the review process, the qualified bids will be officially declared, while the other candidates who have not been selected will be duly notified (PPIAF, 2016, p. 102).

4.4.3.2 Technical Proposal Assessment

The Technical Proposal Assessment is a crucial stage in which the technical capacities and methodologies of the bidding companies are thoroughly assessed. This procedure guarantees that the private entity has the necessary skills, technology knowledge, and technique to efficiently achieve the project's goals. In general, a comprehensive assessment framework is established, placing significant emphasis on factors such as design viability, originality, environmental sustainability, and conformance to specified technical norms. This comprehensive evaluation not only assures that the project is in line with its desired objectives, but also guarantees its long-term viability, sustainability, and overall achievement (Smith, J. & Jackson, R., 2017).

4.4.3.3 Financial Proposal Assessment

Once the announcement of qualifying technical proposals has been made, it is imperative to swiftly commence the submission of financial proposals. In order to possess validity, a financial proposal must include: the incorporation of connected documents, such as: (a) cost estimates including design, building, operation, and maintenance. (b) A financial model that aligns with the aforementioned estimations and technological proposal, supported by a concise explanatory note.

(c) comprehensive financial plan that fulfills bid criteria, including detailed information on factors such as the date of equity injection, sources of debt, and the security package. (d) The requested information pertains to lender assessments and approvals, specifically in relation to the financial proposal and draft Public-Private Partnership (PPP) agreement.

The assessment committee will thereafter assess the extent to which each financial proposal conforms to the specified criteria. The financial proposal that best aligns with particular criteria will be chosen from the compliant options. On the other hand, a comprehensive assessment may be necessary, taking into account various financial factors, allocation of risk, the current state of lender due diligence, government guarantee requests, or variable service delivery.

4.4.3.4 Award and Contract Signing

The procedure of contract assigning entails the selection of the winning bidder, followed by the subsequent drafting of a contract that ensures the effective implementation of the project. This phase of the award procedure entails the execution of the agreement. The phase of Award and Contract Signing holds considerable significance within the framework of PPP processes. In this stage, the process of finalizing the picking of the winning bidder is completed, leading to the establishment of a formal contract between the public authority and the private sector partner. The objective of this phase is to ensure the effective implementation of the project (PPIAF, 2016, p. 30).

According to the study conducted by Rezouki and Hassan in 2019, In order to choose the successful bidder and establish a contract that ensures the project's success, a comprehensive analysis of the selected bids is conducted. The evaluation process involves the comprehensive assessment of both technical and financial bids, as well as the conduction of discussions with the prospective bidders. Additionally, it entails the verification of their capabilities to fulfill the project requirements.Following the conclusion of the evaluation process, the determination of the winning bidder is made based on predetermined criteria, which encompass credentials, experience, and financial viability (Rezouki & Hassan, 2019, p. 2661).

4.5 Financing

4.5.1 Source of Project Finance

The acquisition of project funding is a pivotal element within the context of Public-Private Partnership (PPP) models. This concerns the source of funds and financial instruments that will be employed to facilitate the advancement, implementation, and functioning of (PPP) project. The sources of funding might vary, encompassing equity investments made by private sector entities, loans obtained from commercial banks or international agencies, and the issue of bonds. The establishment of a dependable and appropriate source of project funding is crucial for the viability and longevity of the project, as it determines the project's financial framework and impacts its risk distribution. According to Johnson and Peterson (2019), the establishment of transparent and accountable finance sources fosters confidence between public and private actors, hence facilitating the effective implementation of projects.

4.5.2 Financial Structure

The financial structure serves as the fundamental element within the framework of PPP. It outlines the process by which a project is financed and the allocation of financial obligations between both public and private entities. A clearly defined financial structure determines the allocation of risks and profits among stakeholders by determining the proportion of equity (which is provided by private investors) and debt (often sourced from banks or other financial institutions). The financial structure has a direct influence on the project's potential for success, profitability, and techniques for handling and mitigating risks. The establishment of an appropriate financial structure is of utmost crucial importance, as it plays a critical role in determining the long-term viability, sustainability and success of a PPP endeavor (World Bank, 2014, p. 51)

4.5.3 Cost of Capital

The establishing of the cost of capital in a public-private partnership project entails an examination of interest rates and financial terms that are associated with the project's funding arrangement. This includes multiple factors such as the financing cost, the income generated from equity, and the level of risk associated with the project. The Weighted Average Cost of Capital is a frequently employed is a prevalent method for evaluating the overall cost of capital. The derivation process involves the analysis of the project's distribution of equity and debt capital, as well as the anticipated returns linked to each of these financing sources according to (Greco & Moszoro, 2023, p. 3)

4.5.4 Cash Flow Analysis

The comprehensive evaluation of cash flow is an essential component within the framework of PPP initiatives. This stage is to assess the financial feasibility of a specific infrastructure initiative. The objective of this analysis is to determine if the anticipated project revenues are sufficient to cover the project expenses and generate returns for the private investor. The important purpose of this analysis entails an analysis of the anticipated financial inflows and outflows at various phases of the life cycle of the project from the inception and implementation stages to its operation and final financial gain. Also, the identification of the financial shortage necessitating the implementation of viable solutions (PPIAF, 2016, p. 77)

The analysis takes into account many factors, including operational costs, obligations related to debt payment, expenditures for maintenance, and potential revenue streams such as user fees or government subsidies. The initial stage of this process is the gathering of important data and information related to the infrastructure requirements of the project, anticipated demand, price structure, and operational expenses. The acquisition of this data may be facilitated by the implementation of extensive market research, active engagement in meetings with key stakeholders, and seeking out of expert opinion from individuals specializing in relevant fields such as transportation, energy, or healthcare. (Unvan & Ozdemir, 2022, pp. 52-53). It is important to take into account the unique attributes of the project's host nation, with special emphasis on factors such as a stable political system, regulatory framework, and macroeconomic circumstances. Following the data collection process, financial models are constructed to forecast the expected cash flows. These models encompass several elements, such as investment expenses, operational costs, user fee-generated income, subsidies or other financing mechanisms, contractual agreements, taxation, and pricing patterns. The performance of the project in terms of financial resilience should be assessed through the implementation of sensitivity analysis and scenario testing, take into account the fluctuations in markets and potential risks(Rezouki & Hassan, 2019, p. 2654)

4.5.5 Financial Indicators

One of the most significant foundations in the arena of public-private partnerships is financial indicators. These indicators offer a structured approach to assess a PPP project's feasibility, attractiveness and financial performance. In this particular stage, it is customary to analyze prominent financial indicators, including the debt service coverage ratio (DSCR) and the internal rate of return (IRR).

The Debt Service Coverage Ratio (DSCR) is a metric utilized to evaluate the potential of a project to produce sufficient cash flow to cover the expenses associated with debt repayment. The method of calculation entails dividing the net operating revenue generated by the project by its debt. A Debt Service Coverage Ratio (DSCR) value that is equal to or greater than one is widely seen as appropriate, indicating that the project is producing sufficient money to fulfill its debt-related commitments. (Yescombe E. R., 2007, p. 115)

On the other hand, the Interior Rate of Return (IRR) serves as an indicator of the project's profitability, signifying the anticipated rate of return that the project is predicted to generate during its whole duration. Projects are deemed appealing to investors when the internal rate of return (IRR) is high. A comprehensive economic assessment is conducted to examine the aforementioned financial indicators, comprising factors such as projected revenue streams, operating expenditures, and potential risks and uncertainties. (Yescombe E. R., 2007, p. 53)

4.6 Construction

Construction has been regarded as a crucial component within the world of PPP. This phase signifies the activation of the physical infrastructure or facility, playing a crucial role in the achievement and sustainability of PPP project. The construction pillar contains many crucial parts:

- The preliminary phases of construction encompass the disciplines of design and engineering, wherein project concepts are transformed into comprehensive blueprints. The initial phase establishes the fundamental basis for the whole project, encompassing the assessment of functionality, safety considerations, and adherence to technical standards.
- Quality assurance is of utmost importance in the construction industry, as it ensures the attainment of the greatest level of quality. The implementation of rigorous quality control protocols, thorough inspections, and strict adherence to construction standards are vital in ensuring the delivery of a resilient and effective asset.
- The management of costs is a critical factor in the financial feasibility of construction projects. The implementation of efficient cost management practices is of paramount significance in order to adhere to budgetary constraints and prevent the occurrence of cost overruns, which can impose financial strain on both public and private stakeholders.
- Risk mitigation is a crucial aspect of the construction industry due to the presence of inherent challenges which encompass unanticipated obstacles, weather-related delays, and labor conflicts. The pillar incorporates integrated risk management measures to mitigate interruptions and ensure the protection of project execution.
- The government performs a regulatory and supervision function, assuring respect to pertinent legislation, regulations, standards, and quality. Regular monitoring and evaluation activities ensure the timely success of project objectives, adherence to assigned budgets, and maintenance of standards of excellence (Ramadhan Mohammed & Harputlugil, 2019).

Construction in public-private partnerships is characterized by a synergistic collaboration between the private sector partner, often including a team of construction and engineering companies, which assumes an essential role. A well implemented construction phase not only ensures the completion of the targeted infrastructure but also has a significant role in the overall success of the partnership, by addressing the public's requirements and providing value for all involved parties.

4.7 Operation and Maintenance

In our framework, Operation and Maintenance (O&M) activities are meticulously planned and executed to ensure the long-term sustainability and efficiency of the project.

One of the key features of our model is the clear assignment of responsibilities between the public and private partners involved. This ensures accountability and facilitates effective decision-making throughout the project's lifecycle. The PPP agreement outlines specific roles and obligations regarding O&M tasks, providing clarity and minimizing the risk of disputes.

Moreover, O&M contracts within the proposed model are designed to incentivize optimal performance. Performance metrics, such as uptime, response time, and service quality, are clearly defined, and contractual arrangements include mechanisms for rewarding superior performance or penalizing underperformance. This approach encourages the private partner to uphold high standards of O&M, thereby safeguarding the project's functionality and value over time.

Additionally, our proposed PPP model incorporates advanced technologies to enhance O&M practices. Real-time monitoring systems, predictive analytics, and remote sensing technologies are utilized to proactively identify maintenance needs and address potential issues before they escalate. By leveraging these technological capabilities, the project can minimize downtime, reduce maintenance costs, and maximize the lifespan of infrastructure assets

Furthermore, risk allocation mechanisms are carefully considered within the PPP framework. Risks associated with O&M activities, such as equipment failures or unexpected maintenance expenses, are allocated between the public and private partners based on their respective capabilities and expertise. This ensures a fair distribution of risk while incentivizing the private partner to implement effective risk management strategies. The proposed PPP model integrates comprehensive strategies for O&M management, including clear responsibilities, performance-based contracts, technology integration, and risk allocation mechanisms. By adopting this approach, infrastructure projects can achieve sustainable, cost-effective, and reliable O&M practices, ultimately contributing to their long-term success and societal benefits.

4.8 Conclusion

In conclusion, this chapter has presented an in-depth look at the overall procedure and key elements of Public-Private Partnerships. It has assessed several models and practices of public private partnerships, offering valuable insights into the various stages of PPP initiatives. The chapter has thoroughly examined several areas of project planning and feasibility, including project selection, legal concerns, and government planning. It has also explored risk analysis, tendering, finance, construction, and operation and maintenance. The essential role of thorough project planning and feasibility studies in guaranteeing the financial viability of PPP projects has been emphasized. The significance of risk analysis and management has been emphasized, comprising the processes of identifying, mitigating, and efficiently allocating risks among the many stakeholders involved in a project. The intricate process of tendering, characterized by a variety of assessment methodologies and procurement forms, exemplifies the different approaches employed in PPP projects.

In addition, the chapter has looked at the complexities of financing, with a focus on project funding sources, financial structure, cost of capital, cash flow analysis, and the importance of financial indicators. The preservation of functionality and efficacy of PPP projects is contingent upon the careful consideration of construction, operation, and maintenance activities.

This chapter serves as a comprehensive overview of the complex realm of PPP, highlighting the significance of careful Planning, effective risk management, strategic procurement, expertise in finance, and unwavering dedication to the sustained prosperity of these cooperative endeavors.

CHAPTER V

PPP PRACTICES, OPPRTUNITIES AND CHALLENGES FOR LIBYA

5.1 Introduction

The landscape of infrastructure development across the globe is witnessing a transformative shift through the integration of public-private partnerships (PPPs), a model that amalgamates the strengths of both the public and private sectors to accomplish mutual goals. This chapter explores the dynamic world of public-private partnerships (PPPs), focusing on their implementation, opportunities, and challenges, with a particular emphasis on Libya. It begins by examining PPP practices in developed countries, showcasing their sophisticated frameworks and success stories, serving as benchmarks for other nations. The narrative then shifts to the adoption of PPPs in developing countries, highlighting their role in addressing infrastructure deficits and fostering economic growth.

Focusing on Libya, the chapter outlines the nation's journey towards integrating PPPs amidst challenges such as political instability and the urgent need for infrastructure development. It assesses the Libyan government's initiatives to create a conducive environment for PPPs, including legislative reforms and the establishment of dedicated entities to facilitate public-private collaboration.

By comparing global PPP models with the Libyan context, this chapter aims to identify pathways for Libya to leverage PPPs for its development. It underscores the importance of aligning international best practices with local needs, proposing strategies for Libya to overcome its unique challenges and capitalize on PPPs for sustainable growth and development.

5.2 PPP Practice in the Developed Countries

The degree of growth in public-private partnerships (PPPs) differs throughout nations and regions, contingent upon factors such as local geography, financial market maturity, political environment, and the capacity to establish partnerships. In this context, nations that possess a favorable public-private partnership (PPP) atmosphere, particularly developed nations, tend to exhibit a more matured and refined PPP policy in comparison to developing ones (Deloitte, 2006, p. 4).

The United Kingdom and Australia possess highly developed public-private partnership markets compared to other developed nations. Since 1992, the United Kingdom has witnessed widespread implementation of the Private Finance Initiative (PFI) model across many infrastructure sectors. Partnerships UK (PUK), which emerged as the successor to the Treasury Task force in 2000, has made substantial contributions to the present state of the United Kingdom's Public-Private Partnership (PPP) sector. The Public-Private Unit (PUK) provides technical assistance and guidance to the Treasury about policy matters related to Public-Private Partnerships (PPP). Additionally, PUK aids public authorities in the formulation and implementation of Private Finance Initiative (PFI) projects (Kahyaoğulları, 2013, pp. 245-248)

Initially, there had been a lack of support from many local authorities for the Private Finance program. However, the positive outcomes and contributions of PFI, particularly in the educational sector, have played a significant role in changing the attitudes of local government authorities. As a result, their level of commitment has significantly risen (Kahyaoğulları, 2013, p. 256)

PFI projects in the UK are commonly classified into three distinct models: financially self-sufficient, classic PFI, and joint ventures. In the financially self-sufficient framework, the responsibility of planning, constructing, funding, and operating a public facility is assumed by the private sector, wherein all expenses are recovered through direct user fees. The classic Private Finance Initiative (PFI) model entails the provision of services to the public entity that initiated the contractual agreement. This suggests that in such projects, the private investor doesn't directly receive money from users. Instead, the investor obtains regular payments from the public authority, which are contingent upon the project's availability (Alshawi, 2009, pp. 3-4).In a joint venture, the public authority plays a significant role as a stakeholder in the joint venture business. However, the private partner is in charge of overall control. It's significant to note that this kind of PFI is typically used when the public authority wishes to ensure a larger societal benefit from the project (Cartlidge, 2006, p. 196)

The practice of PPP in Australia has notable similarities to the framework of (PFI) model employed in the United Kingdom. The transition from the previous Build Own Operate Transfer (BOOT) model to the United Kingdom's PFI model took place throughout the early 2000s. (English, 2006, p. 253)

The adoption of PPP in Australia exhibits variation between different Federal States, with the state of Victoria taking the lead in PFI model implementation. The establishment of Partnership Victoria State aimed to provide the State government with technical and consultative services. According to the OECD, 2008, pp 117-121, the Partnership Victoria has had a role in facilitating around 10% of PPP investment as of 2003. Furthermore, it is worth noting that as of the year 2014, a total of 24 Public-Private Partnership (PPP) projects, with an estimated value of AU$12.4 billion, were implemented under the Partnership Victoria initiative, as reported by the State Government of Victoria (2015). Those Public-Private Partnership initiatives encompass a diverse range of infrastructure sectors, such as transportation, healthcare, education, and security. Other states, such as New South Wales and South Australia, have also implemented Public-Private Partnership (PPP) units similar to Partnership Victoria. The government of Australian IN THE YEAR 2008 introduced an autonomous federal agency named Infrastructure Australia (OECD, 2010, p. 76). This agency, was created under the Infrastructure Australia Act of 2008, was designed to encourage the adoption of PPPs across the Federal States. Additionally, Infrastructure Australia is dedicated to developing policies, creating guidelines, and coordinating infrastructure growth throughout the country's Federal States (Appleby, Aroney, & John, 2012, p. 56)

Other developed nations such as the United States of America and Canada have well-established and matured public-private partnership (PPP) markets. The Canadian Council for Public Private Partnerships (CCPPP) was founded in 1993 in Canada. The organization is the primary entity responsible for public-private partnerships (PPPs) in Canada. Its main duties are the coordination and promotion of PPP policies on a national level (Jooste & Scott, 2009, p. 26). According to the OECD (2010a), In addition to Alberta, other provinces, including British Columbia, Ontario, and Quebec, have instituted PPP units that provide consultancy services to government organizations and agencies (OECD, 2010a). Since the mid-2000s, about 206 public-private partnership projects, with a total value of $63 billion, have been established in Canada. 9 (CCPPP, 2016, p. 9)

The United States' practice of public-private partnerships is similar to the structure of PPPs in Canada. Just like its Canadian counterpart, the United States also has a national public-private partnership (PPP) unit known as the National Council for Public-Private Partnerships (NCPPP) which was founded as a successor to the Privatization Council, which was first formed in 1985. At the federal state and local levels, the NCPPP has continuously over years worked for and promoted the PPP idea (Osborne, 2002, pp. 117-119)

Notably, the majority of U.S. PPP initiatives are in the transportation infrastructure sector (Wall, 2012, p. 74). Between 1989 and 2011 more than 96 PPP initiatives totaling $54.3 billion took place in the U.S. transportation infrastructure sector. In contrast to the United Kingdom, where the DBFO concession type has been utilized extensively for transport projects, the United States uses a variety of concession contracts, including design build, and finance (DBF) design and build (DB), and design build operate and maintain (DBOM) (Reinhardt, 2011, p. 7).

Considering the PFI concept's success and its significant impact on the UK's economy, governments in other developed nations are emulating the UK's PPP approach. Countries such as Japan, South Korea, Italy, Belgium, Spain and Portugal have all shown an interest in the PPP approach. These nations have enacted policies and laws that govern the implementation of this policy (Yescombe, 2011, p. 35)

5.3 PPP Practice in Developing Countries

In the past few years, governments in developing nations have exhibited a degree of commitment towards utilizing the financial resources and specialized expertise of the private sector in order to facilitate the development of public infrastructure. The prevalence of PPP initiatives has shown a notable rise in developing countries through the years, as highlighted by (Bovis, 2013, p. 27). It makes sense given that the majority of governments in developing nations face a substantial infrastructure investment gap that budgetary allocations alone cannot close that gap (Trebilcock & Rosenstock, 2013, p. 5)

PPP investments have experienced a notable increase over time, notably in developing nations in the Latin America and Caribbean (LAC) area. In Latin America and the Caribbean, over the years, Brazil has made significant contributions to the expansion of public-private partnership (PPP) initiatives. The significant growth in projects in Brazil was observed in 2003, accounting for 45% of LAC PPP investments, and further increased to 78% in 2012 (World Bank 2013a, P. 123). Other nations, such as Mexico and Argentina, are increasingly adopting the concept of Public-Private Partnerships (PPP) and have made significant contributions to PPP investments in the Latin American and Caribbean (LAC) region (Magro, 2015, p. 28).

Over the past twenty years, the PPP market in the East Asia and Pacific (EAP) area has shown progress. The area now ranks second among developing regions in terms of PPP investments (ADB, 2021, p. 5). The majority of PPP projects in the area have increased, however, been started in China, followed by Malaysia and the Philippines. China has essentially provided 33% of the region's private infrastructure investments since 1990, Malaysia and the Philippines providing approximately 17% and 16%, respectively, as reported by the World Bank in 2013 (p. 4). Prior to currently, China's communist planned economy placed limitations on the number of PPP projects that undertaken in the nation. However, starting from the early 2000s, China's economic system has undergone a process of liberalization via the implementation of new laws. The aforementioned development has facilitated increased involvement of the private sector in the delivery of public infrastructure. According to (Hu, Chan, Le, Xu, & Shan, 2016, p. 3). In a similar vein, the Malaysian government created a PPP unit named the Privatization and Private Finance Initiative Unit (PFI). The PPP unit is anticipated to enhance and facilitate the implementation of more public projects through PPP programs in the nation, with the aim of stimulating private investments in the area (Ahmad & Khan, 2016, p. 27).

In the South Asia (SA) area India has emerged as the predominant country. According to Ahmad & Khan India accounted for a significant proportion of Public-Private Partnership (PPP) projects that achieved financial closure in 2014. Out of the total 40 projects, India obtained 36, indicating a substantial 90% share. In addition to India, other emerging nations such as Bangladesh and Pakistan are also shown a notable inclination towards private sector involvement in the provision of public infrastructure (Ahmad & Khan, 2016, pp. 20-25).

In the Sub-Saharan Africa (SSA) and Middle East and North Africa (MENA) areas private investments in PPP have not shown significant progress when compared to neighboring areas. In essence, the Sub-Saharan Africa (SSA) region has documented a total of 509 PPP projects over the course of the last twenty years, with a combined value of US$ M157,148 as reported by the World Bank in 2015. Similarly, the Middle East and North Africa (MENA) region documented a total of 164 PPP projects, with a combined value of US$ 105,499 million, as reported by the World Bank in 2017. In the early 2000s, South Africa implemented a national PPP framework, which served as a catalyst for the revitalization of its PPP sector. The effective implementation of PPP projects in South Africa can be attributed to the efficient approval procedure and the robustness of the local financial market (IMF , 2018, p. 11)

5.4 Best PPP Practice Framework for Infrastructural Projects in Developed Countries

Many countries around the world that excel in public-private partnership initiatives possess a comprehensive framework. This framework, established during the early stages, integrates the development of the PPP program. A public-private partnership framework amalgamates guidelines, policies, structures, and regulations that together determine how a PPP is identified, assessed, selected, budgeted, procured, prioritized, and monitored (Osei-Kyei & Chan, 2017, p. 115). Furthermore, these elements seamlessly collaborate to carry out the intrinsic tasks of PPPs.

A robust PPP framework is essential for a partnership's success as it fosters transparency, accountability, and integrity. It ensures the chosen initiative aligns with the procuring agency's developmental objectives, offers optimal financial benefits to the public, and minimizes undue risks to public entities. Moreover, this framework encourages methodical engagement with stakeholders and equitable compensation for deserving parties, enhancing private sector involvement and public endorsement of the PPP program. To work on the basis of best practice an effective PPP framework must be adopted which encompasses specific key components, including the following:

a) Robust Policy Framework

A well-defined and inclusive policy establishes the strategic direction for Public-Private Partnerships, defining the objectives, responsibilities, and procedures included. It serves as a comprehensive guideline for all stakeholder involved, guaranteeing consistency in the process of making decisions, transparency in the execution of duties. Moreover, this Policy serves as a guiding principle, guaranteeing that public-private partnership ventures are not only financially feasible, but also in accordance with the wider socio-economic development objectives of the government.

A strong policy framework, therefore, creates mutual trust and cooperation among private and public sector by providing confidence and predictability. As highlighted by the author World Bank Report (2017), the presence of a well-defined policy framework plays a crucial role in guiding the direction of public-private partnerships (PPPs) towards achieving of intended objectives and the mitigation of possible obstacles.

b) Legal Framework

The establishment of a legal framework is of utmost importance in the context of public-private partnerships as it serves to set clear guidelines, facilitate appropriate risk allocation, and offer mechanisms for resolving disputes. This framework promotes an atmosphere of confidence and predictability that is crucial for encouraging the active involvement of the private sector (De Mastle, Farquharson, & Yescom, 2011). This provides the private sector with a sense of assurance and protection for their legal rights. Conversely, in the absence of specific laws governing partnership operations, contract negotiations may become more laborious and costly, while the risk of potential disputes between the involved parties could rise.

c) Processes and Organizational Obligations

A viable PPP framework should sufficiently state the procedures deployed by partners in identifying, developing, appraising, implementing, and managing a PPP project. An acceptable PPP process should remain efficient, consistent, and transparent to regulate the quality of public-private partnership projects effectively.

d) *Public Financial Management Mechanism*

Public financial management procedures play a crucial role in the implementation of best practices for public-private partnerships (PPPs) by ensuring the promotion of transparency, accountability, and efficient utilization of resources. According to Farquharson et al. (2018), the implementation of a robust financial management system is crucial for effectively monitoring, evaluating, and reporting the fiscal implications associated with PPP initiatives. This system plays a vital role in sustaining the feasibility of such projects and guaranteeing the efficient utilization of public funds. This enhance public confidence and trust which is crucial for the successful implementation of PPPs (Yescombe & Farquharson, 2018, p. 62).

The implementation of a well-structured PPP framework ensures a high level of commitment to efficient project management and transparent reporting, while also facilitating the development of an appropriate budget for public-private partnership initiatives. Consequently, the Public-Private Partnership (PPP) has the potential to offer value for money for the project expenditure while avoiding unnecessary burden on future generations and effectively mitigating the financial risks associated with the project (Osei-Kyei & Chan, 2017, p. 115).

e) *Other Arrangement*

Achieving optimal execution of Public-Private Partnerships requires the execution of diverse arrangements that extend beyond just financial and legal frameworks. These components encompass stakeholder participation to ensure comprehensive representation of all interests, a well-defined governance structure to promote effective decision-making and oversight, and robust project assessment processes that verify the feasibility and benefits of the project (World Bank, 2022, p. 21)In addition, it is imperative to establish a transparent procurement process and implement rigorous dispute resolution systems in order to foster confidence and guarantee the long-term sustainability of the project.

5.5 PPP Practice in Libya

The country has seen a notable increase in the need for public services over the past few decades as a result of the country's population growth rate increase. The government, with its monopolistic policy, struggled to keep pace with these growing needs and meet the needs of the population, often lagging in project completions. Additionally, despite the country's geographic expansion and the distance, new planning was delayed. straining the government's ability to meet its commitments to its citizens. While there was government's reawakening in recent years to initiate and progress new infrastructure projects, the onset of the 2011 revolution broke out these efforts.

This necessitated the pursuit of political stability and innovative strategies, that would help in completing the stalled projects, introduce new ones. Financing these initiatives from sources beyond the state's primary budget was pivotal, in order to eradicate administrative corruption and adhere to modern best practices (Al-Sifao & Mohamed, 2022, p. 279)

Considering these challenges, it was urgent to implement and update some of the previous government decisions to fit future demands and cater to the people's needs. Among these decisions is to implement the partnership between the public and private sectors by establishing a competent entity, guided by top international standards, that could revitalize the Libyan public sector and construction market, offering the private sector and foreign investments a more substantial role (Rushdi, 2008, p. 1187)

In 2004, an initial measure was taken to form a new corporate entity known as the Libya Investment firm. The primary objectives of this firm were to facilitate investment activities, secure financial resources for various projects, and oversee investment portfolios. However, the intended execution of this entity was hindered by traditional mismanagement practices prevalent during that period.

In accordance with Cabinet Resolution No. (1) of 2020, which pertains to the addition, purpose modification, and amendment of the trade name of the Libya Investment company. As per this resolution, the Libyan Investment Company is now officially recognized as the Libyan Public Private Partnership Company (LPPPC). This change comes with legal personhood, independent financial liability, and is endowed with a capital of 100 million dinars.

Showcasing a fresh perspective, a distinct entity with its own legal standing and financial accountability was founded. The fusion of promoting public-private partnership ventures with the availability of diverse financial tools is instrumental in realizing the nation's objectives (Al-Sifao & Mohamed, 2022, p. 279)

Article No. (3) of the company's bylaws outlines the objectives of the newly established company as follows: The company aims to explore alternative financing sources for public projects. This involves creating and enhancing a conducive environment for project implementation through collaboration between the public and private sectors. The focus is on transparent and competitive processes that generate added value. Additionally, the company is empowered to manage portfolios, invest cash surpluses for the benefit of various public entities, both national and foreign. It can establish and oversee specialized funds, manage special-purpose companies for government projects, formulate necessary legal frameworks and procedures for public-private partnerships, and execute approved initiatives. The company is also authorized to manage issuances (Libyan Cabinet Resolution, 2021, P. 3)

In pursuit of its goals, the company is authorized to undertake the following activities: Enter into agreements and contracts with entities interested in investing their savings and financial surpluses. Engage in lending and borrowing activities. Possess the real estate necessary for the fulfillment of its objectives. Execute all legal transactions related to its owned fixed or movable assets, including buying, selling, mortgaging, and other legally permissible actions. Conduct all legal transactions pertaining to funds managed by the company on behalf of others, as stipulated in the management agreements and in compliance with relevant legislation. Participate in the establishment of companies with other entities, subject to the defined objectives and subsequent approval. Conclude agreements and contracts with national and international financial institutions to support the realization of its objectives (Libyan Cabinet Resolution, 2021, P. 4)

The Libyan Economic Salon team indicated that, by examining the company’s bylaws and through the meeting held by the Libyan Economic Salon team with the Chairman of the Board of Directors of the Libyan Public Private Partnership Company (LPPPC), and by referring to the literature on partnership between the public and private sectors (PPP), as well as international experiences, the following can be noted:

A) The experience of establishing a company dedicated to Public-Private Partnerships (PPP) represents a unique venture in the realm of international practices. Traditional international approaches and literature on PPP, as endorsed by global entities such as the World Bank, typically advocate for the establishment of an institutional framework bolstered by robust government support, which may manifest as a dedicated body or institution. The concept of having a company specifically for this purpose is unconventional in comparison to established norms and practices.
B) The company is a profit-making institution that cannot be entrusted with the project of preparing the environment for participation operations.
C) This development approach (PPP) requires strong support from the central authority that cuts across all sectors.

Therefore, it is difficult for a company that follows a specific sector to have the ability to manage the Partnership portfolio.Through the company's articles of association, there is no clarity or specific mechanisms that make the company able to manage this type of Partnership and the Economic salon have some recommendations in this regard as the following:

One of the most important components of the success of the PPP is the presence of a robust legal and institutional framework supported by the highest levels of power in the country.

The team of Libyan Economic Salon recommends the necessity of issuing clear statements and instructions from the top of the authority to adopt the PPP framework as a development method and providing legislative, institutional and technical support for each stage of the Partnership agreement. (World Economic Forum, 2019)

Establishing a unit, whether it is a committee or organization under the supervision of the cabinet of ministries or finance ministry, whose main mission is to create the appropriate environment for the success of the partnership system, and to address the necessary legislative and technical gaps. In the Libyan case, a specialized department or unit concerned with PPP can be established. Also seeking help from some international organizations interested in participation models to benefit from the experience of these organizations in this type of participation. Furthermore, encouraging local authorities to study and understand the participation system, which may be a way out to fill the infrastructure deficit in municipalities if the design and implementation of local projects is mastered according to correct rules (World Economic Forum, 2019)

As per the 2022 Audit Bureau's report, there is encouragement for fostering partnerships between the public and private sectors, emphasizing its significance in driving development, activating the private sector's role, and diversifying project financing sources as an alternative to government spending on infrastructure projects, in addition to the distribution of risks. However, concerns were raised about the government's bypassed of crucial preliminary steps to establish a conducive environment for successful partnerships. Whereas the Libyan Public Private Partnership company LPPPC was established and granted broad powers to establish the legal frameworks and procedures for partnership with the private sector without taking into account the internationally recognized stages with regard to controlling the procedures for partnership between the public and private sectors (Libyan Audit Bureau Report, 2022, p. 235).

The report of Libyan Audit Bureau suggests internationally recognized stages, including project prioritization, feasibility studies, and public tenders must be taken into consideration. Identifying the government entity or establishing a unit that will participate with the private sector.Supervision and oversight of the partnership agreement by competent authorities involve monitoring the execution, assessing outcomes, and ensuring the attainment of specified targets, in conjunction with a thorough feasibility study.

Considering that the entire process of public-private partnership, including proposing the vision, plans, procurement, contracting, implementation, and establishing legal frameworks, cannot solely be entrusted to LPPPC. This is particularly crucial as the execution of these stages should be assigned to an independent body or entity. To ensure effectiveness and transparency, a procedural guide must be developed for organizing this process. Additionally, a dedicated body should be assigned to enhance the legal, regulatory, and legislative frameworks, safeguarding the state's rights and preventing the loss of its capabilities. The LPPPC should be obligated not to undertake any financial or legal commitments beyond its capacity (Libyan Audit Bureau Report, 2022, p. 236)

Consequently, it is imperative for LPPPC to assume a pioneering and transformative function in the implementation of the PPP strategy, as well as in the formulation of funding mechanisms and financial instruments for privately initiated infrastructure ventures, with the aim of effectively and innovatively executing these projects.

Regarding the private sector, prior research on the viability of implementing the PPP approach in the construction industry of Libya has determined that the private sector exhibits enthusiasm towards participation and holds an optimistic outlook on the state's capacity to offer suitable incentives for investment in development projects that cater to the requirements of its population (Al-Sifao & Mohamed, 2022, p. 281).

According to InfraPPP, The Libyan Public Private Partnership has drafted projects in health and transportation sector to be implemented in the form of PPP. Port of Susah is the country first PPP. The agreement for the design and construction of the port has been formalized through an Engineering, Procurement, and Construction (EPC) contract with Archirodon Construction in 2020. Upon its completion, the Port of Susah is poised to become Libya's deepest multi-use port, equipped to manage a minimum of 500,000 TEU annually. The project is anticipated to have a total investment of $1.5 billion and will progress through four distinct phases, the projects has been delayed up to know. PPP Projects in Libya (www.infrapppworld.com, 2019. P. 3).

The figure 2.3 below shows the key phases of the Public Private Partnership project process that the LPPPC currently adopt in the execution of the partnership agreement.

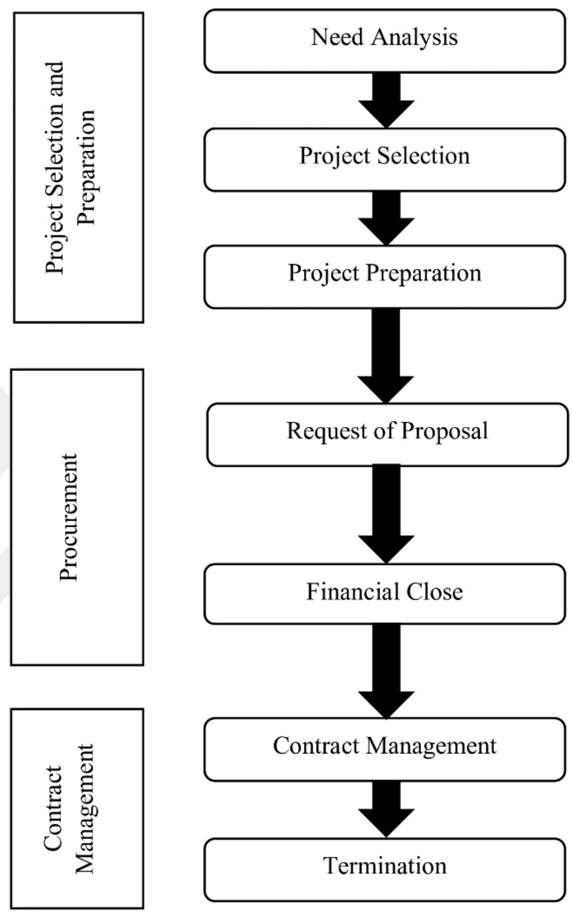

Figure 5.1: Key Phases of Public Private Partnership Project Process

Source: LPPPC Manual, 2021

5.5.1 Opportunity for Infrastructure PPP Projects in Libya

While the Libya's current infrastructure, like that of many other developing nations, presents a significant challenge to economic growth and development, However, it also presents a chance for Libya to draw private investments in infrastructure. The following are some key factors illustrating the opportunity infrastructure PPP projects and investment in Libya:

5.5.1.1 Massive Reconstruction Needs

As a result of years of conflict and chaos, Libya's infrastructure has suffered substantial damage. This has created an imperative for comprehensive and strategic reconstruction. The scale and complexity of these infrastructure challenges present a vast array of opportunities for PPP to step in. Engaging the private sector through PPPs can bring in not only the required capital but also expertise, innovation, and efficiency in the restoration and development of key infrastructure projects, from transportation networks to public utilities and beyond (ISDB, 2018, p. 243)

The substantial oil and gas reserves of Libya present a reliable and consistent source of money that is well-suited for the purpose of infrastructure development. International Monetary Fund (2023) Pointed out that, these reserves not only contribute to the overall strength of the national economy but also serve as a solid foundation for the implementation of large-scale initiatives. Through the utilization of these resources via Public-Private Partnerships, Libya has the potential to attract private investments, hence facilitating the development of efficient infrastructure. These agreements can further facilitate the transfer of technology and contribute to economic diversification, therefore mitigating the economy's over reliance on oil and gas. The combination of abundant natural resources and a well-developed infrastructure holds promising prospects for the future economic expansion of Libya (IMF, 2023, pp. 3-5)

5.5.1.2 Strategic Geographical Location

The strategic geographical location of Libya's Mediterranean coast presents opportunities for the development of ports, logistics, and marine infrastructure, which in turn facilitate crucial trade lines between Europe and the rest of Africa (Megerisi, 2020, p. 3).

5.5.1.3 Support from International Body

Global institutions like the African Development Bank and the World Bank have a strong commitment to provide assistance to developing nations by means of public-private partnership frameworks, which encompass both financial and technical support (World Bank, 2022, p. 64).

5.5.1.4 Growing Population

The increasing population in Libya places pressure on the current infrastructure, hence presenting potential avenues for investment in areas such as housing, water, sanitation, and transportation. According to Bennett (2019) in the Urban Development Quarterly, the study focuses on the correlation between population growth and infrastructure requirements in North Africa.

5.5.1.5 Need for Technological Infrastructure

According to Ahmed (2020), the necessity for technical infrastructure, encompassing telecommunications and information technology (IT), is becoming increasingly apparent for middle east and north African nations as Libya directs its attention towards the future. This presents opportunities for public-private partnerships (PPPs) to be established (Cusolito , Gévaudan, Lederman, & Wood, 2021, p. 52).

5.5.2 Challenges for PPP Implementation

5.5.2.1 General Challenges for PPP Implementation

Despite being recognized as a crucial and successful mechanism for the development of many countries, public-private partnerships (PPPs) encounter a range of challenges. Those key challenges are:

a) Different Organizational Values and Objectives Between Participants.

According to (Reich, 2018, p. 240), public-private partnerships (PPPs) typically unite entity with different cultural, value and perspectives. These inter-sectoral collaborations between the public and private sectors are often results in intricate and prolonged collaborations (Paanakker & Reynaers, 2020, p. 251) pointed out that PPP create a unique environment where public and private sector principles and moral standard often meet and conflict with one other. Due to the differences in the values and moral principles upheld within the private sector as compared to those observed within the public sector, partnerships between these sectors might face challenges and inefficiencies.

Suebvises (2014) argues that there are notable distinctions between public organizations and their private sector counterparts in several aspects, including organizational structures, missions, procedures, cultures, and communication styles. For example, it is common for public sector firms to adopt bureaucratic structures, whereas private sector businesses tend to exhibit greater flexibility in their organizational structures. Hence, these distinct organizational characteristics can make collaborations especially challenging (Suebvises, 2014, p. 76).

Strausser et al. (2021) argue that it is important to engage in a comprehensive dialogue on shared objectives and priorities among both parties from the very beginning of the process. Subsequently, it is important for the partners to engage in ongoing dialogue and reassess the established objectives and priorities. In other words, the enhancement of consistent communication techniques will lead to an improvement in the quality of public-private partnership (PPP) collaboration (Strasser, Stauber, Shrivastava, & Riley, 2021, p. 9).

b) Inadequate Institutional Framework

Nuhu, Mpambije, and Ngussa (2020) highlighted the significance impact of weak governance mechanisms in the context of public-private partnerships (PPP). These mechanisms encompass inefficient enforcement measures, poor regulations, aa lack of transparency, imbalanced involvement in decision-making processes (Nuhu, Mpambije, & Ngussa, 2020, p. 6)

Most experts concur that a robust institutional framework plays a vital role in ensuring the success of PPP projects. According to Gobikas and Čingienė (2021), the lack of a robust institutional framework is a significant factor contributing to the ineffectiveness of public-private partnership (PPP) initiatives, without such a framework, PPP endeavors are likely to falter ((Gobikas & Čingienė , 2021, p. 1187). Casady et al. (2020) pointed out that the sophistication of PPPs hinges on the advancement of three core capabilities: legitimacy, trust, and capacity. The development of these capabilities plays a pivotal role in the successful execution of PPP projects (Casady, Eriksson, & Levitt, 2020, p. 15).

According to Narbaev, Marco, and Orazalin (2019), the presence of robust governmental institutions is necessary in order to improve the performance of public-private partnerships (PPP) and stimulate investment development. The regulatory structure in place reflects transparency and clarity, effectively serving the PPP endeavors (Narbaev, Marco, & Orazalin, 2019, p. 120).

c) Inadequate Political and Legal Structures

Inadequate political and legal structure are widely recognized among the most significant hindrance to the execution of the PPP framework (Sadeghi, Bastani , & Barati, 2020). Inadequate legislation and insufficient administrative capabilities deter private sector initiatives. During the 1990s, Central and Eastern European nations established a sophisticated legal framework for PPPs. Yet, the measures taken were inadequate in creating a conducive legal and administrative framework (Amel , Šašić, & Tanović, 2021, p. 68)

PPP initiatives must possess a comprehensive strategy framework to ensure their continuity, even amidst political shifts and instabilities, to avert possible obstacles. Delić, Šašić, and Tanović (2021) proposed that PPP reforms should prioritize the legal structure, providing considerable adaptability related to the essence and substance of PPPs (Delić, Šašić, & Tanović, 2021, p. 57)

d) Deficient Processes for Choosing PPP Partner

Choosing private partners for a PPP must be through competitive process, with multiple interested private entities submitting their proposals to join as partners (Dechev, 2015, p. 230). Yet, this method isn't frequently employed in major infrastructure projects. For example, in Bulgaria, PPP implementations often call for enhancements in partner selection methods, as some entities are directly chosen without a proper selection process, leading to potential suspicions of corruption. Additionally, this strategy impedes the free competition in the selection process and tries to maximize private profit at the expense of public expenditure.

e) Inadequate Monitoring and Evaluation of PPP Procedures

According to Suebvises (2014), the absence of effective monitoring systems within the context of PPP may contribute to the facilitation of unethical behaviors. In Thailand, there are several models of Public-Private Partnerships which increasing the susceptibility to corruption inside governmental entities. The utilization of PPP in

certain regions of Thailand has been presented to facilitate corruption for both parties involved, owing to inadequate monitoring procedures in place (Suebvises, 2014, p. 77).
Nuhu, Mpambije, and Ngussa (2020), emphasized that there has been a lack of sufficient monitoring and evaluation of PPP procedures in Tanzania. This deficiency may be attributed to some private entities' reluctance to share essential information and adhere to the standards set within the PPP framework. The prevailing perception often holds that governmental perceived as ineffective, though it is worth noting that certain private sector partners often demonstrate inefficiency. For instance, private health facilities in Tanzania operating under PPPs fail to provide regular reports yet seek increased governmental financial support. This leaves the government in a bind, lacking evidence of the private partner's operations and service delivery (Nuhu, Mpambije, & Ngussa, 2020, p. 12).
According to Twinomuhwezi and Herman (2020), governments must establish a mechanism to oversee PPP partnerships. In order to avoid resource misallocation, PPP projects must be continuously monitored in all of its aspects (Twinomuhwezi & Herman, 2020, p. 135)

f) Inadequate Mechanisms for Allocating Risk and Responsibilities

The implementation of Public-Private Partnerships (PPPs) is mostly motivated by the potential of sharing risk among participating entities. Huque (2021) posits that certain PPP partners encounter technical and organizational obstacles, such as ambiguous agreements related to the allocation of risk and responsibility, inadequate protocols for resolving disputes and disagreements among partners, and the absence of agreements regarding the mitigation of substantial profits and risks of failure. The lack of dependable risk assessment methods leads to inaccurate evaluation and unequal allocation among partners (Huque, 2021 , p. 82). Additionally, there may be possible risks that are not addressed by the agreed-upon term. The potential for an economic and financial disaster to transpire is a significant example, according to the study conducted by Walwyn and Nkolele (2018),Based on the risk transfer establishment theory, it is necessary to allocate risks in PPP to the partner who posGsesses the highest level of proficiency in monitoring or managing the risks at the lowest possible cost (Walwyn & Nkolele, 2018, p. 3)

g) Inconsistency Between Resource Allocation and Quality

Another key issue with PPP implementation appears to be the inconsistency between funding and service quality (Dechev, 2015, p. 234). Maurya and Srivastava (2018) claim that details of outputs, and quality are missing from certain PPP projects' agreements, although the inputs and procedures are thoroughly stated, thus parties lower the quality of outputs as a result of insufficient quality monitoring (Maurya & Srivastava , 2018, p. 126).

h) Luck of Transparency

Transparency is one of the key elements that makes PPPs successful. Limiting public access to PPP development documents poses significant challenges (Dechev, 2015, p. 234). Such restrictions can undermine the investment's transparency and sustainability. Given that PPP agreements often contain commercially sensitive information; they are not readily available to the public. This makes it difficult for the public to evaluate and oversee the quality, terms, and potential risks associated with services that serve their interests. A deficit in transparency can inadvertently foster corruption (Suebvises, 2014).

5.5.2.2 Challenges for PPP Implementation inLibya

PPP in Libya, as introduced by the Libyan Public-Private Partnership company (LPPPC), holds a positive outlook on achieving significant societal benefits and enhancing vital institutions. This will be accomplished through the execution of a comprehensive set of development projects, utilizing the partnership model with the private sector. Simultaneously, it is aware of the difficulties that may arise when implementing these PPP projects. These challenges include:

a) One of the most significant challenges to private sector involvement in infrastructure investment is the absence of legislation or enforceable laws that govern the relationship between public and private entities. This lack of legal framework hinders the establishment of clear duties and responsibilities within partnership contracts and all associated aspects. The presence of an insufficient or inadequate enabling environment, particularly in terms of legal and regulatory frameworks. The establishment of a robust and well-organized regulatory framework is widely recognized as a crucial prerequisite for the successful implementation of PPP (Al-

Sifao & Mohamed, 2022, p. 282). The existence of a robust legal and regulatory framework has the potential to enhance the tendency of the private sector to engage in PPP (Kwak, bbs, & Chih, 2009, p. 62)

b) The persistence of political instability and sporadic armed clashes create substantial challenges to economic development and reconstruction efforts, especially in remote areas. These circumstances have the potential to discourage foreign investments and global reputation. The extensive territorial size of Libya, which measures 1,759,540 square kilometers, relative to its population of 6.871 million in 2020, results in significant additional expenses for protecting and insuring that affect the entire investment expenditure.

c) Underdeveloped public financial system as Libya's financial Fiscal structure is underdeveloped, small, and largely owned by government entities. Libya's public sector accounts for over 80% of the total assets in the country. The banking sector is the prime provider of financial services to the economy in the country According to Abdulsaleh (2017, p. 18). The banking sector's fragility in Libyan state is a result of the state's 85% control over the financial and banking industry and the fact that it lags behind international banks in terms of competence. One of the key elements for ensuring sustainable growth is the banking industry that is well-developed. The growth and prosperity of investment and the private sector involvement hinge on the backing and amenities provided by the banking sector (Zhang, 2012,P. 67).

d) Non-banking banking business entities in the country remain relatively small, underdeveloped, and less significant. The domination of the Libyan economy by the public sector deters private entities from entering into a partnership with the public companies (Abdulsaleh, 2017, P. 19).

e) Among the biggest barriers to develop the Libyan economy is administrative, political, and financial corruption, which is also a key factor in the failure of some reform initiatives. In a study published by Transparency International (2020), Libya received a score of 17 out of 100 for integrity. This is evident in the government's expenditure on development projects despite no obvious outcomes being seen or felt on the ground (Rahman & Di Maio, 2020, p. 71) *f)* The absence of a comprehensive draft law on public-private partnership (PPP) introduces complexities in the organizational partnership procedures within the Libyan state, which are pivotal for enhancing and evolving Libya's economic environment according to world Bank Report (2020).

However, it is crucial to thoroughly examine and analyze the previously mentioned issues and challenges in order to include them during the adoption of PPP model.

5.6 Conclusion

In conclusion, the exploration of public-private partnership (PPP) practices, opportunities, and challenges, both globally and within Libya, illuminates a critical path for infrastructure development and economic revitalization. While developed countries offer a blueprint of mature PPP frameworks that underscore the importance of a conducive political, legal, and regulatory environment, developing nations, including Libya, are at a pivotal juncture to harness these insights for their advancement. Libya's endeavor to adopt PPP models signifies a commendable step towards addressing its infrastructure needs and economic challenges. However, this chapter underlines a pressing need for Libya to refine and update its PPP framework to align more closely with global practices. The current landscape in Libya reveals a significant gap in the legal and regulatory framework governing PPPs, which hampers the effectiveness and efficiency of these partnerships. This shortfall not only impedes the country's ability to attract private investment but also limits its capacity to undertake projects that are critical for national development.

For Libya to realize the full potential of PPPs, it is imperative to undertake comprehensive reforms aimed at establishing a robust legal and regulatory framework. Such reforms should focus on enhancing transparency, accountability, and equitable risk-sharing between the public and private sectors. Additionally, aligning Libya's PPP framework with international standards and practices will be crucial in fostering a more attractive investment climate, thereby enabling the nation to tap into the expertise and resources of the private sector more effectively.

In light of these findings, it is recommended that Libyan policymakers and stakeholders engage in a thorough review and update of the existing PPP framework. This process should involve benchmarking against global best practices, consulting with international PPP experts, and fostering dialogue between all relevant parties to ensure the development of a comprehensive and effective PPP model. By addressing the current deficiencies in its legal and regulatory framework, Libya can pave the way for more successful and sustainable public-private partnerships, ultimately contributing to the nation's long-term development and prosperity. This will be further explored and addressed in the proposed model presented in the final chapter.

CHAPTER VI

STRATEGIC ASSESSMENT OF LIBYAN INFRASTUCTURE APPROACH WITHIN GLOBAL AND REGIONAL CONTEXT

6.1 Introduction

Infrastructure is at the core of every country's economy and is integral to defining its competitiveness. A sound infrastructure network contributes significantly to economic growth, trade facilitation, quality of life enhancements for populations as a whole, and enhanced standard of living for its people - providing essential benefits in both developed and developing nations. A well-laid-out infrastructure can act as a catalyst for change as developing nations transition toward becoming modern economies. Unfortunately, for Libya, as a country with significant oil reserves, infrastructure development has encountered several hurdles due to political unrest, financial difficulties, and civil unrest - hampering progress and meeting its population's needs.

It is vitally important to trace its historical context to gain insight into the current state of infrastructure in Libya and explore potential solutions. It began during Italian colonization and culminated with King Idris' monarchy period - when only limited infrastructure development was taking place along roads and railways. Muammar Gaddafi's rule, which spanned over four decadesin which Libya witness significant investments in infrastructure. Under Gaddafi, infrastructure became essential in driving economic and social development. However, Libya experienced a dramatic political transformation with the Arab Spring in 2011. The transition from an authoritarian system into a democratic one caused prolonged political instability with violent conflicts breaking out across its territory and fragmented governance structures that led to protracted periods of chaos that severely disrupted infrastructure development and maintenance programs (Fraihat & Yaseen, , 2020, p. 331). Economic challenges and fluctuations in oil production - Libya's primary revenue source - further compounded Libya's infrastructure deficit. Libya presents an intriguing case study: It is one of Africa's wealthiest nations with extensive oil reserves; however, due to years of conflict, neglect, and under-investment, it faces an infrastructure deficit that not only undermines economic growth but also negatively impacts the quality of life for its citizens.

Addressing this gap is key to Libya's continued progress and economic prosperity. This chapter seeks to thoroughly assess Libya's state of infrastructure and explore how strategic projects might help address its infrastructure deficit. It begins by outlining global infrastructure challenges, setting a context for understanding issues in developing nations (specifically Arab ones). Subsequently, an investigation of the current infrastructure state in Libya, followed by private sector investment into infrastructure, is conducted, and an in-depth analysis of Libya's deficit is provided.

This chapter also undertakes a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis to understand Libya's infrastructure investment landscape fully. This approach highlights strengths that can be built upon, weaknesses that need to be addressed, and opportunities and threats that need to be managed in Libya's infrastructure sector. After this chapter, a comprehensive summary of Libya's infrastructure challenges and potential solutions is provided, with special consideration of PPP as a strategic alternative for financing infrastructure projects. The objective is to give an in-depth account of Libya's current infrastructural situation while simultaneously stressing the urgency for innovative, strategic, and sustainable infrastructure development in Libya.

6.2 Global Infrastructure Challenges

According to the 2017 Global Infrastructure Outlook, there is a projected $15 trillion infrastructure investment gap. This gap arises from the disparity between the anticipated investment of $79 trillion and the $94 trillion needed for sufficient global infrastructure by 2040, which is 19% more than what would be achieved under current trends. It is projected that Africa and Asia would collectively have expected to contribute $6.3 trillion to this deficit, with the most significant shortfalls occurring in Energy and Road Transport sectors. Recent studies have begun to compare the efficiency gains of the PPP (Public-Private Partnership) procurement model against traditional methods. (Global Infrastruture Hub , 2017, p. 3)

The 21st century has been characterized by swift urbanization, technological progress, a growth in population, demographic transformations and shifting socioeconomic factors. In this evolving environment, Infrastructure development has emerged as a prominent factor, assuming a pivotal role in fostering economic advancement, enhancing societal welfare, and promoting ecological sustainability. Nevertheless, Despite the growing acknowledgement of the importance of infrastructure, the global community encounters several significant obstacles in the process of its strategic planning, development, and management (Güneş, 2021, p. 491). The following part explores the complex issues faced by infrastructure projects worldwide, utilizing extensive research and analysis to offer a valuable perspective.

6.2.1 Financial Constraint

One of the greatest obstacles to global infrastructure development is financial constraints. Infrastructure projects require substantial capital that often outstrips available resources in developing nations, surpassing their fiscal capacity to fund adequate infrastructural facilities for an acceptable standard. To understand this dire predicament, one can turn to the price-level fiscal theory, which demonstrates the relationship between fiscal deficits and inflation. According to Cochrane (2005), when governments cannot secure sufficient funding for their spending plans, they may resort to inflationary practices as an attempt at funding deficits with new money that increases general prices levels - destabilizing an economy further and leading to high inflation, low growth, and severe consequences on society - particularly those from underprivileged backgrounds who often bear its brunt.

Financial constraints prevent governments in many developing economies from investing adequately in infrastructure development, hindering current economic performance and prospects of economic expansion. An infrastructure gap impedes economic growth, potentially leading to decreased foreign investments, inhibited trade activity, and ultimately increased poverty levels (Cochrane, 2005, p. 501). Given these potential pitfalls, there has been an increased focus on finding alternative financing methods to support infrastructure development - leading to innovative financing methods such as Public Private Partnerships. Leveraging both sectors' strengths to overcome financial constraints, PPPs present an appealing solution that draws upon capital, technological prowess, and efficiency to deliver public infrastructure projects.

Implementing PPPs presents certain challenges; issues like contract design, risk allocation, and upholding public interest must all be considered to ensure its success. Therefore, financial constraints present an insurmountable hurdle in global infrastructure projects; however, strategic planning, innovative financing mechanisms such as PPPs, and international cooperation could provide ways around this obstacle. (Heinrich & Kabourek, 2019, p. 867) By their very nature, infrastructure projects demand significant financial investments that often surpass the fiscal capacities of developing nations a midst significant economic pressures like low GDP, rising public debt levels, and other socioeconomic obligations. Even in advanced nations, financing large infrastructure projects may strain public coffers leading to fiscal imbalances.

Financial challenges associated with infrastructure development arise from limited fund availability and their allocation and management (Badi, Stević, & Bouraima, 2023, p. 17). Public funds, which can often be restricted due to budgetary cycles, bureaucratic red tape, or other administrative factors, are not always allocated efficiently, often leading to projects being started up but remaining incomplete due to insufficient ongoing funding; moreover, cost overruns and delays often extend their limited budget further than anticipated. Furthermore, infrastructure development incurs financial costs through externalizes associated with its development. Construction can have social and environmental ramifications, which must be mitigated; funding must be made available for these efforts - increasing overall project costs further. Likewise, ongoing investments are needed for infrastructure maintenance and operation costs once infrastructure projects have been built out (Estache & Foucart, 2019).

With these constraints in place, Public-Private Partnerships have become an increasingly essential means of financing infrastructure projects. It could bring financial resources from both sides - public and private - bringing new possibilities for infrastructure project implementation that might otherwise not be achievable using only public funding alone. Furthermore, due to its focus on efficiency and profit motives, private firms often bring improved project management expertise that helps control costs while meeting timelines on time for the completion of projects. Nevertheless, their success relies heavily upon an enabling policy environment, clear regulatory frameworks, and equitable risk-sharing mechanisms between partners - conditions essential in PPP agreements between public and private partners (IMF , 2004, p. 4).

6.2.2 Aged and Outdated Infrastructure

One major contributor to global infrastructure challenges is that there is a rapidly aging and obsolete nature, particularly within developed nations. Much of this infrastructure was constructed post-World War II but is nearing or exceeding its expected lifespan- for example, in the US, many bridges, highways, and water systems built over 50 years ago need urgent repair or replacement work. Aging infrastructure poses numerous problems, including increased risk of failure, decreased efficiency, and higher maintenance costs. These issues, in turn, have wide-reaching societal effects, such as disruptions to transportation systems, negative health and safety impacts on general populations, as well as restrictions on economic productivity and growth (the American Society of Civil Engineers (ASCE) has given our nation's infrastructure an unfavorable rating). Significant Investments must be made immediately (Wu, 2023, p. 38)

On the other hand, outdated infrastructure--systems not necessarily old but ill-suited to current needs--presents its challenges. Due to technological advancement and shifting demographics, once state-of-the-art infrastructure systems no longer meet contemporary demands; this is especially evident within digital infrastructure, where rapid innovation quickly renders existing technologies outdated. One can draw parallels with Schumpeter's (1942) theory of creative destruction here. According to this economist, innovation drives economic activity by rendering older technologies obsolete - leading to an endless cycle of destruction and creation. While this process generally benefits the economy, infrastructure projects that require long-term investments may face obstacles due to this cycle requiring significant financial and strategic planning investments to anticipate trends and requirements in advance (Schumpeter, 2003, p. 87)

Though replacing or upgrading outdated infrastructure may pose many challenges, the process also presents opportunities. You can take this chance to incorporate cutting-edge technologies, design principles, and materials that result in more efficient, resilient, and sustainable infrastructure systems, such as renewable energy technologies integrated into power grids or green infrastructure being utilized to manage storm water in urban areas.

As infrastructure systems age and become outdated, they can pose numerous problems beyond simple repairs or upgrades. Older infrastructural systems become more susceptible to breakdowns, leading to catastrophic incidents that endanger life and property. Such maintenance often carries significant financial costs; the expense incurred after system failure far outweigh any proactive maintenance or upgrades (Fiorio et al, 2019 p 428)

Aging infrastructure increases its risk of failure and efficiency over time, necessitating additional resources to maintain the same output level. Over time, worn-out infrastructure components require additional resources to remain functional, which is wasteful in terms of costs and has detrimental environmental ramifications by leading to higher resource consumption and greenhouse gas emissions. Additionally, operating and maintenance costs associated with older infrastructures tend to rise exponentially, further straining public budgets. Furthermore, this creates an opportunity cost as funds that could otherwise go toward creating new infrastructure or public services are tied down in maintaining these outdated systems. Eventually, this cycle turns into one in which limited resources are spent keeping systems inefficient while leaving little room for innovation or creating new infrastructure projects (Wu, 2023, p. 140).

Outdated infrastructure - while not necessarily old - can present difficulties, particularly as technologies advance and demographics change. Digitalization across various sectors like transportation, energy production, and public services necessitates modern digital infrastructure; unfortunately, many developing and developed countries struggle with outdated telecoms systems that cannot support modern digital technologies' data demands. Schumpeter's Theory of Creative Destruction provides an essential framework for understanding outdated infrastructure. According to this concept, economic and technological progress involves an ongoing cycle of destruction and creation where new technologies replace older ones; however, long-lived infrastructure poses a formidable barrier in this regard - unlike other sectors where outdated technologies may be easily or rapidly replaced; overhauls require long-term commitments of resources which cannot easily or swiftly be overturned.

However, upgrading aging infrastructure presents opportunities. Upgrading outdated infrastructure opens the door to adopting more advanced, efficient, and sustainable technologies. For instance, when upgrading an aging power grid, there may be the chance to integrate renewable power sources to reduce dependence on fossil fuels while lowering carbon emissions. Replacing an outdated water supply system could involve adopting advanced water-saving technologies and increasing resource efficiency and sustainability (Shabalov, Buldysko, & Gil, 2021, p. 2687)

6.2.3 Rising Demand for Sustainable and Resilient Infrastructure

The 21st century has witnessed an exponential increase in the need for resilient infrastructure due to escalating climate change impacts, increased awareness of its social and economic benefits, and public expectations regarding corporate and government responsibilities. The infrastructure of tomorrow must not only fulfill its intended purpose. Still, it must also withstand numerous stressors and disruptions while contributing to better natural and social environments and providing long-term value to communities.

As noted by Pachauri et al. (2014, p, 151) climate change presents unique infrastructure development and management challenges. Climate changes, precipitation patterns, and sea levels - coupled with more frequent and severe extreme weather events - pose serious threats to existing and newly constructed infrastructure. Floods, wildfires, heatwaves, hurricanes, and other powerful natural events have demonstrated this to great force, leaving widespread infrastructural damage behind and social disruption. Recognizing our infrastructure's vulnerability to climate shifts has highlighted the necessity of planning the infrastructure with resilience in mind. As a response, the concept of sustainable infrastructure has taken hold. This approach involves designing and operating infrastructures that fulfill their intended functional roles and mitigate environmental impact while adding social value and providing economic advantages. A long-term view must be taken when considering these factors - including climate change impacts.

At the same time, there has been an increased need for "resilient" infrastructure systems. Resilient infrastructure refers to procedures designed to withstand adverse events -

natural catastrophes like floods and earthquakes and human-caused disruptions like power outages or cyberattacks - while remaining resilient under pressure. Resilience closely parallels sustainability but specializes in resilience, allowing infrastructures to respond better when faced with change and uncertainty. As articulated by the United Nations in their Sustainable Development Goals (United Nations Report, 2015), social forces also drive progress toward sustainable and resilient infrastructure systems. Infrastructure systems provide access to basic services while increasing social inclusion and stimulating economic development.

6.2.4 Urbanization and Population Growth

Global infrastructure development faces another formidable challenge from population growth and urbanization. According to reports by the UN Department of Economic and Social Affairs (2018), more than half of humanity now resides in urban areas; that figure is projected to reach 68% by 2050. With population expansion comes increased demand for infrastructure such as transportation systems, housing units, utilities, and social amenities that need to be provided.

Demographic change places undue stress on existing infrastructure, leading to its overuse and rapid degradation. Furthermore, this increases demand for new systems able to accommodate both population growth and upgrade or replace outdated ones that cannot keep pace. However, meeting this demand can be difficult because it requires significant financial resources, careful planning, coordination, and sometimes removing social or political obstacles. Urbanization often coincides with increased economic activity, leading to greater energy use and environmental damage. Cities account for 75% of global CO_2 emissions (UN-Habitat, 2011, p. 57). Making sustainable urban infrastructure crucial to support economic development while mitigating environmental consequences.

Population growth and urbanization trends vary considerably around the globe. According to World Bank (2019, p. 59) rapid urban growth can be found predominantly in Asia and Africa - regions lacking sufficient financial resources and technical capacity to plan or manage this expansion effectively. This creates significant risks of increasing urban inequality as poor communities often bear more of the brunt of inadequate infrastructure provision.

6.2.5 Technological Advancement and Digitalization

Technology and digitalization pose both opportunities and threats to global infrastructure development. On the one hand, these advancements offer innovative solutions to infrastructure issues by increasing efficiency, cutting costs, or creating new capabilities - yet on the other hand, they also introduce new requirements and vulnerabilities which must be carefully considered when planning and managing global infrastructure development projects. The digital revolution is disrupting nearly every sector of the economy, from transportation and energy to healthcare and education. Smart grids in point offer more efficient power distribution while simultaneously reducing energy waste while making possible integration of renewable sources (ECLAC, 2021, pp. 14-15)

However, digital infrastructure poses its own unique set of challenges. Integrating information and communications technology (ICT) into infrastructure systems increases complexity while opening them up to potential cybersecurity attacks that could cause significant service interruptions or compromise public safety. Furthermore, as digital technologies increasingly form part of infrastructure systems, there will need to be an ongoing upgrade/replacement cycle due to rapid technological evolution. Moreover, digitalization poses serious consequences for social equity. Although digital infrastructure can increase accessibility and affordability of services, it may also exacerbate social inequalities, especially among communities without access to or the skills to use these technologies effectively (referred to as the "digital divide") (Norris, 2001, P. 87).

6.2.6 Legal and Regulatory Obstacles

The presence of regulatory frameworks that are inconsistent or complicated might serve as a hindrance to the development of infrastructure. Overcoming these challenges necessitates the establishment of regulatory frameworks that are characterized by transparency, efficiency, and adaptability(OECD, 2012, p. 19)**.**

6.3 Infrastructure Deficit in Arab Countries

In recent decades, the Arab countries, have witnessed significant advancements in economic development and modernization. However, the region suffers from a persistent and complicated challenge—infrastructure deficits that stretch across various sectors. This part provides a review of the infrastructure deficiencies seen in Arab nations, substantiated by extensive data and references, shedding light on the extent of the problem and its implications.

6.3.1 Overview of Infrastructure Deficit in Arab Countries

Infrastructure deficit is an acute problem across Arab nations, marked by an acute shortage of high-quality and accessible infrastructure across various sectors like transportation, energy production, water and sanitation services, and information and communication technology (ICT). As the Arab World encompasses 22 nations across North Africa and the Middle East, its infrastructure deficit varies considerably across these nations due to their various economic standings and political stability levels. This chronic infrastructure gap severely impacts this region's economic growth, social development, and overall progress (Kurdi, 2021, p. 31)

Transport infrastructure - an integral element for trade facilitation and community connection, has suffered under-investment across many Arab nations, leading to insufficient road networks, ancient maritime ports, and underdeveloped public transport systems that impede economic integration and regional connectivity (Eltahir, 2018, P .78).According to the World Bank's "Infrastructure and Public Utilities Development in the Arab World" report (2020, P, 29), the average road density in Arab countries is approximately 2.5 km per 1,000 people, significantly lower than the global average.

Energy sectors, specifically electricity, have also experienced numerous obstacles. While Arab countries boast high electrification rates, quality and reliability issues remain critical. Furthermore, frequent power outages continue to plague businesses while diminishing the quality of life, the energy industry in several Arab nations encounters obstacles in effectively addressing the escalating electricity demand and undertaking infrastructure modernization. This insufficiency has significant implications for both the sustainability and energy security aspects. (Fattouh & El-Katiri, 2017- P

.19)The Arab Petroleum Investments Corporation (APICORP) estimates in its "Arab Energy Outlook" (2019) that the Arab region would need an investment of over $200 billion by 2030 to expand and modernize its power generation capacity.

Water and sanitation concerns in the Arab world include limited access to clean water, inadequate sanitation facilities, and ineffective management systems Climate change-induced drought has compounded these difficulties, further while mismanagement of resources (World Bank, 2018, P. 116). According to the "Arab Human Development Report: Youth and the Prospects for Human Development in a Changing Reality" (2020) published by the United Nations Development Programmed (UNDP), the issue of ensuring availability of clean drinking water continues to be a significant barrier in many Arab nations. According to the World Health Organization (WHO), approximately 18% of the population living in the Middle East and North Africa lacked access to basic drinking water services in 2017, while 23% did not have basic sanitation.

The significance of urban infrastructure cannot be overstated, however it is evident that there is a notable lack of investment in the majority of north African cities, as seen by the existing backlog and substandard condition of infrastructure. The global crises and subsequent slow economic development have engendered a precarious predicament for cities throughout the globe. This position is characterized by a scarcity of financial resources, which hampers the ability to invest in new infrastructure projects and adequately maintain existing infrastructure assets. In the United States, it is worth noting that there was a reduction of 25% in the allocation of Community Block Grants from the Federal Government to towns in the year 2008 (Arimah, 2016, p. 256)

Another aspect of the inadequate infrastructure in many Arab nations is the digital divide. While some Arab nations have advanced significantly in terms of digital infrastructure, others have not kept up, which limits their prospects in the social and commercial spheres. According to the International Telecommunication Union (ITU) data for the year 2020, there are notable inequalities in both internet access and digital literacy across the region. Specifically, the data reveals that around 55% of the Arab population utilizes the internet. According to the International Telecommunication

Union, Internet penetration in Arab nations lags behind the global average, with wide disparities between and within countries (ITU, 2020, pp. 6-7).

6.3.2 Causes of Infrastructure Deficits in Arab Countries

Arab countries' infrastructure deficit stems from multiple causes, contributing to its current state. One primary factor is historical under investment in infrastructure projects. The presence of deficiencies in infrastructure in Arab countries is an intricate issue that spans several sectors essential for both social and economic development. The aforementioned shortfalls can be attributed to a multifaceted interaction of several elements that have influenced the infrastructure landscape of the region. In the following points will attempt to underling the fundamental factors that have played a role in the emergence of infrastructure deficiencies among Arab nations:

some Arab states have been subjected to political instability, and limited financial resources, reducing funding for infrastructure development. Prioritizing other sectors over infrastructure, such as defense which has created insufficient investments resulting in widening infrastructure gaps in those states. (ILO, 2020, pp. 3-4)

Arab countries are currently witnessing rapid population growth and urbanization placing immense strain on infrastructure systems due to population and urban migration increases; existing capacity often cannot keep up with demographic shifts resulting in deficits regarding to inadequate planning/investment practices which exacerbate infrastructure gaps further. Funding constraints pose significant barriers to infrastructure development in Arab nations. Economic fluctuations, falling oil revenues, and competing demands on public spending have left limited funds available for infrastructure projects. Due to a lack of funds, large-scale initiatives cannot be completed, or existing infrastructure maintained properly, thus further contributing to the deficit (Ramadan, 2015, p. 3).

Governance and institutional challenges also contribute to the infrastructure deficit. Poor governance practices, inadequate regulatory frameworks, and institutional constraints impede effective infrastructure delivery. Issues regarding project planning, procurement transparency, and corruption also impede infrastructure development; strengthening governance practices while improving regulatory frameworks and increasing institutional capacities will help address the infrastructure deficit efficiently and ensure efficient infrastructure delivery (OECD, 2020, p. 2)

Climate change and environmental factors also create infrastructure deficits in Arab countries. They are vulnerable to risks related to rising sea levels, water scarcity, and extreme weather events, all of which impact infrastructure assets requiring adaptation measures for resilience. Integrating environmental considerations and sustainable infrastructure practices into planning and development processes is paramount to effectively addressing the infrastructure deficit while fostering long-term sustainability (OECD, 2014, p. 55).

The absence of significant private sector involvement has furthermore played a role in deepening the infrastructure deficiencies in Arab nations. Limited private sector participation in infrastructure projects is hindered by weak legal and regulatory frameworks, bureaucratic processes, and unpredictable investment climates.Promoting public-private partnerships (PPPs) to close this infrastructure gap while tapping into their expertise and resources can help bridge it more quickly. (OCED, 2007, p. 12)

Arab Nations require a comprehensive approach in order to effectively tackle their infrastructure deficiency. This should encompass the implementation of policy changes, the allocation of more financial resources, the enhancement of governance practices, the reinforcement of institutions, and the promotion of regional cooperation as well as more engagement of the private sector in the infrastructure development. Arab nations can significantly advance their efforts to address the infrastructure gap and promote sustainable development by enhancing funding channels, utilizing international alliances, and promoting sustainable infrastructure practices.

6.3.3 Impact of Infrastructure Deficits on Development in Arab Countries

The presence of an infrastructure deficit in Arab states poses a significant obstacle to their pursuit of developmental and economic objectives. Lack of infrastructure is a significant challenge to the provision of vital services and contributes to the escalation of health and social issues (WHO, 2017, p. 19). In addition, it impedes economic activity, so limiting prospects for trade, investment, and the generation of employment possibilities. The presence of inadequate infrastructure further amplifies socioeconomic and geographical inequality. According to a report by World Bank (World Bank, 2017, P. 31), rural communities and regions that are socioeconomically disadvantaged often face a lack of high-quality infrastructure, exacerbating their marginalization and impeding their potential for growth. The presence of inadequate infrastructure in Arab countries including Libya, have severe economic and development growth ramifications. The attainment of progress is hindered in the absence of adequate infrastructure, while many obstacles hinder the realization of sustainable development objectives. The following are few significant effects of inadequate infrastructure on the process of development:

6.3.3.1 Economic Growth and Productivity

Infrastructure deficit pose significant limitations on both economic development and productivity potential. Inadequate transportation infrastructure, encompassing roadways, trains, and ports, imposes constraints on the efficient flow of products, resulting in escalated expenses and trade disruptions (World Bank, 2019). Furthermore, the presence of additional energy infrastructure, such as power outages, can disrupt industrial production and commercial activity, therefore exerting a favorable influence on overall productivity and competitiveness. The lack of reliable energy infrastructure can result in frequent disruptions to business operations and increased operational costs, reducing the competitiveness of Arab nations in the global market.

6.3.3.2 Human Development and Social Well-Being

Improving social well-being and fostering human development both depend heavily on infrastructure. Deficits in essential services, including water supply, sanitation, healthcare facilities, and education facilities, and education services hinder access to high quality (World Bank 2019). Restrictions on access to up to dated infrastructure have an effect on public health. poor healthcare infrastructure makes it more difficult to provide populations with high-quality healthcare services, while obsolete ICT equipment or poor educational facilities limit access to digital connection and educational possibilities (World Bank, 2019).

6.3.3.3 Regional Disparities

Infrastructure scarcity promote regional inequality within Arab states. The unequal allocation of investments results in divergent development outcomes between urban and rural areas (Al-Karablieh & Al-Meshal, 2016). Rural regions often experience more pronounced infrastructure difficulties, such as restricted access to transportation networks, limited availability of basic services, and fewer economic prospects (Rural Area Development Committee, 2016).Therefore, addressing infrastructure gaps is critical in creating equitable development outcomes and decreasing regional disparities.

6.3.3.4 Regional Disparities

The investment and business climate in Arab nations is negatively impacted by infrastructure deficits, which have the effect of dissuading both local and international private sector investments. This is mostly due to the increase in operating costs, decrease in productivity, and heightened risks associated with such deficits, as highlighted by the World Bank Report in 2019. Investors commonly prioritize the acquisition of dependable infrastructure systems to facilitate their business operations, including well-functioning transportation networks, consistent energy provision, and advanced telecommunication services. Any insufficiency in these areas has the potential to hinder the attraction of investment funds and block efforts to promote economic diversification (World Bank Report, 2019)

6.3.3.5 Environmental Sustainability

The achievement of environmental sustainability necessitates the incorporation of sustainable infrastructure development as a fundamental component in addressing prevailing environmental concerns. Insufficient infrastructure can lead to ecologically detrimental behaviors such as inadequate waste disposal, pollution, and inefficient energy use (Al-Karablieh & Al-Meshal, 2016). Moreover, insufficient allocation of resources towards renewable energy, environmentally-friendly technology, and infrastructure that can withstand climate-related challenges hinders the progress towards adopting sustainable development strategies with reduced carbon emissions. This, in turn, worsens the deterioration of the environment and intensifies the adverse effects of climate change.

Addressing Arab countries' infrastructure deficit is key to unlocking their full development potential. Doing so requires comprehensive strategies prioritizing infrastructure investments, strengthening governance frameworks, fostering public-private partnerships, and leveraging international cooperation. High-quality infrastructure can boost economic growth while improving social well-being, reducing regional disparities, attracting investments, and encouraging sustainable development throughout Arab states.

6.4 Infrastructure Development in Libya

Libya, situated in North Africa, is a nation endowed with significant oil resources, with one of the most substantial proved oil reserves on the African continent, as reported by the OPEC (OPEC, 2020, P. 75). Therefore, a significant portion of the Libyan government's revenue and foreign exchange is reliant on the earnings generated by the oil sector (Elhuni & Jones, 2016, P. 54). This revenue stream is expected to provide sufficient resources for major expenditures in infrastructure development endeavors. Since the 2011 protest that resulted in the removal of Muammar Gaddafi, Libya has experienced a series of issues including political instability, economic difficulties, and civil unrest (Megerisi, 2019). According to McDowall (2021), there has been a significant decline in both oil output and exports, resulting in a notable reduction in government revenue. The absence of a comprehensive and sustainable policy framework for infrastructure development has given birth to several challenges (McDowall, 2021).

The occurrence of political instability has further given rise to significant security concerns, therefore delaying the progress of infrastructure projects. The occurrence of conflict has resulted in the disruption of ongoing projects as well as serious damage to existing infrastructure, including roads, bridges, airports, and power production facilities (UNDP, 2020). Despite these obstacles, efforts have been undertaken to enhance Libya's infrastructure. Projects aimed at repairing or upgrading infrastructure have been undertaken by governmental bodies, international organizations, and nongovernmental organizations (NGOs). These initiatives encompass a range of sectors, including transportation, energy, water sanitation, and social infrastructure such as healthcare and educational institutions (World Bank, 2019).

According to the World Bank (2019), Libya possesses considerable prospects of further development, given the ability of its oil resources to provide substantial funding for the construction of infrastructure. There is an increasing recognition of the need to engage private enterprises as partners in the process of infrastructure development. This approach has the potential to offer an extra pool of expertise and skills (World Bank, 2019). The realization of this potential necessitates the establishment of a safe environment, the implementation of competent governance practices, and the adoption of strong economic management strategies. The case of Libya serves as a powerful illustration of the difficulties that resource-rich countries may face in achieving sustainable development. It underscores the crucial significance of political stability and effective governance in this process.

6.4.1 An Outlook of Libyan Economy in Terms of Infrastructure Investments

Libya's economy is predominantly sustained by its oil industry, which contributes approximately 60% to its Gross Domestic Product (GDP) in 2019, it constitutes over 95% of its export income, and forms 90% of the fiscal earnings. Historically, the nation's oil wealth has been the primary financier for its infrastructure development initiatives. Nevertheless, the recent period of political turmoil and ongoing conflicts have markedly interrupted oil extraction activities (World Bank , 2021, p. 1). The National Oil Corporation (NOC) release that oil output plummeted from an average of 1.6 million barrels per day (bpd) in the pre-conflict era of 2010 to a mere 400,000 bpd by 2016 (NOC, 2017). This drastic reduction in oil production has led to a steep decline in state revenue, which in turn has disrupted consistent funding for infrastructure projects, resulting in substantial delays and the cessation of various initiatives.

Despite facing challenging political and economic circumstances, Libya has undertaken substantial investments in its infrastructure. In the year 2018, it was reported that almost 8.5% of the Gross Domestic Product (GDP) was allocated for the construction and upkeep of the road network in Libya, as stated by the Libyan Ministry of Economy and Industry in 2018. Further expenditures were allocated to enhance port facilities, enhance water supply systems, and support the Great Man-Made River project, a massive pipeline network spanning from the Sahara Desert to coastal cities (UNESCO, 2016, p .131)

However, there is an expectation that hydrocarbon production would see a growth of around 15% in the year 2023. This increase may be attributed to a rise in oil output from 1 million barrels per day (mbd) in 2022 to an estimated 1.2 mbd in 2023. It is anticipated that this growth trend would persist, ultimately reaching around 1.5 million barrels per day by the year 2026. The considerable increase in oil output projected for 2023 can be attributed to the resumption of operations after the oil blockade occurred in 2022. As a result, it is projected that the real Gross Domestic Product (GDP) is forecasted to expand by 18.8 percent in 2023, recovering from a decline of 11.4 percent in 2022 (IMF, 2023, p. 8)

Libya has demonstrated a commitment to social infrastructure by allocating resources towards the development of healthcare and education despite the ongoing conflict, healthcare expenditure in 2020 accounted for around 6% of Libya GDP. In parallel, investment in education reached over 8%, underscoring the crucial role of both sectors in Libya's overall development, as highlighted by (UNICEF, 2023, pp. 4-5)

The construction industry has historically faced significant challenges, including limited access to financial resources, insufficient expertise and machinery, and a complex regulatory framework (AFDB, 2018, P. 67). The assessment of the Libyan economy's prospects, specifically regarding infrastructure investment, reveals a narrative characterized by a combination of obstacles and potential advantages. The necessity to restore and enhance its infrastructure offers a potential route not alone for economic restoration, but also for the growth in diversity and robustness of the Libyan economy. The economic prospects of Libya in the future will be heavily influenced by the extent to which the country can properly manage the complex relationship between stability, investment in infrastructure, and diversification of its economy. In order to actualize the objective of a strong and diverse Libyan economy, it is imperative that the Libyan government, private sector, and international community collaborate and contribute together. In all sectors, it is imperative to implement a comprehensive approach encompassing the establishment of a more robust and consistent regulatory framework, coupled with governmental incentives, enhancement of sector-specific infrastructure, and gradual diminishment of state intervention across all sectors to achieve the greatest possible outcomes (IMF, 2023, p. 7).

6.4.2 Private Sector Role in Libya Infrastructure Investment

To date, Libya has experienced limited involvement by private investments in infrastructure due to regulatory restrictions, security challenges, and an unproven public-private partnership (PPP) framework. These factors have severely limited participation by private firms in infrastructure projects and limited their contributions towards national development yet recognizing the critical nature of private engagement for furthering infrastructure development and economic diversification, Libya has taken steps to encourage private investment into this sector.

In Libya, historically, the public sector has fared significantly eclipsed the private sector, which accounts for only 5% of the country's GDP, based on figures from 2019. The private sector's participation in various industries varies significantly; in trade, it might reach 90%, while in financial services, it is just 10%. State-owned companies continue to be the main drivers of the Libyan economy; which have a presence across a number of sectors provide employment to approximately 70% of the labor force in the formal sector. There is less competition in the private sector as a result of the preponderance of state-run companies.

Prior to 2011 and before the Arab spring, the government implemented a number of reforms aimed at promoting investment. These measures included the adoption of the "New Investment Law No. 9/2010" and the establishment of the Privatization and Investment Board (PIB). The newly established laws were basically designed to offer a wide range of incentives in order to attract private investors. However, the intended positive outcomes were not realized due to the rise of unrest.

The primary barriers to the expansion of the private sector and the influx of foreign direct investment (FDI) in the country include the opacity of regulatory frameworks, the extensive bureaucratic procedures involved in business establishment, and the inadequacy of the country's legislative framework which has made it exceedingly difficult for enterprises, both public and private sector entities to Predict changes in laws and regulations that impact economic operations. This has thereby compromised the stability necessary for enduring investment and strategic development. Furthermore, the presence of political fluctuations and ambiguity in economic policies, along with concerns regarding the security situation, is expected to exert a detrimental influence on foreign direct investment short- to medium-term inflows. The establishment of a conducive business environment necessitates significant changes, which entail modifying crucial legislation pertaining to economic operations and implementing innovative strategies to support small and medium-sized firms (SMEs) as well as micro enterprises.

The 2010 Investment Law grants investors the authority to employ foreign workers in cases when domestic counterparts are unavailable. However, there is a lack of clarity on the government's responsibility in ensuring compliance with this provision. The complexity of private property rights in Libya is attributed to historical government policies and a regulatory framework that lacks strength. As a consequence, there has been a deceleration in the growth of the private sector and a potential impediment to the inflow of foreign direct investment (FDI) (African Development Bank, 2017, p.113)

6.4.3 Libya Infrastructure Deficit

Libya is still confronting an extensive shortage of infrastructure, which may be attributed to a prolonged period of under-investment, the detrimental effects of conflict, and the high pace of urbanization (World Bank, 2019). This deficiency can be seen in several areas,

including energy production and distribution, water and sanitation provision, transportation infrastructure provision, healthcare delivery, and information and communication technology (ICT).

The energy industry in Libya is characterized by insufficient and antiquated infrastructure, resulting in frequent occurrences of power outages and interruptions in electricity delivery (IMF, 2020). The restricted access to dependable services for a significant number of Libyans may be attributed to the inadequate investment and maintenance in power generating and distribution infrastructure, which has led to an unstable energy system. The country of Libya possesses a nameplate-installed capacity of 10 GW; however, the actual installed capacity is around 7.5 GW. In practice, only a mere 5.5 GW is accessible due to insufficient infrastructure. According to a report by GECOL, this particular circumstance leads to a deficit of around 25% in power supply(GECOL, 2017, pp. 12-14). The water and sanitation sector in Libya requires assistance in order to ensure universal and equitable access to clean drinking water and sufficient sanitation facilities. The issue is exacerbated by water shortages and deteriorating infrastructure, which have adverse effects on both the quality and availability of water resources (African Water Facility, 2018, p. 18). According to a World Bank report 17% lack access to safe drinking water, 25% lack access to improved sanitation.

The construction industry had significant challenges, including limited access to financial resources, insufficient expertise and equipment, a complex regulatory framework, and inadequate availability of essential materials like as steel and cement (Kuşakcı & Ayvaz, 2017, p. 276)

Over the course of the past four decades, Libya has had a persistent issue of administrative instability, characterized by frequent alterations to the mandates of ministries within very short time-frames. The water sector, in contrast, was under the administration of the General Water Authority GWA for an extended period of time. The establishment of the Ministry of Water Resources (MWRs) occurred in 2012. The scope of its jurisdiction encompassed the supervision of many entities, including the GWA (General Company for Water and Wastewater), the General Company for Water Desalination (formerly under the purview of the Ministry of Electricity), and the Authority for Execution and Management of the Manmade River Project (AEMMmRP). Similar to other developing nations, Libya lacks a clearly defined mandate and an organized process for governing the water industry. Hence, it is imperative for Libya to enhance its institutional frameworks and bolster its capacities. There exists potential for further advancement in the domains of human resources, capacity enhancement, and the dissemination of knowledge (African Water Facility, 2018, p. 23)

6.5 SWOT Analysis of Infrastructure Investment in Libya

Infrastructure investment is vital to the social and economic well-being of any nation. Libya, a country endowed with significant natural resources, places great emphasis on the need of infrastructure investment in order to unlock its economic potential and enhance the well-being of its population. Hence, the implementation of a comprehensive SWOT analysis on infrastructure investment initiatives in Libya may offer valuable insights into the formulation of efficient strategies that effectively tackle the many problems faced, hence facilitating a more seamless process of growth. This section offers a comprehensive SWOT analysis of infrastructure investment in Libya, encompassing a study of both internal and foreign variables that impact the country's infrastructure environment. The purpose of this research is to investigate the strengths and weaknesses of Libya in terms of infrastructure development, as well as identify external possibilities and dangers that might potentially impact the investment climate in Libya.

6.5.1 Strength

6.5.1.1 Libya's Wealth of Natural Resources

The nation of Libya possesses a considerable abundance of natural resources, with a special emphasis on its substantial reserves of oil and gas. According to OPEC (OPEC, 2020), Libya possesses the greatest confirmed oil reserves in the African continent. The utilization of oil production revenue as a means to finance infrastructure investments has been a longstanding practice. This presents a valuable prospect of exploiting oil revenues for the purpose of facilitating infrastructure development, encompassing the establishment of transportation networks, energy infrastructure initiatives, and other vital fields (IEA , 2019, p. 173)

6.5.1.2 Geographical Location

Libya's advantageous geographical location in North Africa provides it vital access to the Mediterranean Sea and crucial international shipping routes, hence facilitating commerce and transportation opportunities. Given its extensive coastline and ports, Libya has the potential to function as a significant regional commerce and transportation center. This is because these ports can effectively support heightened commercial operations and attract investments for the expansion of port facilities, logistical services, maritime infrastructure, and coastal development projects (US Department of State, 2022, pp. 3-4)

6.5.1.3 Diverse Climate and Natural Landscapes

Libya possesses a wide range of climate zones and natural landscapes, encompassing desert regions, coastal areas, mountainous terrain, and mountain ranges. This geographical diversity presents favorable conditions for the development of tourism through the establishment of infrastructure that caters to this sector. The allocation of resources towards the development of resorts, transportation networks, recreational facilities, and cultural heritage sites has the potential to draw visitors, hence fostering economic diversification and augmenting income streams (UNOCHA, 2021, pp. 4-5)

6.5.1.4 Government Commitment to Infrastructure Development

The demographic composition of Libya, characterized by a youthful and growing population, has engendered a heightened need for enhanced infrastructure and services. These encompass modern housing, efficient transportation networks, healthcare establishments, educational organizations, and other facets of urban infrastructure. Meeting these stipulations not only improves the standard of living for individuals but also has the potential to foster economic growth in Libya (World Bank, 2021, p. 70).

6.5.2 Weakness

Despite the potential strengths associated with infrastructure investment, Libya also has several weaknesses that pose challenges to its growth. The subsequent sections provide more elaboration on each identified weakness:

6.5.2.1 Political Instability and Security Concerns

Since the 2011 revolution, Libya has encountered a state of political instability and has faced several security concerns. The absence of a consistent and unified governing body has resulted in an uncertain investment environment, posing challenges in the attraction and retention of private sector investments in infrastructure initiatives. The presence of security issues, such as armed conflicts and violence, has had a detrimental impact on the current infrastructure, impeding advancements and further aggravating the existing infrastructure gap (UNDP, 2015, p. 48)

6.5.2.2 Economic Challenges and Fiscal Constraints

The Libyan economy has been significantly impacted by oil production and revenue fluctuations due to political unrest and conflicts. The irregular funding from the oil sector and the overall economic challenges have constrained the availability of financial resources for infrastructure investment. Fiscal constraints limit the government's ability to allocate sufficient funds toward infrastructure development, leading to delays, slower progress (IMF, 2023, p. 6).

6.5.2.3 Limited Private Sector Participation and Regulatory Restrictions

The private sector's role in infrastructure investment in Libya has been limited due to regulatory restrictions and a lack of a well-established public-private partnership framework. Insecurity and the absence of a conducive business environment have deterred private sector engagement in infrastructure projects. The need for legal and regulatory reforms to facilitate private investment and enhance the participation of domestic and international investors is crucial (Campo-Boué, 2023, p. 4)

6.5.2.4 Infrastructure Damage and Maintenance Backlog

The extended period of conflict and disregard has led to substantial deterioration of the pre-existing infrastructure, encompassing transportation networks like highways, bridges, airports, as well as power production facilities.

The existing infrastructure of the entire country has suffered significant deterioration, with road networks exhibiting signs of aging and railway systems largely falling into a state of disrepair. As per the Logistics Performance Index (LPI) provided by the World Bank's performance, the infrastructure of Libya was positioned at the 115th rank out of 160 countries in the year 2018. (world Bank, 2018). The backlog of maintenance and repair required for existing infrastructure further hampers the progress of new development initiatives. The presence of limited resources and capacity hinders the effective functioning and maximum usage of current infrastructure assets due to maintenance requirements.

6.5.3 Opportunities

Even though Libya has many barriers and restrictions when it comes to infrastructure development, there are still a number of opportunities that might spur economic growth, attract foreign investment, and advance infrastructure upgrades. Further information about each opportunity may be found below:

6.5.3.1 Investment in Renewable Energy

Libya offers a great chance to invest in renewable energy infrastructure due to its abundance of solar and wind resources. Libya could be a great place to invest in this as it has access to wind farms, solar farms, and other renewable energy projects that would help it diversify its energy mix, reduce its dependency on fossil fuels, and promote sustainable development (Maka a & Salem, 2021, p. 6)

6.5.3.2 Public-Private Partnerships Offer Expertise, Innovation and Financing

The establishment of well-structured and transparent public-private partnerships can effectively enable the engagement of the private sector in infrastructure projects. Through such partnerships, the private sector can contribute its experience, creativity, and financial resources, while the government provides a supportive framework. This collaborative effort has the potential to mitigate infrastructure deficiencies, enhance project efficiency, and distribute risks among the participating entities (World Bank, 2015, p. 16)

6.5.3.3 Regional Integration and Trade

Libya's unique geographic location renders it a very favorable gateway for regional integration and trade. Improving transportation infrastructure, such as highways, ports, and border crossings, to enable the movement of goods and services can foster economic collaboration with neighboring countries, the enhancement of regional connectivity has the potential to facilitate the emergence of new market opportunities and stimulate economic growth (Al-Sifao & Mohamed, 2022, p. 280)

6.5.3.4 Post-Conflict Reconstruction

The process of reconstructing damaged infrastructure subsequent to a conflict has the potential to foster the development of a more robust and environmentally conscious constructed environment. The prioritization of reconstruction efforts may center around the enhancement of vital infrastructures, such as healthcare facilities, educational institutions, and transportation networks, in order to address the requirements of the people while concurrently facilitating sustainable growth.

Libya may take use of these prospects to attract investments, encourage economic expansion, and resolve its infrastructural shortfall. To be genuinely effective, this requires collaboration of the government with players in the private sector, foreign partners, and local communities (Rahman & Di Maio, 2020, p. 39).

6.5.4 Threats

In Libya, there are several risks that make infrastructure investment difficult. In order to guarantee sustainable and efficient infrastructure development, it is critical to identify and counter these threats. More information on each threat found in the sections follow:

6.5.4.1 Political Instability and Security Risks

Infrastructure investments in Libya are still seriously threatened by the country's ongoing political unrest and security threats. Private sector engagement can be discouraged, and an uncertain investment climate created by political disputes, possible changes in government policy (IMF, 2023, p. 5).The existence of security concerns hampers project implementation and poses threats to the safety of infrastructure assets.

6.5.4.2 Economic Volatility and Revenue Dependency

Libya's economy is highly dependent on oil revenue, which makes it vulnerable to fluctuations in the economy. The availability of funding for infrastructure investment is directly impacted by changes in oil prices and production levels. A single revenue source dependency puts the economy's diversity and ongoing infrastructure development at risk (IMF, 2023, p. 5).

5.5.4.3 Lack of Funding and Financial Resources

Inadequate funding and constrained financial resources pose a significant threat to infrastructure investment in Libya. The country faces fiscal constraints due to economic challenges, including reduced oil revenues and a strained budget (UNECE, 2008, p. 5).

6.5.4.4 Inadequate Regulatory Framework and Governance

The presence of a regulatory framework and governance practices that lack strength and effectiveness can impede the progress of infrastructure development and the involvement of the private sector. The realization of projects and the involvement of the private sector are hindered by ineffective public procurement processes, intricate administrative procedures, and the presence of corruption. Enhancing regulatory frameworks and necessary in order to mitigate these risks (World Bank, 2018, p. 26).

6.6 Conclusion

This chapter has explored the assessment of Libyan infrastructure strategic projects, Studying Libya's infrastructure development highlight the obstacles due to extended political instability, economic challenges. Deficiencies in critical sectors such as energy, water and sanitation, affected the quality of life for the Libyan people. Yet, Libya's wealth in natural resources, its strategic geographic position can create opportunities for potential advancement. Libya's private sector infrastructure investments have been limited due to regulatory restrictions, security concerns, and an ineffective PPP framework. Nonetheless, Libya's government recognizes the value of encouraging private participation through reforms that encourage private investment into infrastructure projects; opportunities exist for the private sector to contribution. SWOT analysis of infrastructure investment in Libya highlights its strengths and opportunities that can be capitalized upon to draw investments, foster economic growth, and reduce the infrastructure deficit. At the same time, weaknesses and threats should also be acknowledged, including political instability, economic volatility, funding constraints, regulatory challenges; all must be tackled to overcome any hurdles and ensure successful infrastructure development. A comprehensive approach must be adopted as Libya moves forward to address its infrastructure deficit. This entails creating political stability, encouraging economic diversification, reforming regulatory practices, improving governance practices, strengthening institutional capacity, and considering environmental considerations. An environment conducive to private sector participation through structured PPPs with transparent processes and effective risk-sharing mechanisms is vital for successful infrastructure development.

CHAPTER VII

A PPP FRAMEWORK PROPOSAL FOR INFRASTRUCTURE INVESTMENT IN LIBYA

7.1 Introduction

There is increasing global interest in promoting opportunities to benefit from the financial, managerial, and technical resources of the private sector in the development and expansion of infrastructure assets and public services in a wide range of industries, including energy, water sanitation, communications, transportation, and other sectors. This tendency has taken on special importance in many countries that face challenges in meeting the growing demand to supply the required funding for government spending in order to develop and expand the infrastructure to fulfill the rising need for public services. In this context, Arab countries are making huge efforts to create a supportive environment for the implementation of PPP by strengthening the legislative, regulatory, and institutional frameworks and raising the efficiency of human capabilities to develop effective strategic partnerships.

Arab nations have recently shown a greater interest in extending the variety of infrastructure financing options due to the lack of financial resources and the high levels of public debt. The most notable trends in this area are attempts to encourage the private sector to enter into partnerships with governments in the field of financing and developing infrastructure. This was also motivated by the belief that the technical expertise of the private sector would enhance knowledge and capacities in some crucial industries, like transportation and energy. In this situation, many Arab nations decided to depend on the private sector's partnership model to finance the construction of infrastructure and its restoration.A large number of them sought to develop supportive frameworks for partnership with the private sector, includingGovernment policies, laws and regulations, technical and financial support mechanisms, levels of governance, transparency and buildingCapacity.As a result of this interest, a number of Arab nations have seen a notable increase in the private sector's involvement with governments in the planning, construction, financing, and operation of public assets and services. Approximately 242 PPP projects, worth an estimated $223 billion, are identified as being constructed in the Middle East in 2021 according to Middle East Business Intelligence (MEED) in 2021

In light of Libya's need for substantial infrastructure development, there is a pressing necessity to explore innovative financing solutions that can effectively address the funding gap. The researcher recognizes the potential of Public-Private Partnerships (PPPs) as a viable model for attracting private investment and expertise into Libya's infrastructure sector. This chapter aims to present a comprehensive Public-Private Partnership (PPP) model tailored to the Libyan context and consider the distinctive challenges and opportunities that exist within the country. Through the presentation of this model proposal, the researcher aims to make a contribution to the ongoing discourse related to infrastructure development in Libya and offer practical insights that can be utilized by policymakers and stakeholders who are actively involved in shaping the future of the country's infrastructure landscape. The proposed Public-Private Partnership model will prioritize the establishment of collaborative efforts between the public and private sectors, aiming to utilize cutting-edge practices and lessons learned from successful PPP implementations worldwide.

7.2 Legal and Institutional Structure and Framework

7.2.1 Legal Framework

The experiences and practices of PPP worldwide demonstrate that the effective success of collaborative projects between the public and private sectors depends on the availability of a well-defined legal framework. Such a framework clarifies the guiding principles for project implementation and management, outlines the project's scope, and defines the duties and responsibilities of each party involved. This provides the private sector with a sense of assurance and protection for their legal rights. Conversely, in the absence of specific laws governing partnership operations, contract negotiations may become more laborious and costly, while the risk of potential disputes between the involved parties could rise.

The dissimilarity in legal regulations among nations leads to variations in legal frameworks that govern partnerships between the two sectors. Certain countries have enacted legislation that is specifically dedicated to public-private partnerships, whereas others utilize policies or guidelines (e.g PPP Policy) to demonstrate the government's commitment to fostering such collaborations. Alternatively, in the case of the absence of specific laws pertaining to public-private partnerships (PPP) are not in place, it is possible for projects to be carried out under alternative legislation that is applicable, such as privatization concession laws, investment promotion laws, or companies' laws.

In this particular context, and with the aim of establishing a favorable environment that promotes the effectiveness of the collaboration between the two sectors, many countries have paid attention to developing the legal system in terms of enacting laws related to partnerships between the public and private sectors. Additionally, they have crafted comprehensive policies and guidelines that clarify the implementation of partnership projects. In fact, several developing nations have taken proactive steps by introducing dedicated laws or general policies aimed at regulating Public-Private Partnerships.

As part of the suggested PPP legal framework in Libya, there have been significant developments in recent years. Notably, the government introduced several cabinet resolutions to establish and restructure the public-private partnership landscape.

In 2004, the Council of Ministers issued Resolution No. 164, establishing the Financial Investment Company responsible for facilitating collaboration between the public and private sectors.

In 2020, Cabinet Resolution No. 1 Amended Resolution No. 164 by renaming the company to the Libyan Company for PPP Projects with the Private Sector, now affiliated with the Finance Ministry. The primary objective of this entity is to explore alternative financing sources for public projects by fostering an enabling environment for public-private partnerships. The focus is on transparent and competitive value creation, ensuring high-quality services and infrastructure.

However, in 2021, Cabinet Resolution No. 70 transferred the Libyan Company for PPP Projects with the Private Sector's affiliation directly to the Council of Ministers, bypassing the Ministry of Finance.

While these initiatives demonstrate the government's commitment to PPPs, the researcher noted some concerns. The establishment of the Libyan Company for PPP Projects seemingly granted broad powers to set legal frameworks and procedures, bypassing internationally recognized stages outlined by the World Bank for organizing PPPs. Key stages like vision and plan proposals, implementation, and legal frameworks are typically overseen by a legislative body rather than solely delegated to a company (Libyan Company for PPP Projects). Moreover, essential legal aspects, such as calculating the state's share of investment output and penalties for breaches, are yet to be addressed, posing significant legal obstacles to successful PPP project implementation in Libya.

The researcher highlights the necessity of enacting legislation by the Libyan Parliament that effectively regulates collaborations between the public and private sectors taking into account the above mentioned notes. The proposed legislation should establish explicitinstitutional, organizational, and procedural frameworks,delineating the distinct roles and responsibilities within the different levels of the institutional system. The effective coordination and administration of collaborative initiatives between public and private entities are crucial for achieving successful results.

In order to enhance the legal framework, it is essential to implement a comprehensive set of regulations, policies, procedures, and guidelines. The primary emphasis of these proposals should be on the proposition of collaborative projects, encompassing various elements such as project analyses, administrative approval phases, tendering procedures, partner identification, contractual conditions, dispute resolution mechanisms, as well as arbitration and settlement protocols. The inclusion of public entities in partnership projects should be properly addressed by the legislation, in which the rights and responsibilities of each party are clearly defined, and mechanisms for offering assistance are outlined.

In addition, it is imperative for the legislation to establish regulations pertaining to compensation in instances where changes in laws or sovereign decisions impact the financial balance of the contract. Additionally, the legislation should outline procedures for the premature termination of contracts prior to their designated duration.

Through the establishment of a robust and all-encompassing legal framework, Libya has the potential to create a conduciveenvironmentfor effective andsustainablepartnership between those two sectors. This, in turn, would encourage private sector engagement and drivethe nationstowards the achievement of its developmental goals.

7.2.2 Institutional Framework

Although legal frameworks play a vital role, they are not sufficient on their own to ensure the effectiveness of public-private sector partnerships. To guarantee the successful execution of projects, it is imperative to establish strong institutional frameworks that effectively enforce laws, policies, and regulations. The establishment of an effective executive, regulatory, and supervisory framework is imperative to enable smooth cooperation among the relevant stakeholders in contractual partnerships. Furthermore, it is crucial to ensure efficient coordination among the various ministries and government entities engaged in the partnershipprocess. Establishing a distinct and well-defined allocation of duties and obligations becomes crucial in order to effectively implement policies, supervise operations, and conduct follow-up protocols. The partnership process can truly thrive and achieve its objectives only through the implementation of comprehensive institutional arrangements.

Experiences from around the globe, along with the World Bank's advice, underscore the importance of managing partnership agreements between the public and private sectors. It's been shown that having a specialized unit or authority to oversee and supervise the preparation and execution of these partnerships is crucial for their success. Such an authority plays a pivotal role in ensuring the smooth operation and effectiveness of partnership contracts. For this unit or authority to effectively deliver its services and meet its objectives, it is imperative that the concerned government entity of the project be actively involved in its activities. This includes participation in decision-making concerning design, project outsourcing, and later, in overseeing the project's execution and evaluating its outcomes.

The PPP Authority will be set up within the Ministry of Finance and will report directly to the Supreme Committee. This committee will receive all project and initiative proposals that could be executed through the partnership contract system from the PPP Authority. The Supreme Committee will then either grant final approval or forward these proposals to the Ministry of Finance for further review before any large-scale project implementation proceeds.

The researcher proposes three-tiered levelsthat involves government agencies responsible forpolicymaking ,direction, and the execution of partnership between the two sectors.

At the apex of the framework Lies the Supreme Committee for Partnership Projects between the public and private sectors, which operates under the Ministry of Finance. This level of authority would be responsible for the formulationof national policies,the evaluation and approval of proposed partnership projects, in accordance with its financial authority vested in it.

The second tier is composed of the Authority for Partnership Projects between the Public and Private Sectors (LAPPP).

The LAPPP's method for reviewing development projects and initiatives involves creating an action plan that assesses projects and initiatives fit for PPP execution based on recommendations from relevant entities, the Supreme Committee, private parties. This plan will prioritize projects of utmost significance and urgency to the government and society, based on an economic analysis. Projects selected will be those of developmental and strategic value to the nation, aligning with the state's highly prioritized sectors. This approach aims to enhance economic diversification and encourage the private sector's involvement alongside the public sector.

The action plan of the LAPPP should include several key sections aimed at enhancing public-private partnerships in developmental projects:

- Sector Identification: Identifies potential sectors for PPP projects, including healthcare, education, real estate, environment, transportation, water, and energy. These sectors are chosen based on their alignment with national development goals such as economic diversification, job creation, and encouraging private sector involvement.
- Sector Analysis: Conducts in-depth studies to understand the specific needs of each sector within the PPP framework. This includes analyzing supply and demand, as

well as the capabilities of both public and private sectors, to identify suitable projects for partnership.

- Project Classification and Prioritization: Establishes criteria to evaluate and prioritize projects based on government vision, strategy, and development plans. This ensures that projects are aligned with the country's developmental objectives.
- Coordination and Consultation: Emphasizes the importance of thorough coordination and consultation with government entities to align spending policies and development visions at the state level, ensuring the successful implementation of projects.
- Implementation Schedule and Performance Indicators: Outlines a detailed schedule for executing selected projects and sets clear, specific performance indicators to measure the overall social and economic impact of the PPP projects, as well as the progress of individual projects.

This approach allows for a structured and strategic implementation of PPP projects, focusing on sectors critical to national development and ensuring projects are executed efficiently and effectively in line with government priorities.

The third tieris represented by the Contracting Authority(CA), The government created the contracting authority as a specialized entity with a duty to identify, create, and oversee PPP projects in collaboration with partners from the private sector. There arealso some other entities or organizations that would be developed, linked to,and appointedbythe Contracting Authority, including:

i. TheAccounting Manager;
ii. The projectManager;
iii. TheProject Team;
iv. The Assessment Committee;

The Contracting Authority seeks support and guidance from external consultants, in particular:

- The transaction Consultant;
- Independent Expert (selected collaborativelyby the Contracting Authority and the Private Party and offer advice to both parties);

Additionally, several institutionsoperating within the institutional framework oversee various aspects of PPP projects on behalf of the government. These institutions include: The Process Auditor, The Accountant General, The Auditor General and The Solicitor General

By embracing the three-tier institutional framework for PPP model, the path for achieving successful implementation is promising and encouraging. The Supreme Committee for PPP, which falls under the authority of the Ministry of Finance, is responsible for ensuring the development of robust national policies and approves proposed partnership projects, bolstered by its financial authority. The Libyan Authority for Public-Private Partnership (LAPPP) serves as a proactive and efficient intermediary, promoting smooth coordination and collaboration between public and private entities. At the project level, the Technical Committee plays a crucial role in navigating the complexities of each venture, consisting of representatives from compatible public entities. This comprehensive and well-structured approach guarantees efficient decision-making procedures, improves project supervision, and promotes greater collaboration among relevant parties, ultimately resulting in the successful realization of public-private partnerships in Libya.

7.2.3 Partnership at the Level of Decentralization

Committing government entities to engage in proactive and effective coordination with the Partnership Authority LAPPP on their major strategic project implementation. This require acknowledges, while some agencies might possess the expertise and capabilities to independently undertake joint projects with the private sector, the overarching strategy aims to facilitate their access to transparent processes for selecting suitable private sector partners. This is intended to draw a broader investor base, thereby encouraging private sector engagement in joint projects with government entities and, in turn, improving the services these entities provide to the community.

Such an approach promotes a significant aspect of economic decentralization and constructive collaboration across various government bodies. Ensuring government entities coordination and collaboration with the LAPPP serves the public's interest and insure alignment with the state’s national goal. This is particularly crucial in the initial 5-

8 years of the partnership contracts system's implementation within the country, to maximize project success chance and cultivate a welcoming investment environment for the private sector.

7.3 Functional Structure and Framework

Amidst the proposed legal framework for PPP in Libya, a comprehensive institutional framework arises, incorporating key entities that are fundamental for the effective implementation of projects. The functional structure is revolving around the three key entities: The Supreme Committee for Public-Private Partnership Projects, the Libyan Authority for Public-Private Partnerships, and the Technical Committee. Each component plays a crucial role in guaranteeing the smooth implementation of Public-Private Partnership (PPP) initiatives, promoting cooperation between the public and private sectors, and optimizing project supervision. This section delves into the distinct functions of each entity, providing insight into their importance and contribution to successful PPP ventures in Libya.

7.3.1 The Supreme Committee for Public-Private Partnership Projects

According to the proposed legal framework for PPP in Libya, thesupreme Committee led by the Minister of Finance and comprising the following committee members:

i. Minister of Finance (Chairman);
ii. Minister ofPlanning;
iii. Minister of housing and Construction;
iv. Minister of Economy and Commerce;
v. Director General of the Environment Public Authority;
vi. LAPPPDirector General;
vii. Three experts and specialists Appointed by the Ministers Cabinet.;
viii. Two representatives from the Fatwa Council

The Supreme Committee is responsible for the following functions;

- Settinggeneral policies on Public Private Partnership.;

- Settingoverarching policies for projects and initiatives of strategic significance to the economy, including setting priorities and endorsing associated detailed documents.
- Ensuring that all initiatives and projects adhere to the national priorities outlined in the policy framework for public-private partnerships;
- Approve the project proposal that the contracting Authority has presented to the supreme committee.
- Providing authorization for the allocation of required landsand funds crucial for executing partnership projects in close collaboration with the relevant authorities;
- Establishing basic rules, procedures, and standards for contract awards and standardized bid documents;
- Analyze and approve feasibility studies carried out by the contracting authority;
- Approve the Authority's(LAPPP) organizational structure;
- Approve the budget of the Authority's(LAPPP) andits final accounts before presenting them to therelevant authorities;
- Oversight for the monitoring and evaluation of public-private partnerships (PPPs) conducted by the contracting authoritythroughout the entire projectlife-cycle ,from the initial commencement to the post-completion stage;
- Guarantee that the government's financial and other forms of support granted in the implementation of the project are subject to approval and strict fiscal accountability in their management;
- Sanctioning the proposed studies and concepts for partnership projects and mutually agreeing to present them in accordance with the partnership system;
- Decisions regarding the termination of partnership contracts in the public interest are made in response to the request from the public contracting authority;
- Assure the effectiveness of any project implementationconducted by Contracting Authority;
- Request any information regarding a public-private partnership from any party involved in the project;
- Monitor adherence to the public-private partnership's rules and regulations;
- TheSupremeCommittee may create any subcommittees it deems necessary for the better discharge of its duties and the effective use of its authority;

- Considering the semi-annual report on partnership projects;

7.3.2 The Libyan Authority for Public-Private Partnerships (LAPPP)

As perproposed legal framework for PPP in Libya, it is advised to establish a novel public entity referred to as the Libyan Authority for Public-Private Partnerships, to be a central authority that supervises all partnership projects proposed by the government., supreme committee or public entity. The Authority will consist of dedicated staff members, carefully chosen and appointed in adherence to the regulations established by the Supreme Committee. Includes consultants who are specialized and experienced in examining, analyzing, and choosing strategic projects that are advised for execution through partnership contracts with the private sector. This team also comprises technical experts and skilled professionals in financial, technical, and legislative analysis. The leadership of the Authority will be entrusted to aDirector Generaldirector ,whose appointment is subject to a decision by the Ministers Cabinet, based onthe nominationby the Finance Minister. The Director General holds the responsibility of implementing the overall policies, regulations, and decisions put forth by the Supreme Committee. Furthermore, he oversees all facets of the Authority's operations and management.

The Authority is dedicated to promoting collaboration and coordination with public entities to execute partnership projects. It assumes the following functions:

- LAPPP assume to act as the technical and secretariat arm of the supreme committee;
- Provide theSupreme CommitteeandProject teamwith technical, financial, and legal expertise;
- Act as a resource center and archive for matters related to public-private partnerships;
- Offer capacity building and advice to the contracting authorityand others involved parties in project planning, coordination, execution, and monitoring;
- Assessment of comprehensive feasibility studies for partnership projects as well as the generation or completion of these studies as necessary. Subsequently, the Authority will proceed to present suitable recommendations to the Supreme Committee, thereby paving the way for the project's investment offering;

- Promote civic education to increase stakeholders' awareness and comprehension of the public-private partnership process;
- Create, assemble, and manage an inventory of potential, highly rated public-private partnerships that are likely to draw investment from the private sector;
- Create, assemble, and manage an inventory of potential, highly rated public-private partnerships that are likely to draw investment from the private sector;
- Create a process that is open, transparent, efficient, and fair in overseeing the identification, development, procurement, execution, and monitoring of projects to maintain uniformity across all projects;
- Assist contracting authorities in designing, identifying, selecting, prioritizing, appraising, evaluating, and negotiating projects, as deemed necessary by the Unit;
- Conduct research and analyses to execute public-private partnerships more effectively;
- Reviewingand evaluating proposals or government support concerning a project and provide advice to the Committee on the appropriate support to be accorded for the project;
- Assists the supreme committee by Formulating a procedure for the submission of initiatives and establishing an evaluation method for presenting them as investment opportunities;
- Defining methodologies for monitoring and evaluating the performance of approved partnership projects;
- Developing contract templates encompassing essential terms and conditions to be met, to be presented to the Supreme Committee for endorsement;
- Monitoring the implementation of partnership contracts and collaborating with the relevant entity to overcome any obstacles that may arise during the implementation process;
- monitor potential liabilities, budgetary concerns, and accounting matters relating to public-private partnerships with the appropriate Ministry agencies;
- Enact measures to remove obstacles impeding the realization of benefits anticipated from a public-private cooperation;

- LAPPP is required to create a record of its finances, including records for any funds that it has been assigned to it, and any fees it has paid to project companies or private parties;
- Submitting Recommendation to Supreme Committee to approve the winning bidder following successful negotiations with the investor;
- Formulating programs for partnership projects, overseeing their progress, and issuing necessary decisions accordingly;
- Preparing and submitting a semi-annual report on partnership projects to the Higher Committee for approval, prior to its presentation to the Council of Ministers by the Minister of Finance;
- Proposing tax and customs duties exemptions for the project and submitting recommendations to the Supreme Committee in this regard;
- Keep a record of all project paperwork;
- Crafting a comprehensive guidebook for partnership projects;

7.3.3 The Contracting Authority

A crucial stage in encouraging and facilitating PPP for infrastructure development and service delivery in Libyais the establishment of the contracting authority. The contracting authority isestablished by the government as a specialized organization with the responsibility to find, construct, and manage PPP projects in cooperation with partners from the private sector. In the proposed model forPPP process, the contracting authoritywould act as the primary interface and themain point of contact between the two partners.Throughout the PPP Project life-Cycle, the Contracting Authority assumes the driving role. It is specifically responsible for:

- Project Identification:The contracting authority conductsurveys and preliminary research for identifying potential initiatives that are acceptable for presentationwhich have the potential for private sector involvement, and consistent with overallnational development goals;
- Project Feasibility Studies:the contracting authorityconductfeasibility study to evaluate the viability and sustainability of proposed projects and their potential .

These studies examine the project's technical, social, financial, and environmental factors in order to determine its viability;

- Tendering and Procurement:The contracting authority oversees the procedure for choosing business partners from the private sector through a competitive bidding process. The Contracting Authority should produce comprehensive tender documentation and evaluation criteria wheninviting private companies to submit bids for the project;
- Contract Negotiation: Following the evaluation processthe contracting authority and the preferred private sector partner discuss the parameters of the partnership agreement;
- Risk Allocation :Contractingauthorityshould work towardthe distribution ofrisks among the public and private partners, ensuring each partnercarries on obligations in accordance with their expertise and capacities;
- Financial Oversight :The contracting authority shall ensure financial accountability When implementing projects funded by the government or other sources during project implementation;
- signing the PPP agreement with the chosenprivate partner, overseeing the Public Private Partnerships relationship throughout the implementation phase until the contract's expiration date, which encompasses contractmanagementand performance evaluation;
- Contract Management:During the project's implementation phase, the contracting authorityshould track the private partner's performance toensurethat thetwo parties' commitments, compliance with contractual obligationsare met and that the infrastructure or services that were agreed upon are provided;
- Monitoring and Evaluation:They keep track of the project's development and assess its effects on the economy and society to make sure the project is yielding the desired results.

7.3.3.1 Contracting Authority Entities

There arefour entities that are linked to,and appointedbythe Contracting Authority, including:

i. TheAccounting Manager;
ii. The projectManager;
iii. TheProject Team;
iv. The Assessment Committee;

The Contracting Authority receives support from external specialists, specifically:

i. The transaction Consultant;
ii. The Independent Expert, who is collaboratively selected by the Contracting Authority and the Private Party and offers counsel to both parties;

A) TheAccounting Manager

The accounting Manager,a senior government official who serves in the contracting authority. A key player in overseeing the PPP project who isin charge of all duties performed by the contracting authority during all phases of the PPP Project Cycle.

Working in consultation with the relevant minister, they make critical decisions throughout the project's planning, procurement, and execution. These decisions encompass appointing and supervising the Project manager and Team, approving project identification, the Project Concept Note, terms of reference for the Transaction Advisor, and the awarding of the Transaction Advisory mandate. The Accounting manager also plays a vital role in accepting the Feasibility Study Report, approving the PPP project for submission to the LAPPP and PPP Supreme Committee, and authorizing budgetary expenses for the PPP project.

Accounting Manageralso approve bidding documents before publication, appoint theAssessment Committee, and approve the selection of prequalified bidders as recommended by theAssessment Committee. The Accounting manager also reviews the selection of the Private Party and signs the PPP agreement on the Contracting Authority's behalf;

Furthermore, the Accounting manager approves all contract management actions, including payments, penalties, compensation events, the hiring of outside consultants, requests for contract changes, and dispute resolution are also approved by the accounting manager;

Additionally, they represent the Contracting Authority in high-level meetings related to the PPP project, involving other government entities and the Private Party, when allowed and instructed by the relevant minister. To ensure continuous expertise in PPP project preparation and implementation, the Accountingmanager is tasked with institutionalizing a dedicated PPP team within the Contracting Authority, preserving valuable skills and knowledge for future PPP endeavors;

B) TheProject Manager

The Projectmanager ,supervised by the AccountingManager ,plays a crucial role in managing the PPP project throughout its entirelife cycle .They should possess the necessary expertise and ideally be a senior member of the Contracting Authority. As the head of the Project Team, the Project Manager is in charge of daily project management during all stages of the PPP Project Cycle. They prepare decisions for the AccountingManager and handle all project-related decisions not requiring the AccountingManager's involvement.

Since PPP agreements typically spansuch a long time ,it is common for multiple individuals to fulfill the ProjectManager function consecutively during the project's lifetime. Different skills are required for managing the PPP project at various stages of the PPP Project Cycle. As a result, it is often best to appoint a new Project Officer with the appropriate skills at the beginning of each stage.

The arrangement for the ProjectManager's role should be determined by the AccountingManager based on the availability of project management staff and their skills and interests.

C) TheProject Team

For each individual PPP project, the Accounting Manager appoints a Project Team, which is essential to overseeing and carrying out the PPP project. The team, which is led by the project manager, is in charge of carrying out all of the Contracting Authority's responsibilities and dutiesduring the planning and execution phases of the project.

Project Team isresponsible for performing initial research, writing concept notes, managing the selection process, reviewingfeasibility studies, developing procurement strategies, and managing bidevaluation procedures.

The Project Team also oversees the Contracting Authority's compliance with its responsibilities under the PPP agreement, maintains the PPP contract, and provides relevantentitieswith updates on the project's progress and financial liabilities. The size and composition of the team would defiantlydepend on the PPP project's size and complexity, but typically wouldinclude technical, legal, financial personnel, representatives from the PPP Authority(LAPPP) .

D) The Assessment Committee

The Assessment Committee is appointed by the Accounting Manager, is tasked with evaluating bids made by the potential private parties and selecting the Preferred Bidder. This assessment includes evaluating technical and financial criteria, reviewing technical and financial bids, andproposing the selection of prequalified bidders if necessary. The committee comprises representatives from the Contracting Authority with the required expertise in technical, legal, and financial matters for the evaluation process. Establishing separate committees for prequalification and bid review isalso advised. Additionally, external experts like the Transaction Advisor and the PPP Unit may be involved in an advisory capacity but cannot participate in the voting process.

As it has been mentioned above there are an External expert who wouldprovide assistance to the Contracting Authority, namely:

A) TheTransaction Consultant

The Contracting Authority, in cooperation with theAuthority for PPP (LAPPP) ,appoints a TransactionConsultant in order to assess the preparationand procurement of the PPP project.Transaction Consultantduties include carrying out an exhaustive feasibilitystudy,encompassing every aspect of the project, preparingbid papers, assisting the Contracting Authority with the procurement process, and developing a framework for contract management. The Transaction Advisor is frequently a group of specialist consulting companies and consultants, comprising technical, legal, and financial experts, due to the diversity of the services that are needed.

B) TheIndependent Expert

The Independent Expert, as has been addressed in the beginning of the section is jointly chosen and paid for by the Contracting Authority and the Private Party, his role lies in oversight of project implementation. In the construction phase, they should ensure design compliance with the specification in the PPP agreement, monitor and track the construction, evaluate modification requests, and manage commissioning tests. During operation, they supervise compliance with performance standards and review modification requests. At the agreement's end, they manage handover tests. The initial Independent Expert's contract covers the construction phase until the project's final completion and delivery, with consecutive appointments during operation, each lasting could be from three to five years.

7.4 Basic Pillars and Dimensions of the Model

In the pursuit of robust and sustainable infrastructure development, PPPs have emerged as a powerful model for fostering cooperation between the public and private sectors. With the aim of presenting a comprehensive framework for successful PPP implementation, this section highlights the crucial components that serve as the cornerstone of our proposed PPP model, focusing on five pivotal stages: inception or conception, feasibility, procurement, contracting, and implementation. Each stage of the proposed PPP model has been thoughtfully designed to assures a seamless and efficient process, encompassing a holistic approach that ensures project success and sustainability.

Throughout this section, we will explore the complex intricacies of each pillar and dimension, clarifying their significance in fostering transparent decision-making, risk-sharing mechanisms, financial viability, and stakeholder involvement.

In the effort to create robust and sustainable infrastructure development, the collaboration between the two sectors through PPP has emerged as a potent model. This section aims to present a comprehensive framework for successful PPP implementation, encapsulating the essential components that lay the foundation of our proposed model. The focus is on five pivotal stages: inception, feasibility, procurement, contracting, and implementation. Each stage has been carefully crafted to ensure a seamless and efficient process, embracing a holistic approach that guarantees project success and sustainability.

Throughout this section, we will delve into the intricacies of each pillar and dimension, shedding light on their crucial roles in promoting transparent decision-making, risk-sharing mechanisms, financial viability, and active stakeholder engagement. By exploring these elements, we aspire to unlock the true potential of our PPP model and establish a pathway to achieve trans-formative infrastructure development in Libya.

7.4.1 Inception

The Contracting Authority identifies a potential PPP project for development. A preliminary economic cost-benefit analysis is conducted for this purpose. This analysis covers key aspects like the project's strategic objectives, anticipated costs and benefits, rationale, and the Contracting Authority's intended management approach.

The primary goal of this preliminary analysis is to gather essential information for preparing a Project Concept Note. This report follows a structured template to a structured template comprising specific questions concerning the project that require detailed answers.

Subsequently, the Contracting Authority submits the Project Concept Note to the PPP Authority (LAPPP) for approval by the PPP Supreme Committee. The PPP Authority performs a comprehensive review to assess the project's suitability for a PPP arrangement and presents its findings to the PPP Committee. Once the PPP Committee approves the project's selection as a PPP, the PPP Authority (LAPPP) officially registers the project.

To ensure a smooth transition, the Contracting Authority takes a proactive measure to guarantee a seamless transition step by appointing a Project Manager and establishing a Project Team for the specific PPP project before the project's registration. These essential personnel play a crucial role in managing and overseeing the project, setting a strong foundation for a successful PPP.

With the completion of registration, the Inception Stage is over. It implies that the project may proceed to the next stage and be expanded as a PPP project as you can see in the figure 7.2 below:

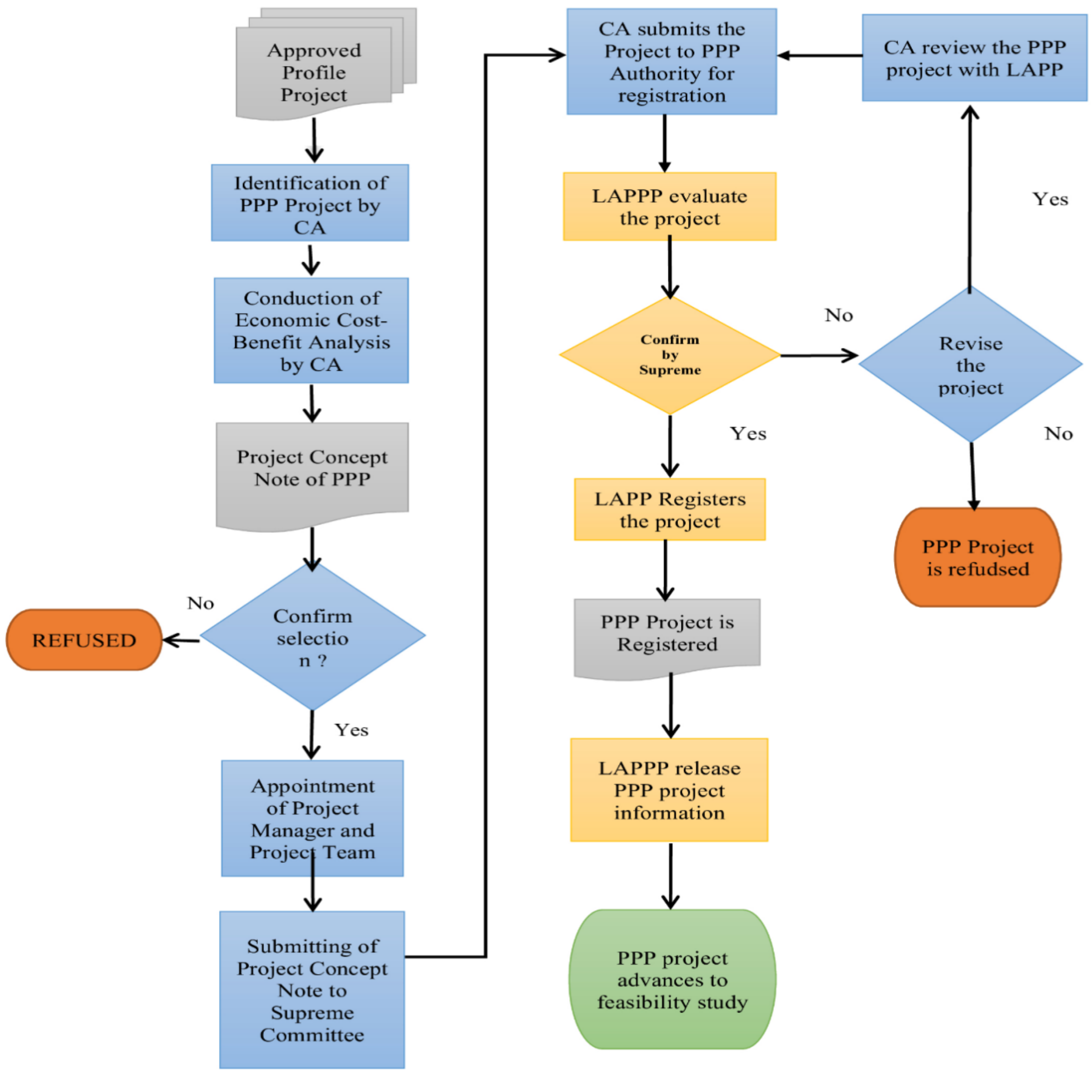

Figure 7.1: Inception Process

CA: Contracting Authority. LAPP: Libyan Authority for Public Private Partnership

7.4.2 Feasibility Study

The Feasibility Study phase is a crucial phase in the Public-Private Partnership (PPP) model proposal for Libya. During this stage as shown in the figure 7.2 below, the Contracting Authority recognizes the potential of a project for development as a PPP and engages a Transaction Advisor, a specialized consulting entity, to conduct a thorough Feasibility Study.

The Feasibility Study is an in-depth assessment that examines all aspects of the project's viability and sustainability. It covers technical considerations, evaluating whether the project is technically feasible and can be successfully implemented. Economic factors are analyzed to determine whether the project is financially viable, considering the potential returns on investment and the overall economic impact.

- The Contracting Authority, Through the Transaction Advisor, under the supervision of the Project Team, prepares the Feasibility Study Report, which includes the findings and conclusions of the study. This report is then submitted to the PPP Authority for approval by the PPP Supreme Committee.
- The PPP Authority, which is responsible for overseeing PPP projects, thoroughly reviews the Feasibility Study Report and formulates conclusions regarding the project's suitability for implementation as a PPP and submit it to the PPP Supreme Committee.
- Additionally, the PPP Supreme Committee, a high-level decision-making body, assesses the fiscal impact and risks associated with the project. Based on a comprehensive examination of the Feasibility Study Report, the conclusions provided by the PPP Authority, and the findings of the fiscal affordability assessment, the committee makes a decision regarding the project.

There are three possible outcomes:

i. Approval for PPP Implementation: If the project is deemed financially viable, technically feasible, and aligns with the strategic objectives of the PPP model proposal, the PPP Supreme Committee approves the project for implementation as a PPP. The Contracting Authority is then directed to proceed to the next stage, the Procurement Stage.

ii. Revision and Re-submission: In some cases, the PPP Supreme Committee may find the Feasibility Study Report incomplete or require further information. In such instances, the Contracting Authority is instructed to revise the report and resubmit it to the PPP Authority for additional approval.

iii. Rejection: If the project does not meet the necessary criteria for PPP implementation or is found to be financially unfeasible or too risky, the PPP Supreme Committee may reject the project for PPP implementation.

- The decision of the PPP Committee marks the end of the Feasibility Study Stage as shown in the figure 7.2 below. If the project is approved for a PPP, it proceeds to the next stage, the Procurement Stage, where the process of selecting private partners and finalizing the contractual arrangements begins.

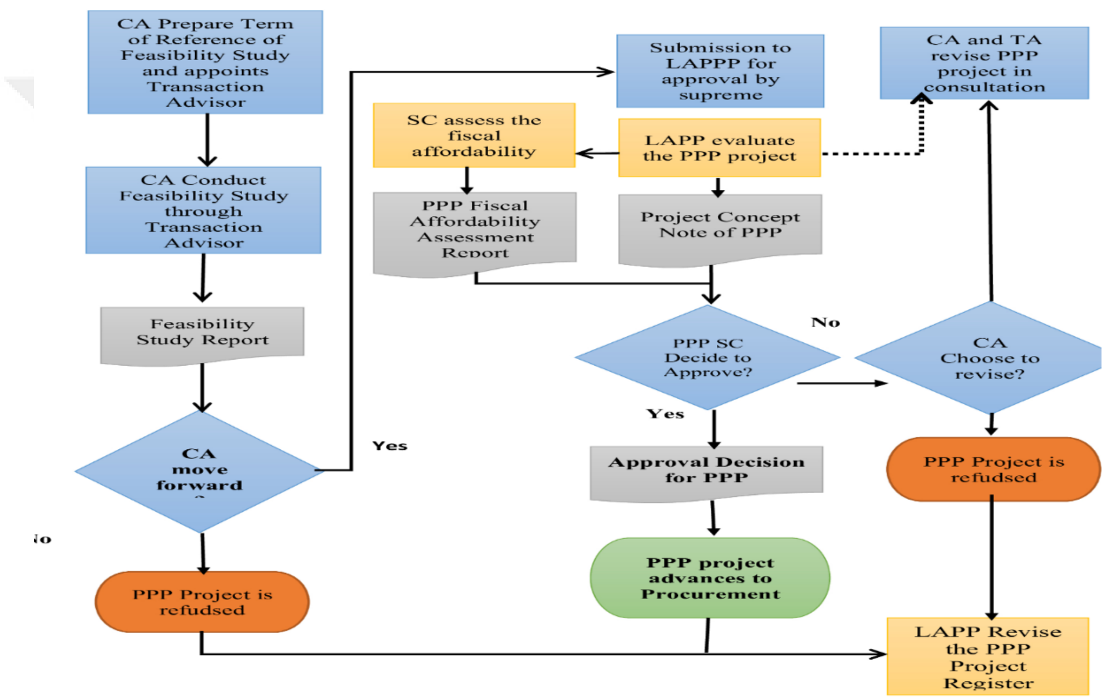

Figure 7.2: Feasibility Process

CA: Contracting Authority. LAPPP: Libyan Authority of Public Private Partnership. SC: Supreme Committee.

7.4.3 Procurement

The primary objective of the procurement phase is to select a private party to implement the PPP project through a well-structured procurement process. This procedure is designed to ensure the selection of the most suitable Private Party among the pool of potential candidates. This indicates that the selected Private Party is capable of completing the project technically and financially while also providing the most favorable price/quality balance.

- Prior to commencing the official procurement procedure, The Contracting Authority may decide to raise awareness among the potential bidders about the project. This can be accomplished by direct marketing initiatives, adverts in specialist periodicals, or any other appropriate promotional activity.
- In the proposed PPP model, there are two bidder methods of selection for the procurement of PPP projects. The default method is the open bidding method, while the alternative method is the direct procurement approach.
- The Contracting Authority conducts a procurement process to choose a Private Party with the help of a Transaction Advisor and in collaboration with the PPP Authority.
  A) If the Contracting Authority plans to choose the Private Party through direct procurement. The PPP Supreme Committee must be consulted in advance for Approval.
  B) If the Contracting Authority intends to contribute to project funding, it must first get approval from the Minister responsible for finance to guarantee that the necessary funds are available.
  - The Contracting Authority submits the bid Evaluation Report to the PPP Authority for review and comments by the PPP Supreme Committee when the bid evaluation procedure is complete. The PPP Authority thoroughly examines the bid Evaluation Report and the choosing the preferred bidder, then informs the PPP Supreme Committee of its findings. Subsequently, the PPP Supreme Committee carefully examines the Bid Evaluation Report and the selection of the Preferred Bidder and relays its observations and comment to the Contracting Authority.
  - The Contracting Authority engages in negotiations with the Preferred Bidder to finalize the PPP agreement.
  - Prior to presenting the PPP agreement to the Supreme committee, the Process Auditor submits their final report to the Accounting Manager.
  - The Procurement Stage is concluded by issuing the Notice of Award to the Successful Bidder.

7.4.3.1 Bidding Methods for the Procurement of PPP Projects

Two bidder methods of selection are proposed for the procurement of PPP projects in the proposed PPP model. The default method is the open bidding method, and the alternative method is the direct procurement approach.

A. Open Bidding Method

In this approach, all interested private parties who are interested in the project can apply to participate by submitting a Request for Prequalification (RFQ). The Contracting Authority assesses the applications and selects prequalified bidders who satisfy the RFQ's requirements. These selected prequalified bidders are invited and given the opportunity to submit their bids.

The open bidding process finds a compromise between competition and selectivity by promoting competitive bids while the Contracting Authority uses prequalification standards ensuring that only capable candidates are invited to participate. It allows interested private parties to respond to the procurement process, resulting in bids with favorable price/quality ratio.

The open bidding method is proposed to serve as the default option for procuring PPP projects. It must be used unless certain conditions for direct procurement are met. The following procedures outline the steps involved in the open bidding method:

a) Preparation and Issuance of the Request for Prequalification (RFQ):
   - ➢ The Contracting Authority creates a thorough RFQ document that contains all the relevant details about the PPP project, including its scope, objectives, technical requirements, financial factors, and assessment criteria.
   - ➢ The Request for Prequalification (RFQ) is widely publicized and advertised to invite interested private parties to participate in the procurement process.

b) Prequalification Phase:
   - ➢ In response to the RFQ, interested private parties submit their applications to the Contracting Authority. Based on the predetermined criteria, the Contracting Authority assesses the applications to determine the technical and financial capabilities of the applicants.

- The list of potential prequalified bids is limited to private parties who satisfy the prequalification criteria.

c) Request for Proposals (RFP) Creation and Distribution:

- A comprehensive RFP or tender document is distributed to the prequalified bidders; it comprises all the necessary details on the PPP project, contractual terms, risk allocation, project timelines, and assessment process.
- The RFP outlines the submission requirements for technical and financial proposals and provides guidelines for the bidding process.

d) Bidding Phase:

- Prequalified bidders create and present their technical and financial proposals in response to the RFP.
- The Contracting Authority thoroughly evaluates the received bids, evaluating each one according to the predetermined assessment standards, which include technical capability, financial feasibility, risk management, and alignment with project goals. The evaluation process should be transparent and guarantee fairness in

e) Selection of the Preferred Bidder:

- The Contracting Authority selects the Preferred Bidder who has provided the most advantageous and competitive offer following evaluating the submissions.
- The Preferred Bidder is notified of their selection and invited for further negotiations.

f) Final Contract Negotiations:

The Contracting Authority and the Preferred Bidder enter into final negotiations to refine the specifics of the PPP (Public-Private Partnership) agreement. During these discussions, both sides work together to finalize various essential components of the project, including financial provisions, the distribution of risk, assurances of performance, key project milestones, and any other pertinent aspects related to the PPP initiative.

g) Approval and Clearance:

Once an agreement has been reached, the PPP agreement will be submitted to the PPP Authority for evaluation and discussion by the PPP Supreme Committee.

h) Execution of the PPP Agreement:

Once all required permissions and clearances have been received. the PPP agreement is signed by the Contracting Authority and the Preferred Bidder to formally establish the partnership. The PPP implementation process may start, and all involved parties will cooperate to achieve the project's goals and milestones.

By adopting the above mentioned approach, it is believed that will participate in ensuring fair competition and the selection of the most suitable private party for PPP implementation. The careful execution of these procedures contributes to the successful delivery of PPP projects and promotes public and Private party confidence in the PPP framework.

B. Direct Procurement Method

- The Contracting Authority selects to invite just one Private Party to make a proposal while using the Direct Procurement method. This approach is appropriate in the following situations:

i. When there is an urgent need for the project, and the Contracting Authority aims to expedite the procurement process by avoiding a competitive procedure. However, it is essential to note that preparing a PPP planning a PPP project and drafting a PPP agreement require considerable time and effort. Hence, if urgency is a critical factor, the Contracting Authority should carefully consider if PPP is the most suitable option for meeting the timely project requirements.

ii. For initiatives involving national defense, security, or health emergencies where a rapid response is essential.

iii. In cases where only one company is considered capable of undertaking the project due to its unique expertise or capabilities.

- For the purpose of adopting the direct procurement method, the Contracting Authority must initially get Approval from the Supreme Committee. This would involve providing the PPP Supreme Committee with a robust explanation specifyingthe reason why direct procurement from a designated bidder is necessary and elucidates why other potential bidders are not suitable for the project on acceptable conditions.

- In case if the PPP Supreme Committee turns down the proposal for a direct procurement approach, the Contracting Authority is then compelled to resort to open bidding procedures. On the other hand, if the request receive approval from the PPP Supreme Committee the Contracting Authority then proceeds to distribute bidding documents (including a draft PPP agreement and the standard of output and performance) exclusively to the lone bidder.

- The Contracting Authority engages in discussions with the bidder to fine-tune the bid documents. Potential negotiation topics include Harmonizing the infrastructure in terms of land acquisition and resettlement, the technical features of the assets, Service quality and performance metrics, the allocation of risk, mechanisms for payment and revenue.

- The Contracting Authority engages in discussions with the bidder to fine-tune the bid documents. Potential negotiation topics include:

➢ The Contracting Authority then revises the bidding documents based on the negotiation's results and requests the bidder to formulate and present a bid.

The figure 7.3 below illustrate the direct Procurement Process. The bid is then reviewed by the Contracting Authority. If it is accepted, the project advances to the last negotiation phase, which aligns with the procedure in open bidding. However, if the bid is deemed unacceptable, the Contracting Authority has the discretion to commence an extra round of negotiations or halt the process and explore other options. These may include terminating the project, reassessing the Feasibility Study, or resorting to open bidding methods.

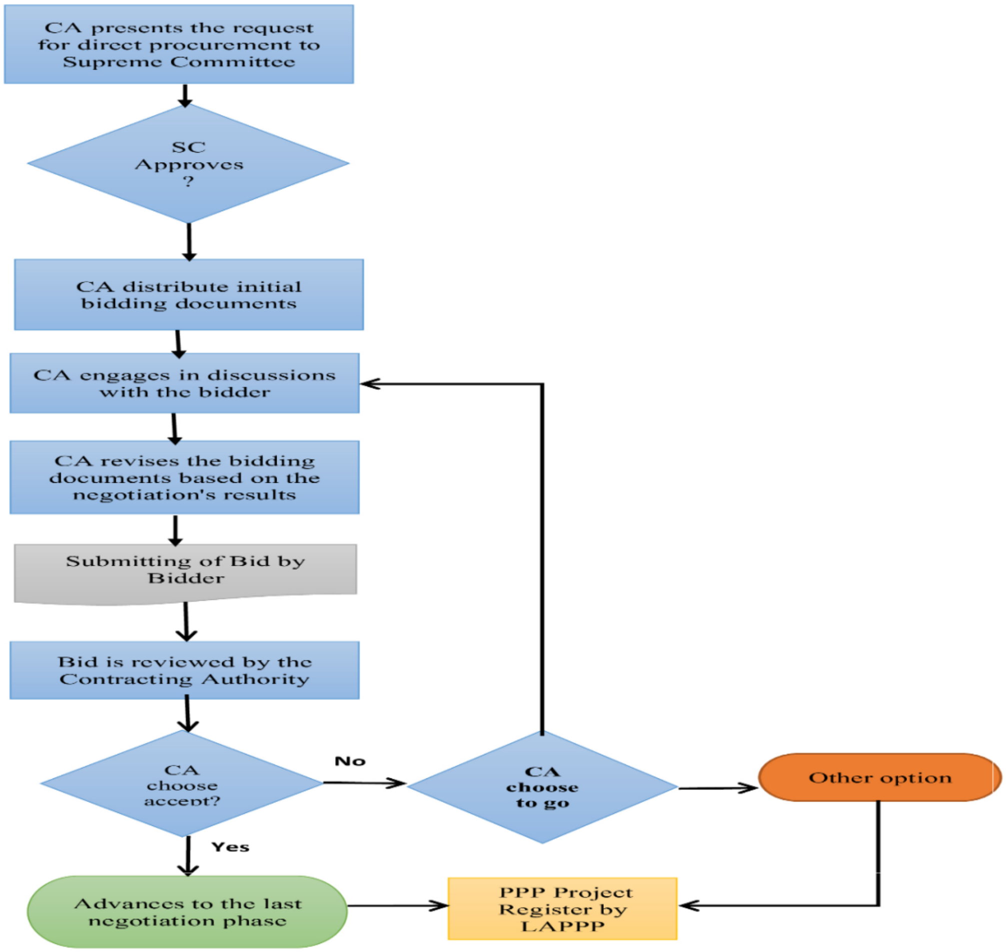

Figure 7.3: Direct Procurement Process

SC: Supreme Committee, CA: Contracting Authority, PPP: Public Private Partnership.

7.4.3.2 Exclusion of a bidder

During the procurement process, the Assessment Committee has the authority to suggest the exclusion of a bidder at any point. Reasons for such disqualification can include: the provision of misleading, incorrect, or incomplete data in their bid by the bidder, the bidder's engagement in fraudulent or deceitful activities.

7.4.4 Contracting

The primary intention of the Contracting Phase is to finalize the PPP agreement, commonly known as reaching the commercial close. Furthermore, at what is termed the financial close, the Private Entity and its financial backers execute the funding contracts as shown in the figure 7.4 below:

7.4.4.1 Commercial Close

a) The Contracting Authority and the Winning Bidder should execute the necessary steps to meet and fulfill the criteria or conditions for commercial closing as outlined in the Request for Proposal (RFP) and reiterated in the Notice of Award. Besides its role to ensure meeting the obligations as stated in the Notice of Award and the RFP, the Contracting Authority should also check to ensure that the Preferred Bidder has met with the conditions as stated in both the Notice of Award and the RFP.

b) Before reaching the commercial close, several steps are undertaken by the Successful Bidder, including setting up a Special Purpose Company (SPC) as per Libyan Law, conducting due diligence to ensure the SPC's formation aligns with the RFB and the PPP agreement requirements, meeting any other conditions specified in the RFP, such as paying a success fee.

c) Once all these conditions are met, the Contracting Authority informs the Private Party and sets a commercial close date. On this date, the Contracting Authority's Accounting Manager and the SPC representatives sign the PPP agreement.

d) If the Successful Bidder fails to sign the PPP agreement within the time-frame specified in the Notice of Award, the process is halted. The second-ranked bidder is then contacted to sign the PPP agreement. If they also fail, then the third-ranked bidder is approached. If none of the top three bidders sign the agreement, a failure of bidding is declared, and the project is put up for re-bidding.

e) After the commercial close is reached. The PPP Authority is then informed about the commercial close and the PPP Project Register is updated accordingly.

7.4.4.2 Financial Close

a) Financial close would be achieved when the Special Purpose Company (SPC) and its lenders have signed the financing agreements and satisfied all draw-down conditions. At this stage, if relevant, agreements for hedging instruments, guarantees, grant funding, and others are finalized. The Contracting Authority may also enter into a Direct Agreement with the SPC and its lenders. Moreover, the Successful

Bidder and other shareholders are required to contribute equity to the SPC as per the financing agreements.

b) The PPP agreement mandates that the Private Party secure debt financing within a specified period post-commercial close. This duration typically spans 3-12 months. If the Private Party fails to achieve financial close within this period, the Contracting Authority may impose a penalty for the delay. The agreement with the Transaction Advisor should also provide support to the Contracting Authority until financial close is attained.

c) The achievement of financial close is often contingent on several conditions precedent, including Reaching the commercial close which would be consider as one of the requirements that must be met before financial close may be reached. securing the appropriate environmental and building licenses, completing the land purchase and relocation. The SPC provides information on stock holdings, board resolutions, and business founding papers. Legal assessments of the SPC's suitability for the project as stated in the incorporation documents. completing any specified requirements outlined in the PPP deal, such as passing certain laws.

d) The Contracting Authority needs to oversee the achievement of financial close, requiring cooperation from the Private Party in this regard. A Transaction Advisor could assist the Contracting Authority in this task, with their role extending until the financial close or any subsequent extension.

e) The Contracting Authority's responsibilities include verifying that requested funds are available and secured to finance the project, ensuring the project's implementation isn't influenced by the deficiency of fund. This oversight allows the public Party to require the Private Party to provide a proof of financial capacity to the Contracting Authority's Accounting Officer. The Transaction Advisor assists in requesting and assessing this required evidence. The figure 7.4 shows how the contracting process is implemented;

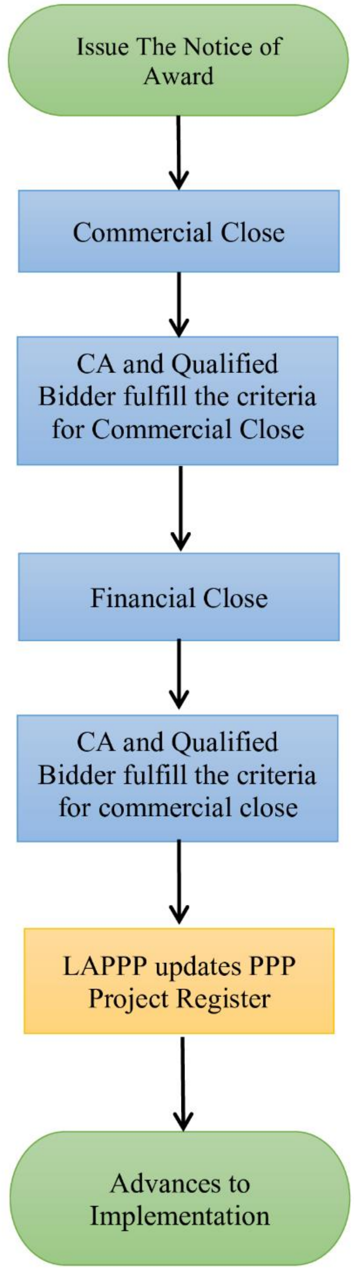

Figure 7.4: Contracting Process

7.4.5 Implementation

The Implementation Stage in PPP process is the phase where both the Contracting Authority with the Private Party put the PPP agreement into action, execute what has been agreed upon in the PPP agreement. This stage, which considers as the longest part of the PPP project cycle and typically contains four phases:

a) Pre-Construction Phase*:* This preliminary stage includes all preparations that must be made before construction commences. These might involve obtaining necessary rights-of-way, applying for permits, conducting design studies, reaching financial closure, and other preparatory activities.
b) Construction/Development Phase: In compliance with the conditions of the contract, this phase entails the acquisition, installation, or construction of project assets as outlined in the agreement.
c) Operations and Maintenance Phase: Throughout this phase., the project assets are operated and maintained by the Private Party, which also delivers the project services to the end users.
d) Handover Phase: Which happens at the conclusion of the PPP agreement period, is the last phase of the implementation stage. In this phase, the project assets are returned to the Contracting Authority by the Private Party.

The Implementation Stage of a Public-Private Partnership (PPP) process involves various key institutions that play defined roles:

1. Private Party: The Private Party is tasked with carrying out all necessary activities to construct, maintain, and operate the project assets according to the performance indicators laid out in the PPP agreement.
2. Contracting Authority: The main role of the Contracting Authority pertains to contract management, which encompasses:

- Executing its obligations under the PPP agreement, such as arranging the right-of-way or appointing an Independent Expert;
- Keeping track of the Private Party's performance against the stipulations of the PPP agreement;
- Processing payments as per the PPP agreement, including performance-based bonuses and penalties;
- Approving periodic adjustments of user fees in user-pays projects, if permitted by the PPP agreement;
- Dealing with unexpected situations according to the PPP agreement provisions, such as unexpected risk events, consistent non-compliance with contract requirements.

- ➢ The Contracting Authority also has to handle tasks outside the PPP agreement that are vital for successful project management. These include stakeholder management, progress reporting to the PPP Authority and PPP Supreme Committee;

3. The Ministry of Finance oversees the fiscal aspects of the project.
4. Auditor: The auditor carries out an annual audit of all PPP projects as per the National Audit Act of Libya

7.4.5.1 Implementation Phase Process

A) Setting Up a Contract Management Team

The Contract Management Team, acting as the Project Team during the Implementation Stage, The Project Manager and other members of the Contract Management Team frequently undergo changes after financial closure or when new assets are commissioned, which marking the start of the maintenance or operating phase. However, it could be advantageous to retain a few members of the project preparatory Project Team in the new arrangement to guarantee a smooth transition.

The Accounting Manager appoints the Contract Management Team, typically comprising of:

- ✓ A legal and administrative professional well-versed in public administration and public procurement contracts;
- ✓ An accountant or budgeting specialist;
- ✓ A technical professional who is specialized in the services offered under the PPP agreement.

The Contract Management Team handles the daily administration of the PPP agreement. the head of the Contract Management Team acting as the Project Manager throughout the Implementation Stage, serves as the initial contact for the Private Party for all project-related matters. While significant issues may be escalated to the Accounting Manager or even the Supreme Committee, but when concerns arise, the head of the Contract Management Team is the first level to be addressed.

B) Drafting a Plan of Contract Management

The Contract Management outlines the responsibilities of the Contracting Authority during the Implementation Stage. The proposed plan comprises the following components:

- Information on the structure of the contract management team;
- A schedule describing the contracting authority's responsibilities;
- A procedure for monitoring the Private Party's performance Which includes Approving routine performance reports and applying penalty points,
- A method for handling extraordinary circumstances, such as compensation, time extensions, requests, and modifications to the PPP agreement;
- An early termination procedure;
- A procedure for monitoring finances and reporting to the Ministry of Finance;
- A strategy for communicating with stakeholders outside of the company;
- A risk management matrix outlining all the steps that must be taken by the contracting authority and the private party to avoid and reduce project risks.

The Transaction Consultant develops an initial draft of the Contract Management Plan as a part of his final task output. The contract management team then revises this plan with contributions from the Private Party at the onset of the Implementation Stage, focusing in particular on aspects of performance and risk management.

C) Establishing an Independent Expert Role

- The Independent Expert serves both the Contracting Authority and the Private Party by aiding in contract management duties. The preliminary scope of work for the Independent Expert is drafted by the Transaction Consultant and incorporated into the PPP agreement.
- Following the commercial close, the Contracting Authority and the Private Party work together to refines the Independent Expert's scope of work. The Transaction Consultant assists the Contracting Authority in the finding and procurement of the Independent Expert.
- It is recommended that the establishment of the Independent Expert be undertaken a few weeks in advance of the beginning of the construction phase. This structure

enables a sufficient amount of time for the Independent Expert to thoroughly analyze and provide authorization for the complex engineering design prior to the commencement of construction.

D) The Formulation of a Performance Monitoring Plan

The Performance Monitoring Plan serves as the principal instrument for contract management. The Performance Monitoring Plan is thoroughly tied to the PPP agreement. The PPP agreement outlines the specific project outputs that are expected to be provided by the Private Party, as well as the performance criteria that must be met. Additionally, the document outlines the payment that the Private Party is entitled to request, based upon their performance. These payments can be paid by either the Contracting Authority or the user of the project services. In the event that the performance fails to meet the established requirements, the PPP agreement may impose fines or decrease payment. The Performance Monitoring Plan should enable the Contracting Authority to assess the performance of the Private Party and accurately determine the payments due by the various parties involved in the Public-Private Partnership (PPP) agreement.

The crucial elements of the Performance Monitoring Plan encompass:

a) A variety of performance criteria that are directly connected to the output specifications and payment mechanisms outlined in the Public-Private Partnership (PPP) agreement.

Performance indicators for PPP projects can be classified into two primary groups, which are sector-specific in nature:

i. During the construction phase, they include the monitoring of progress in relation to the planned timeline and budget, compliance with design and regulatory standards, and the effects on preexisting facilities;
ii. During the operations phase, the primary areas of attention include monitoring facility utilization and revenue production, upholding service quality, assuring facility availability, managing service disruptions, and handling of user complaints;

b) A performance monitoring and reporting system is necessary to facilitate the contract authority's ability to measure and evaluate the performance. The system involves three main components:

i. Periodic self-reporting by the private party;
ii. a mechanism run by the private party to log performance issues raised by users or the contracting authority;
iii. The Contracting Authority or the Independent Expert may conduct random inspections to verify the accuracy and comprehensiveness of the self-reporting and complaints registry;

The process of setting up a Performance Monitoring Plan involves several stages. **First**, essential requirements for the plan are established within the draft Public-Private Partnership (PPP) agreement. Potential adjustments to the agreement's monitoring and evaluation terms can be discussed during one-on-one meetings between the Contracting Authority and bidders, potentially leading to updated bidding documents with more detailed performance monitoring guidelines.

Subsequently, bidders need to include a provisional Performance Monitoring Plan in their bid, ensuring it aligns with the conditions set in the draft PPP agreement. After securing the contract, the Private Party must present a final Performance Monitoring Plan. The plan for both the construction and operational stages should be submitted before the commencement of each period.

Finally, the Performance Monitoring Plan is evaluated by an Independent Expert, who ensures its adequacy in measuring the project's output and performance as per the specifications outlined in the PPP agreement.

E) Routine Contract Management

Routine contract management refers to the repeating duties that are frequently performed during the implementation stage. These include:

a) Implementation of regular performance monitoring and subsequent remedial measures;
b) Routine reports and audits;
c) Effective management of budgetary and fiscal risks;

a) Performance Monitoring and Subsequent Remedial Measures:

The Contract Management Team is responsible for managing performance tracking and responses. They must review private party performance reports on a regular basis, conduct planned and unannounced inspections, and guarantee that all performance indicators and user tariffs comply with the PPP agreement and relevant regulations. If any shortcomings are observed, contractual penalties are imposed.

The PPP agreement schedules performance evaluations at key stages of project execution, such as the commencement of construction, at various construction milestones, upon construction completion, after the first full operational year, and crucial maintenance phases.

Regular meetings between the Contract Management Team and the management team of the Private Party are held in order to guarantee service delivery and reduce disagreements. In these sessions, project operations, short- and medium-term objectives, and any possible disputes or disagreements are discussed. The Contract Management Team fosters a culture of open communication between all stakeholders in order to encourage proactive problem-solving.

b) Routine Reporting and Auditing

- Regular project performance reports must be prepared by the Contract Management Team. The frequency of these reports varies from weekly to monthly, depending on the complexity and value of the project, and includes an overview of the construction process compared to initial plans during the construction period. During the operating phase these reports provide performance indicator numbers and any penalties imposed. Depending on the magnitude and socioeconomic relevance of the project, the reports are published every month to every quarter.

These reports, which are driven by data from the performance monitoring system, must be delivered to the PPP Authority and Supreme Committee. The primary objective of reporting is to concentrate on identifying and focusing on discrepancies ("exception reporting"), such as any departures from the PPP agreement, projected service levels, volumes, costs, and revenues, as well as the anticipated effects on the social and environmental context. These discrepancies may result in future disputes, financial strain on the contract parties, or other problems.

- Regarding financial reporting, the Private Party should keep separate records for the Project, whose documents shall be open to inspection by the Contracting Authority. The Special Purpose Company (SPC) is also obligated to develop an annual report along with audited financial statements every year. This should occur within three months following the end of the fiscal year, in accordance with all applicable laws and Libya's accounting standards.

The SPC must then deliver the annual report and the audited financial accounts to the Contracting Authority within six months of the end of the fiscal year, along with a copy to the PPP Authority.

- In terms of auditing PPP projects, either the Auditor General or a designated auditor carries out an annual examination of all PPP initiatives, as mandated by the National Audit Act.

c) Risk Management and Budgeting

When creating its annual budget proposal, the Contracting Authority must take into account two aspects: the project's current financial commitments and a provision for potential liabilities that might arise in the next fiscal year. The Contracting Authority must also collect information on budgetary obligations and risks and send it to the Ministry of Finance via the Supreme Committee as part of their obligation to monitor these concerns. The Ministry of Finance, in turn, compiles the information gathered from various Contracting Authorities to create a consolidated database of financial obligations related to PPP projects at both the national and local government levels, the Ministry of Finance, in turn, compiles the information gathered from various Contracting Authorities.

F) Non-routine Contract Management

- Non-routine contract management pertains to addressing unusual occurrences that occur throughout the project's implementation phase. These unusual events include:

- Claims for compensation due to risks partially or entirely assumed by the contracting authority such as legal changes or due to the contracting authority's inability to carry out its obligations under the PPP agreement (such obtaining the project's right-of-way);
- Premature termination of the PPP agreement
- Dispute Resolution

G) Public Private Partnership Contract Termination and Assets Are Returned

- An independent expert assesses the condition of the project assets a few years (usually three to five) before the PPP agreement's conclusion. They identify necessary maintenance required to return the assets to a state that is acceptable under the PPP agreement’s terms.

- The private party must put up a hand back performance guarantee if the estimated cost of maintenance and repairs exceeds typical upkeep costs. The cost difference between routine maintenance and the anticipated cost to return the assets to the required condition is represented by this security amount.

- To guarantee that the necessary maintenance and repair work is done correctly, the independent expert conducts several subsequent reviews. The private party runs the risk of voiding all or a portion of their hand back guarantee if they fail to conduct the needed upkeep and repairs. The contracting authority might then employ a different contractor to do the maintenance and repair work using the forfeited sum.

- The contracting authority also chooses how the project services will be provided after the PPP agreement, and this decision is made well in advance of the deal's conclusion. There are several options, such as keeping the assets up and running on your own, forming a new long-term PPP arrangement for asset refurbishment, growth, maintenance, and operation, or signing short-term service agreements. This choice is made well in advance to provide new contractors with adequate time to go through the hiring process.

- The private party supplies training to the personnel of the contracting authority or the new contractors a few months before the PPP agreement expires to make sure they are ready to take over the asset's maintenance and operation. See Figure 7.5 below which shows PPP process stages while all rights and obligations pertaining to the project assets, such as technical documentation, drawings, software packages, or licenses, revert back to the contracting authority on the expiration date of the PPP agreement.

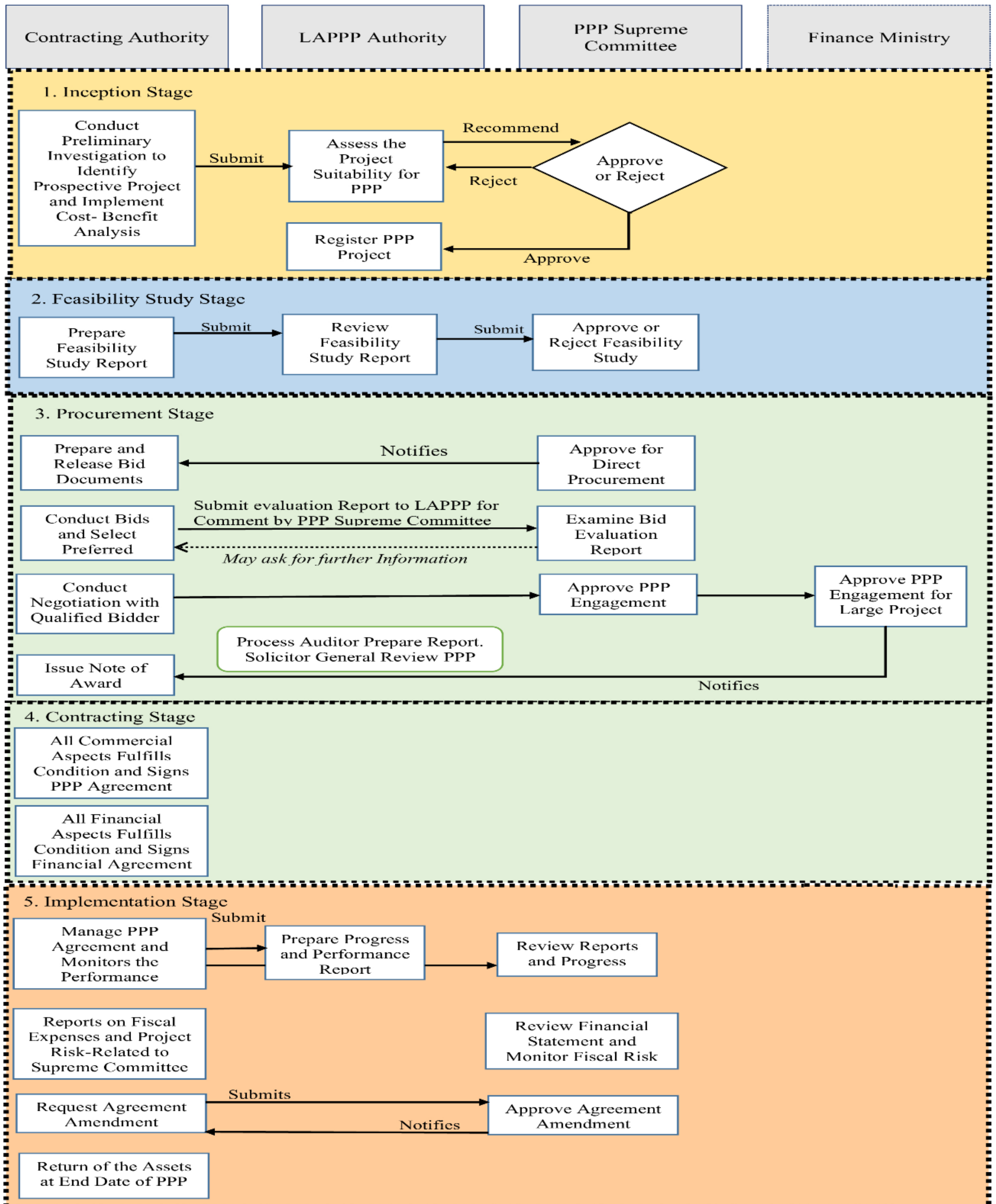

Figure 7.5: Stages of PPP Process

CA: Contracting Authority, LAPPP: Libyan Authority for Public Private Partnership

7.5 Shariah Compliance Framework

Shariah compliance encompasses a set of ethical and moral principles derived from Islamic law, guiding financial transactions to ensure fairness, transparency, and social responsibility.

Initially, it's crucial to harmonize the PPP model with Shariah principles concerning the prohibition of Riba (interest) and Gharar (uncertainty). This entails structuring financing arrangements in a manner that avoids interest-based transactions, such as adhering to profit-sharing mechanisms or utilizing Islamic bonds (Sukuk) instead of conventional debt instruments. Moreover, Shariah compliance necessitates investments in permissible sectors that positively contribute to society and abstain from unethical or harmful activities. Hence, the PPP framework should prioritize investments in socially beneficial infrastructure projects, including healthcare facilities, educational institutions, and sustainable energy initiatives. Furthermore, transparency and accountability are foundational principles in Shariah-compliant finance. The PPP model should integrate mechanisms for transparent decision-making processes, disclosure of financial information, and accountability to stakeholders, encompassing the public and Islamic scholars overseeing Shariah compliance. Additionally, contractual agreements within the PPP framework should be structured to ensure equitable risk-sharing between public and ‘private partners, adhering to the principle of fairness (Adl) in Islamic finance, with provisions for risk mitigation and dispute resolution in accordance with Shariah principles.

Ensuring Shariah compliance in the PPP framework for infrastructure investment necessitates a comprehensive approach aligning financial structures, investment decisions, transparency measures, and risk-sharing mechanisms with Islamic ethical standards. By integrating Shariah principles into the PPP model, we can foster sustainable and socially responsible infrastructure development while meeting the needs of Islamic finance practitioners and investors.

7.6 Scenarios for Implementing PPP-Based New Model

PPPs are versatile instruments that may be applied in a variety of industries, including transportation, healthcare, education, and utilities, to facilitate tasks like the constructions and maintenance of infrastructure like roads, bridges, hospitals, schools, and utility systems.

The proposed Policy framework of PPP is trying to provide the guide of the implementation of such partnerships. It contains the conditions and procedures for the selection, execution, and management of PPP contracts, all of which contribute to the development of an environment that support the engagement of private sector in the offering of public services.

However, it's crucial to realize that PPPs are not a one-size-fits-all approach and that they drastically vary depending on the particulars of the partnership, the involved sector, and the nature of the project. This section will outline and suggest various possible scenarios for implementing PPPs in Libya. Each proposed scenario has its own unique advantages and challenges; therefore, the decision of the selection must be based on the specific needs and circumstances of the project in hand. The possible scenarios for implementing PPPs in Libya include:

7.6.1 Concession

The concession agreement where A private sector operator, or concessionaire, is given full responsibility for service delivery, including system development and improvement as well as operation, maintenance, and management. Notably, the concessionaire is in charge of all capital investments. Even if the private operator supplies the assets, they are still considered public property for the period of the concession.

The role of the public sector transitions from that of a service provider to that of a regulator overseeing pricing and service quality. Tariffs are collected directly by the concessionaire from system users. Normally, the concession agreement outlines the tariff and includes provisions for potential future revisions. On very rare occasions, the government could offer money to help the concessionaire finance its capital expenditures.

The concessionaire is in charge of paying any necessary investments for system construction, improvement, or expansion using its resources and user-paid tariffs. Additionally, the concessionaire controls the working capital. A concession contract typically lasts 25-30 years, giving the operator enough time to repay their initial investment and make a profit throughout the concession term.

If necessary, the public authority may contribute to the cost of the capital investment, which may be seen as an investment "subsidy" (or viability gap financing) to ensure the concession's commercial viability. As an alternative, a portion of the collected tariff might be used to compensate the government for its contribution. The following figure 7.6 illustrates the structure of a typical concession contract:

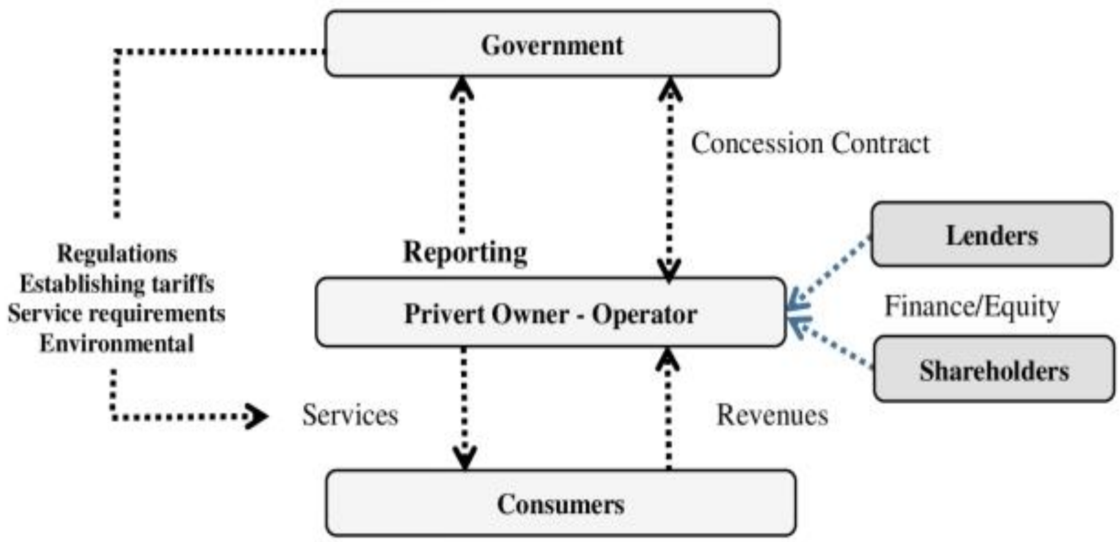

Figure 7.6: Structure of Concession Contract

Source: Heater Skilling, 2007

7.6.2 Joint Ventures

Joint ventures enable the public and private sectors to jointly control and operate infrastructure projects as Joint ventures serve an alternative to full privatization. In this scenario, the partners may establish a fresh company or purchase shares in an existing business to become co-owners.

Joint ventures must preserve their autonomy since the government must act as both a part-owner and a regulator while also maintaining good corporate governance. Because the government, according to the joint venture, serves as both a part owner and regulator, there is a chance that it may meddle in the business' activities for political reasons. But the government also has a stake in the company's success and longevity, which can assist overcome this obstacle.

Typically, the private partner takes on operational responsibilities, and a board of directors is formed, frequently reflecting the shareholder makeup or expert representation. Supplemental contracts that specify the company's expectations, such concessions or performance agreements, are typically incorporated into the framework of a joint venture.

Prior to project execution, joint ventures provide numerous chances for discussion and collaboration between public and private partners as the Joint ventures take time for development. These agreements are frequently adopted when both sectors want to split the advantages and risks of a particular business venture. Typically, the allocation of risks and profits is based on shareholdings or other contractual arrangements. Joint ventures can be employed to maximize the commercial potential of diverse public sector assets; joint ventures can be used. The typical structure of a Joint Venture contract is represented in the figure 7.7 as follows:

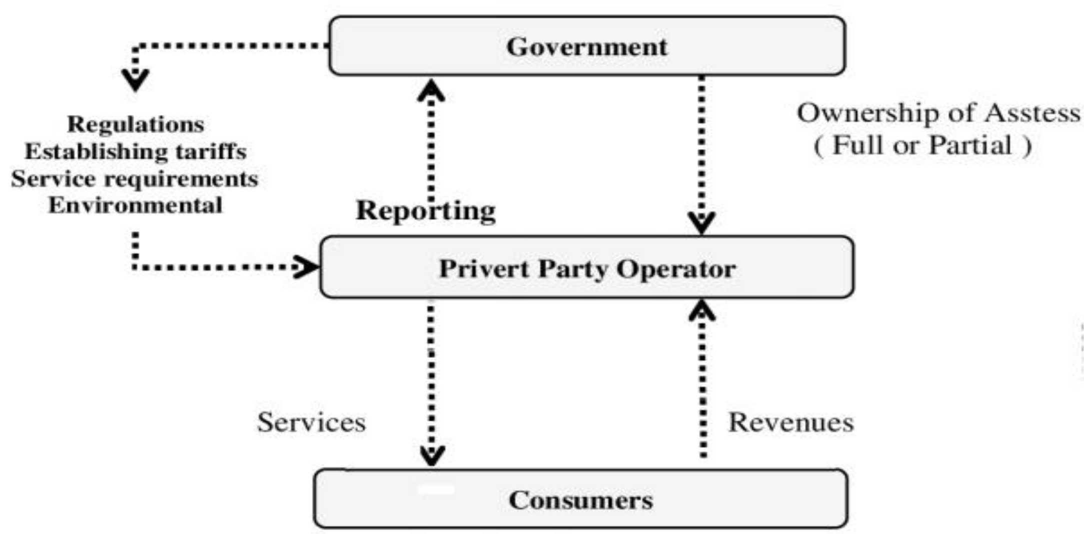

Figure 7.7: Structure of Joint Venture Contract

Source: Heater Skilling, 2007

7.6.3 Build-Operate-Transfer (BOT) and Similar Contracts

Build-Operate-Transfer (BOT) and similar agreements are specialized types of concessions where a private organization funds, constructs, and operates a brand-new infrastructure project or a significant component in accordance with performance requirements established by the government. In BOTs, the private partner covers the capital cost for constructing the new facility and also owns the assets for a certain amount of time, long enough to recoup the investment costs through user charges.

When the contract ends, the public sector takes over ownership and has the option of either continuing the operating contract with the same developer, awarding a new contract to a different partner, or managing the operation themselves.

The primary difference between a BOT and a concession is that the latter frequently involves considerable "greenfield" expenditures requiring substantial external fund, both equity and debt, whereas a concession normally entails the expansion and operation of existing infrastructure. The distinction between a concession contract and a BOT, which might entail the extension of existing infrastructure, can become hazy in practical terms. The typical structure of Build-Operate-Transfer (BOT) contract is represented in figure 7.8 below:

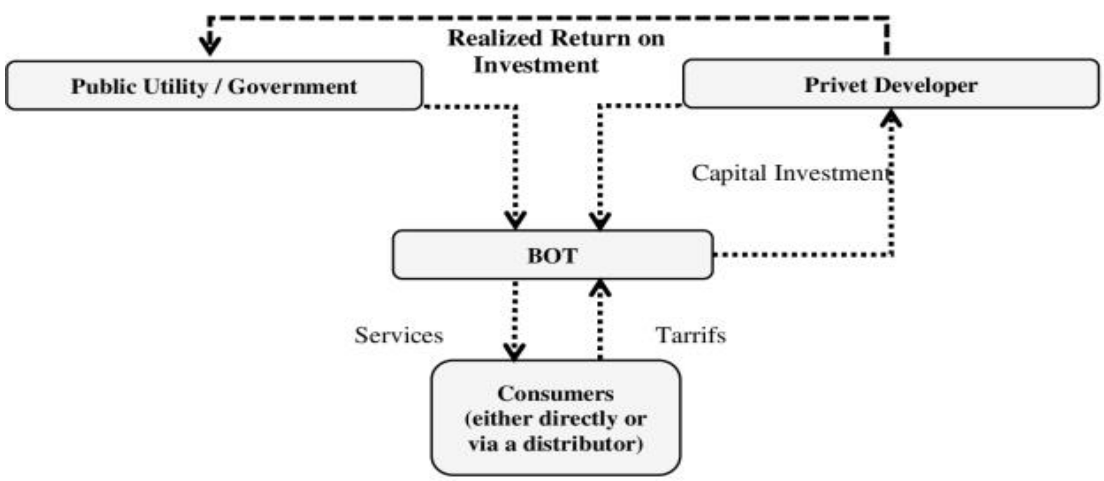

Figure 7.8: Structure of BOT Contract

Source: Heater Skilling, 2007

The basic BOT structure could be available in a number of variations that can be applied in regard to the proposed PPP framework. These include:

- Build-Transfer-Operate (BTO): wherein the transfer to the public owner happens after construction instead of at contract's end.
- Build-Own-Operate (BOO): wherein the developer builds the facility and manages it without transferring ownership to the government.
- Design-Build-Operate (DBO): Design-Build-Operate contract ensures ownership never ends up in the hands of individuals. Instead, a single contract is made available for the infrastructure project's design, building, and operation.
- Design-Build-Finance-Operate (DBFO): According to this model, duties of design, build, finance and operation are combined and transferred to partners in the private sector. Regarding the degree of financial obligation that is transferred to the private partner, DBFO agreements might differ significantly.

Build-Transfer-Operates are frequently used to secure private finance for infrastructure development or refurbishment. these contracts frequently reduce the business risk for the private party, Due to the government's frequent status as the lone client. The private partner must, however, have faith in the government to uphold the purchase agreement.

Design-Build-Finance-Operate projects have an advantage over other types of projects in that they may leverage specific project income streams since some, or all of their funding is provided by debt.

7.7 Framework for Policy Recommendations

Implementing a robust Public-Private Partnership (PPP) framework in Libya is a critical and challenging that require an in-depth understanding of the particular dynamics of this country. Clear policies and a strategic framework are essential for PPP's success. Given that Libya is a resource-rich nation but also faces its own set of difficulties, effective implementation of PPPs might be vital for the country's economic growth and social improvement. However, this is not an easy task and calls for a thorough strategy that is consistent with global best practices while being customized to Libya's particular circumstances. PPPs can encourage the private sector in bridging infrastructure gaps and delivering effective public services. However, this is not a straightforward procedure and calls for a thorough strategy that is in line with global best practices while being customized to Libya's particular circumstances. In order to improve PPP effectiveness and advance inclusiveness, transparency, and sustainable development in Libya, following policy recommendations are presented. These recommendations aim to enhance private sector engagement while maintaining the public's interests. They are intended not only to promote efficiency and effectiveness of PPPs but also promoting transparency, inclusiveness, and sustainable development in Libya.

7.7.1 High Level of Political Commitment

When choosing a PPP over more conventional means of procurement, robust commitment from senior political figures is essential. The transition to PPP procurement may be completely novel to the officials responsible for putting it into practice, and it may bring a number of difficulties. Politicians must not only show unshakable commitment to the PPP procurement process, but also make sure that their commitment to it is visible. Along the process, inescapable obstacles will need government officials to make decisions and take actions in order to overcome these obstacles, and they should feel confident of support from their superiors. To manage and balance the difficulties surrounding PPPs successfully, maintaining stability and predictability, political leaders must fully comprehend and embrace the costs and advantages connected with these agreements.

In order for the political leaders to fully embrace and support PPPs, they must first comprehend the advantages and misconceptions of PPP procurement. PPPs should be pursued for the right reason with a focus on maximizing value of money, not as a sub-optimal option to traditional public procurement. The indications of high-level commitment, or lack of such indications, are fully interpreted by both public officials and private sector entities. If government officials sense a lack of such a motivation, they may not take the project seriously. Similarly, a perceived lack of commitment can deter private sector investors and developers from being less eager to take part in the project.

7.7.2 Robust Legal and Institutional Framework

There must be a well-defined and transparent legal framework at all phases of the PPP process. Clarity in the regulatory framework will play a vital role in reducing the risk of corruption and deterring unscrupulous practices can be prevented. Contracts can be standardized whenever feasible to increase clarity and save transaction costs. Furthermore, as PPP agreements represent long-term commitments and because the demand for public services might vary, there should be unambiguous rules for renegotiation that are relevant to all parties.

For the effective implementation of PPPs in Libya, an established institutional and legal framework is essential. The legal Framework, which serves as the guiding principles for all PPP operations, should involve adequate regulations and laws that safeguard the interests of all parties. This comprises exclusive PPP legislation that defines each party's duties and obligations, strong contract rules that regulate agreements between public and private bodies, clearly defined property rights, and a practical dispute resolution mechanism. The presence of these rules and regulations creates a stable and predictable environment, making it attractive to private investors who desire a sense of certainty.

On the institutional side, establish the institutional framework for PPPs, which should include clear guidelines for project evaluation, awarding, and tendering. several nations have already established PPP units, which is a crucial step when there is a lack of project development experience. In the case of Libya, establishing a centralized PPP Unit inside would be extremely beneficial for overseeing PPP initiatives. This unit would be in charge of overseeing the procedures and making sure that the projects are both doable and advantageous to society. Furthermore, it is imperative to emphasize the significance of inter-ministerial coordination in order to effectively align the activities of diverse government departments and agencies engaged in public-private partnerships (PPPs). Additionally, regulatory authorities should be strengthened or established to monitor the sectors where PPPs are implemented, establish standards, and guarantee compliance. Finally, capacity development is crucial to effectively develop, execute, and manage PPP projects. The parties participating in PPPs should be well-versed in the skills and knowledge that are required. This could potentially be achieved through training programs or technical assistance from international organizations proficient in PPPs.

In essence, a solid institutional and legal framework not only facilitates the efficient functioning of PPPs simultaneously but also guarantees that the public benefits to the fullest extent possible.

7.7.3 Ensure Cost, Functional and Organizational Efficiency

To guarantee cost-effectiveness, operational efficiency, and organizational efficacy within a proposed Public-Private Partnership (PPP) framework for Libya, a holistic strategy is imperative. This approach should encompass meticulous considerations across project planning, execution, and administration. Here are several crucial measures to uphold efficiency within each domain:

Cost Efficiency: Carry out comprehensive cost-benefit analyses, employ competitive procurement methods, distribute risks strategically, introduce performance-driven payment structures, and strategize for sustainable long-term finances.

Functional Efficiency: Clearly define project goals, establish efficient governance frameworks, actively involve stakeholders across project phases, and deploy robust monitoring and evaluation protocols.

Organizational Efficiency: Invest in enhancing organizational capacities, delineate roles and responsibilities clearly, streamline approval procedures, and foster a culture of knowledge exchange and learning from past endeavors.

These strategies collectively contribute to maximizing the benefits of PPP projects while minimizing costs and ensuring alignment with Libya's development goals.

7.7.4 Risk Management

A crucial aspect of any Public-Private Partnership (PPP) is risk management. It entails carefully identifying, assessing, and assigning project-related risks to the party most qualified to handle them. In essence, risk should rest with the party that can handle it most affordably.

Risks in a PPP might be related to a variety of factors, including funding, construction, demand, operating effectiveness, impact on the environment, and regulatory changes.

Risk allocation is the process of selecting which partner—public or private—will bear the costs or profit of unanticipated changes in project outcomes driven on by various risk variables. Effectively allocating these risks is a key strategy in improving PPPs' value for money. For instance, a private partner with extensive construction experience might be better able to manage construction risk (the risk of delays or cost overruns during the construction phase) than a public partner might be able to handle regulatory risk (risk of changes in law or policy affecting the project).

Clear guidelines for the allocation of risks are essential to creating a balanced relationship. This entails outlining each risk's management plan, including who will manage it, how it will be monitored, and the techniques that will be utilized to mitigate it. The objective is to achieve a state of equilibrium that avoids imposing excessive risks on either party, particularly those risks that they lack the necessary resources or capabilities to manage to recruit private investment to the project.

Proper risk allocation also ensures the effective use of the resources and know-how of the private sector while maintaining the public interest. in addition, it provides transparency, decreases uncertainty for the private sector, and may result in cost savings and efficiency improvements, increasing the project's financial viability.

Therefore, when developing policy recommendations for PPPs in Libya, it would be crucial to construct a robust framework for risk management that adheres to global best practices and caters to the specific context and needs of Libya.

7.7.5 Capacity Building

The process of investing in building capacities for Public-Private Partnerships (PPPs) in Libya is supposed to encompasses a comprehensive strategy that is aimed at improving the public sector's capability to comprehend, develop, manage, and oversee these complex arrangements. This include the provision of particular training through workshops and technical support programs that involve a diverse array of subjects pertaining to PPP, including finance, legal considerations, project management, and risk assessment.

The focus should also be placed on developing and overseeing successful PPP projects that meet Libya's particular requirements, assuring ongoing project monitoring and effective project management, and encouraging a culture of continuous learning. It is also crucial to collaborate with educational institutions, establish PPP-specific departments within government organizations, and put in place reliable mechanisms for monitoring and evaluating progress.

The process of capacity building should also take into account the economic, political, and social backdrop of Libya, ensuring that efforts are tailored to be contextually appropriate and achieve effectiveness. This effort encompasses more than simply organizing training sessions; it signifies a deliberate and extensive effort to establish a knowledgeable and adaptable public sector capable of utilizing public-private partnerships (PPPs) to stimulate growth and progress in Libya. The successful implementation of the PPP projects requires a continuous commitment, adequate allocation of resources, and a holistic approach that encompasses both the enhancement of human skills and the reinforcement of institutional capacity.

7.7.6 Monitoring and Evaluation (M&E)

Monitoring and Evaluation (M&E) is a crucial policy recommendation for the effective implementation of Public-Private Partnerships (PPPs) in the context of Libya. This process encompasses not only the act of observing, but also emphasizes the need of continuous development, acquisition of knowledge, and assuming responsibility.

The monitoring and evaluation (M&E) mechanism places significant emphasis on the development of explicit performance criteria as well as regular tracking to ascertain that public-private partnership (PPP) projects are not only achieving their objectives but also delivering cost-effective outcomes. The process entails the methodical collecting, analysis, and understanding of data in order to present an in-depth review of the performance of a public-private partnership (PPP) project.

The continuous monitoring procedure is backed up by periodic and thorough evaluations aimed at assessing the overall impact and efficacy of PPP initiatives. The objective is to develop a knowledge regarding the efficacy and shortcomings of a given endeavor, as well as the underlying reasons, in order to extract valuable insights that may be utilized for future initiatives.

In a context such as Libya, where public-private partnerships (PPPs) may have a major effect on solving infrastructure requirements and promoting economic growth, the establishment of effective monitoring and evaluation (M&E) processes becomes even more crucial. The objective extends beyond the mere fulfillment of timely and cost-effective project delivery, encompassing the imperative of aligning projects with the overarching developmental goals of the nation and fostering a constructive impact on society.

The continuous process of assessing and updating policies guarantees that the Public-Private Partnership (PPP) framework remains adaptable to evolving conditions and that knowledge gained is incorporated into future initiatives. Furthermore, it fosters a sense of trust among private sector partners, as they are able to observe the existence of a clear and responsible framework for evaluating performance.

Moreover, the establishment of a robust monitoring and evaluation (M&E) system can also contribute to shaping the world perception of Libya's investment climate. By demonstrating a dedication to transparency, accountability, and continuous development, it may facilitate the attraction of foreign investment and foster a more stable and successful future for the nation.

It should be noted that a strong monitoring and evaluation (M&E) structure inside Libya's Public-Private Partnership (PPP) model serves a purpose beyond basic administrative duties. it is a strategic instrument that facilitates the alignment of projects with national objectives, promotes the effective utilization of resources, develops a culture of continuous improvements, and creates trust among all parties involved. By prioritizing this approach, Libya may effectively utilize public-private partnerships (PPPs) as a potent mechanism for fostering economic growth and promoting overall development.

7.7.7 Develop a Pipeline Project

Create a project pipeline by identifying possible projects in industries like transportation, healthcare, energy, and education that are appropriate for PPPs. These projects should align with national development goals.

7.8 Regulatory Framework of the Model

The regulatory framework refers to a comprehensive array of rules, guidelines, and policies that determine the manner in which PPPs are organized, executed, and supervised. The Ministry of Finance outlines the regulations and procedures that govern the actions and processes performed by both public and private entities while engaging in and implementing a public-private partnership (PPP) agreement. The following are some key components of the regulatory framework for the proposed model:

7.8.1 Alignment with National Goals

It is imperative to ensure that the PPP framework is in line with Libya's overarching development objectives and economic strategy, taking into account the sectors that necessitate investment and development.

7.8.2 Legal Basis

Establishment of a solid legal basis is of the highest priority in Libya's regulatory framework for Public-Private Partnerships (PPPs). This includes formulation of specific laws or regulations that clearly define what PPPs are, the authority and guidance to employ PPPs within the nation, and identifying the sectors where they can be executed. Such a legal framework is necessary as it establishes a transparent and systematic process for deploying PPPs that align with national goals and takes into account both regional difficulties and global norms. It is essential to ensuring that PPP projects are implemented successfully in Libya.

7.8.3 Institutional Structure

In Libya, the institutional structure plays an important role in the regulatory environment for PPPs. It is absolutely essential to establish the governmental entities responsible for overseeing and carrying out PPPs within this framework. Evidence of this commitment can be seen in the establishment of key entities such as the Supreme Committee, the PPP

Authority (LAPPP), and the Contracting Authority. By creating such an institutional framework, Libya makes sure that handling PPPs is centralized and consistent. In addition to facilitating the efficient coordination and execution of PPP projects, this structure also establishes a clear channel for oversight, adherence, and alignment with the overarching objectives of national development. Having a clearly defined institutional framework in place, such as the recommended institutions responsible for overseeing the PPP implementation, is crucial for the success of PPPs in the context of Libya, where they may be a crucial part of economic growth and development.

7.8.4 Contractual Framework

Which are the typical terms and conditions for PPP agreements that include each party's duties and rights, as well as performance requirements, payment methods, and termination clauses.

7.8.5 Social and Environmental Compliance

Requirements for adhering to social and environmental standards, such as impact evaluations and adherence to international and local regulations is a must.

7.8.6 Transparency and Public Engagement

Public participation and transparency are essential components of Libya's PPP regulatory framework. These components include techniques and tools intended to increase transparency and enable transparency and participation involvement in the entire process of Public-Private Partnerships. Access to relevant information ensuring that all interested parties, including the general public, are aware of the initiatives' objectives, potential effects, and advantages. In the case of Libya, placing a strong emphasis on transparency and promoting public involvement not only increases the confidence and credibility in PPP projects but also facilitates their ability to better meet societal needs and values. This strategy guarantees that the collaborations are not only financially sound but also socially responsible, promoting a more sensible and sustainable route for the country's growth.

7.8.7 Balance of Interests

The framework must serve the interests of both public and private investors, while also taking into account the fact that these interests frequently clash and evolve over time.

7.8.8 Avoiding Excessive Regulation

The framework must prevent excessive regulation, which can hinder innovation, while defining norms and enforcing responsibility.

7.8.9 Dispute Resolution Mechanism

The incorporation of an efficient and impartial dispute resolution mechanism is a vital component in the regulatory framework of PPP in Libya. For Libyan PPPs to succeed, a fair and effective dispute resolution process must be established, possibly involving international arbitration.it promotes investor trust by ensuring fair conflict resolution, in line with international standards, and contributing to the success and sustainability of PPP programs in a Libya.

7.9 Conclusion

In conclusion, this chapter outlining a PPP Model Proposal for Strategic Infrastructure Investments in Libya, a comprehensive approach has been crafted. It combines legal and institutional structures with functional frameworks to govern PPPs. The model's foundational pillars and dimensions are described, along with various implementation scenarios. Strategic policy recommendations and a regulatory framework are provided to enhance investor confidence and ensure alignment with Libya's goals. Together, these elements form a versatile and promising blueprint aimed at fostering sustainable growth in Libya's infrastructure sector, making the proposal a potential guide for other developing nations.

7.10 Results and Analysis

In the realm of infrastructure development, the financing and operational models employed are pivotal in determining the success and sustainability of projects. The focus of this thesis is on Public-Private Partnerships (PPPs) in Libya, a model that amalgamates the strengths of both public and private sectors to foster infrastructure growth. This research investigates the current PPP framework in Libya and proposes a novel model tailored to the nation's unique socio-economic landscape.

The questionnaire is meticulously designed to gather insights from a diverse range of stakeholders.The questionnaire, carefully crafted, aims to collect perspectives from a wide array of stakeholders. It has received responses from 29 individuals. This includes private investors represented by the Libyan Businessmen Council, experts in the field, Academics and practitioners from the industry. This diverse sampling ensures a multifaceted perspective, critical for the robustness of the research. The purpose of this questionnaire is twofold: to gauge the perception and effectiveness of the current PPP framework in Libya, derive a nuanced understanding of the current PPP dynamics and to evaluate the viability and reception of the proposed PPP model.

Central to this thesis is the examination of the current Libyan PPP framework through the lens of various stakeholders. This involves analysis of the existing legal and institutional structures, functional operations, and regulatory environments. Concurrently, the proposed PPP model is introduced, encompassing a variety of aspects crucial for its successful implementation. Participants were provided with detailed information regarding the legal and institutional structure, optimized functional frameworks, foundational pillars, and dimensions of the proposed model. Furthermore, scenarios illustrating the implementation of the proposed model were presented, coupled with an overview of the regulatory environment required to support it.

The analysis of responses from this questionnaire is pivotal in providing an analytical lens to compare and contrast the current and proposed PPP frameworks in Libya. Through the interpretation of these responses, the analysis aims to employ descriptive statistics to quantitatively describe the data collected, providing a foundational understanding of the distribution, tendencies, and variances within the responses.

This approach ensures a holistic understanding of the PPP landscape in Libya, offering valuable insights into both the current state and prospective trajectory of PPPs in Libya. By integrating the perspectives of key stakeholders, coupled with rigorous statistical and analytical techniques, this research aspires to contribute meaningfully to the discourse on PPPs in Libya, offering a robust framework that aligns with the country's strategic objectives and socio-economic needs.

7.10.1 Interpretation of Responses

The exploration of Public-Private Partnership (PPP) framework as a mechanism for financing infrastructure projects in Libya was articulated through a structured questionnaire, comprising twelve questions segmented into three distinct thematic axes.

The initial axis examines the respondents' perspectives on the potential that establishing a centralized PPP unit in Libya might have on the development and management of public-private partnerships, compared to a more decentralized approach where government agencies and organizations individually navigate these partnerships according to the law?

The second axis, encompassing six items, was dedicated to evaluating the efficacy of the PPP system currently operational in Libya with respect to its capacity to finance infrastructure initiatives. This axis aimed to capture insights into the practical application and outcomes of the existing PPP framework.

Conversely, the third axis, also comprising six questions, focused on assessing the potential of a proposed PPP framework, for the financing of infrastructure strategic projects. This segment of the questionnaire was designed to gauge the anticipated effectiveness and efficiency of the proposed PPP framework in the Libyan context.

Due to its common adoption, the proven precision of results derived from the Likert scale among researchers, and the accuracy of the results obtained through its use, particularly in studies of this nature, it was selected as the measurement tool. The statements on the scale are phrased in a positive manner. Participants are assigned a score of (1) for responses indicating 'Totally Agree,' and a score of (5) for 'Totally Disagree.' Intermediate scores are allocated for other response levels: a score of (2) denotes 'Agree,' (3) corresponds to 'Neutral,' and (4) signifies 'Disagree.

7.10.1.1 Interpretation of Responses Regarding the establishing a centralized PPP unit in Libya

The insights on the potential impact of establishing a centralized PPP unit in Libya, as garnered from questionnaires and interviews, reflect a diverse array of perspectives from a range of individuals, including experts in the field, industry professionals, and academics. The collective viewpoint underscores a positive inclination towards the centralized approach for managing public-private partnerships in Libya.

Firstly, the feedback highlighted the critical need for specialized knowledge and expertise in structuring, managing, and implementing PPP projects. A centralized unit was seen as pivotal in aggregating this expertise, facilitating more informed decision-making and risk management practices essential for the success of PPP initiatives. Also, a centralized PPP unit can serve as a catalyst for consistency and transparency across all sectors. By having a singular entity overseeing PPP projects, we can ensure that every project adheres to a set of standardized procedures and criteria, thereby mitigating risks of inefficiency and corruption. This uniformity is essential for creating an environment that is attractive to both local and international investors, as it reduces uncertainty and enhances the predictability of the investment climate.

Moreover, emphasized the benefits of consistency and transparency a centralized PPP unit could bring to the PPP landscape in Libya. The prospect of having a uniform set of standards and practices was particularly appealing, as it would mitigate the complexities and uncertainties currently faced by private investors, thereby potentially increasing the attractiveness of Libya as an investment destination. Another critical aspect is the ability of a centralized unit to engage in strategic planning, aligning PPP projects with the country's broader economic and infrastructural goals. This strategic oversight ensures that PPP initiatives are not just individual projects but part of a cohesive plan to drive national development forward.

Also, a centralized PPP unit can serve as a catalyst for consistency and transparency across all sectors. By having a singular entity overseeing PPP projects, we can ensure that every project adheres to a set of standardized procedures and criteria, thereby mitigating risks of inefficiency and corruption. This uniformity is essential for creating an environment that is attractive to both local and international investors, as it reduces uncertainty and enhances the predictability of the investment climate.

Furthermore, a centralized PPP unit can act as a mediator between the public and private sectors, fostering a collaborative environment that encourages dialogue and mutual understanding. This is vital for resolving any conflicts that may arise and for ensuring that the interests of both parties are adequately represented and protected.

Lastly, the international perspective cannot be ignored. By aligning with global best practices through a centralized PPP framework, Libya can significantly improve its standing on the international stage, making it a more competitive and appealing market for PPP investments. This alignment with international standards also opens up opportunities for capacity building and knowledge exchange, further enhancing the capabilities of those involved in managing PPPs in Libya.

In summary, the establishment of a centralized PPP unit in Libya offers a promising pathway to more efficient, transparent, and strategically aligned public-private partnerships. This approach not only simplifies the process for both public and private entities but also lays a solid foundation for sustainable economic growth and infrastructural development in the country.

7.10.1.2 Interpretation of Responses Regarding the Capability of the Current Public-Private Partnership framework to Finance Infrastructure Projects in Libya

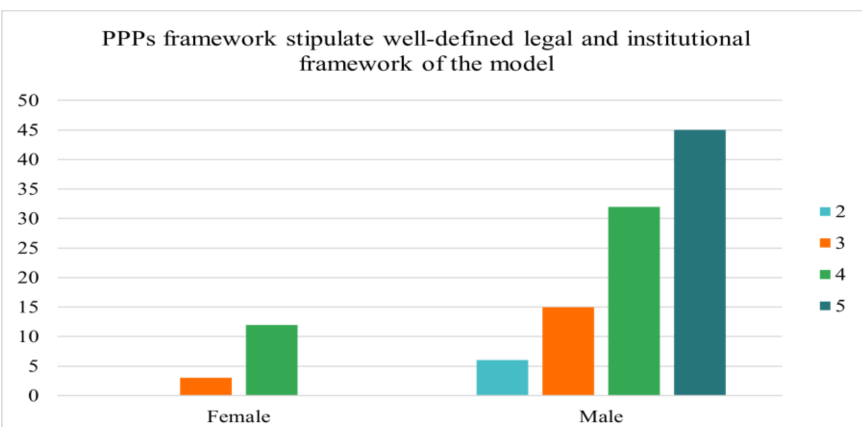

Figure 7.9: Capability of the Current PPP

Based on the figure above which represents the responses to the question one regarding The current PPPs framework stipulate well-defined legal and institutional framework of the model. The majority of respondents express a clear dissatisfaction with the existing PPP framework, as indicated by the significant number of participants who disagreed or totally disagreed with the statement. Specifically, ten respondents disagreed and seven totally disagreed, together comprising a substantial majority of the total responses. This strong inclination towards negative views reflects a prevalent perception among stakeholders that the current PPP framework lacks a well-defined legal and institutional structure. In contrast, only a minimal number of respondents, totaling two, agreed with the statement, suggesting a very limited endorsement of the framework's clarity in legal and institutional terms. Additionally, six respondents remained neutral, indicating either a lack of decisive opinion, insufficient information, or uncertainty about the PPP framework's legal and institutional aspects.

This collective response pattern underscores a critical need for reassessment and potential enhancement of the PPP framework in Libya. The overwhelming tendency towards disagreement, combined with minimal agreement and a noticeable portion of neutrality, highlights an urgent requirement for clearer, more effective, and well-defined legal and institutional structures. Such improvements are essential for enhancing the efficacy, reliability, and stakeholder confidence in the PPP framework within Libya's context.

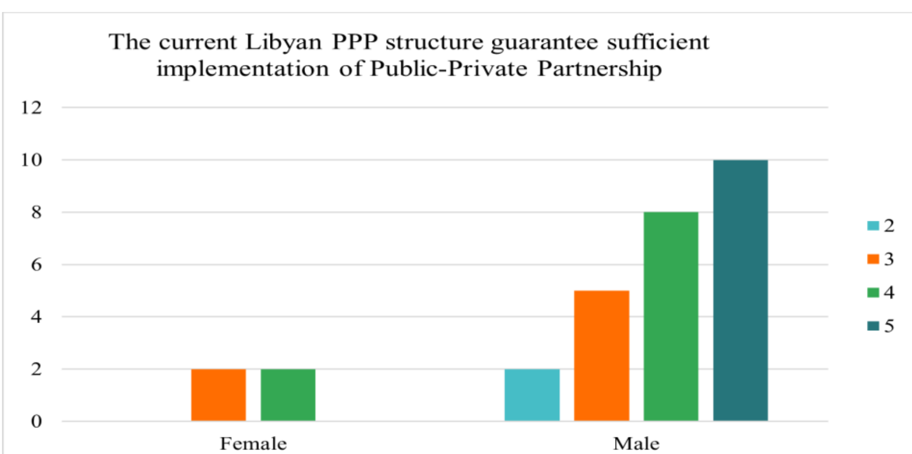

Figure 7.10: Efficiency of Implementation of the Current PPP

The above Figure 7.10 displays the responses received for the question concerning the functional structure of the current Public-Private Partnership (PPP) framework in Libya and its effectiveness in guaranteeing smooth implementation reveal a predominantly negative perception among the respondents.

The majority of the participants, totaling 20 out of 29, expressed disagreement with the statement. Specifically, ten respondents indicated 'Totally Disagree' and ten chose 'Disagree'. This significant portion of the responses strongly suggests that there is a prevailing view that the current functional structure of the PPP framework is inadequate for ensuring the smooth implementation of PPP projects in Libya. The high number of 'Totally Disagree' responses particularly underscores a deep-seated dissatisfaction with the existing functional structure. Furthermore, seven respondents selected 'Neutral', indicating either a lack of strong opinion, insufficient information to make a decisive judgment, or ambivalence about the current functional structure's effectiveness. This suggests that a segment of the participants either is not fully aware of the intricacies of the functional structure or is uncertain about its impact. Only two respondents agreed with the statement, reflecting a very minimal level of confidence or support for the current functional structure of the PPP framework in facilitating smooth project implementation. This low number of positive responses further highlights the general skepticism or criticism among stakeholders regarding the current system's effectiveness.

Overall the collective response pattern indicates a critical viewpoint among stakeholders that the functional structure of the current PPP framework in Libya falls short in effectively guaranteeing the smooth implementation of PPP projects. This insight is vital for policymakers, suggesting an urgent need for revising and improving the functional aspects of the PPP framework to better meet the requirements and expectations of the stakeholders involved in such projects.

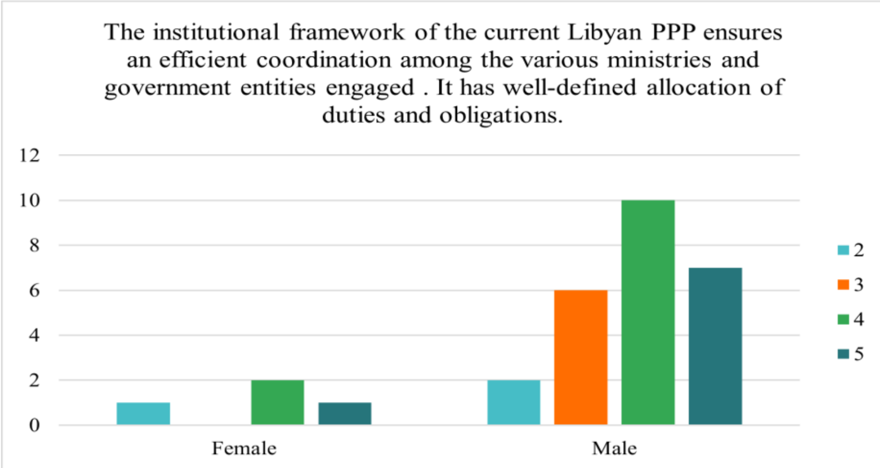

Figure 7.11: Allocation of duties of the Current PPP

The above Figure 7.11 displays the responses to the statement regarding the effectiveness of the institutional framework in the current Libyan Public-Private Partnership (PPP) model, specifically its ability to ensure efficient coordination among various ministries and government entities and its clarity in the allocation of duties and obligations, suggest a predominantly negative viewpoint among the respondents.

A significant majority of the respondents expressed skepticism or dissatisfaction with the current institutional framework. Specifically, eight respondents chose 'Totally Disagree' and twelve selected 'Disagree'. This overwhelming inclination towards negative responses indicates a strong consensus among the participants that the current PPP framework in Libya is perceived as lacking in terms of efficient coordination and clear allocation of duties and obligations. The substantial number of 'Totally Disagree' responses particularly highlights a deep-rooted concern about the framework's efficiency and role clarity. Furthermore, six respondents opted for 'Neutral', implying either a lack of definitive opinion, insufficient information to make a decisive judgment, or uncertainty about the efficiency and clarity of the institutional framework. This suggests that a notable segment of the participants is either not fully aware of the intricacies of the current framework or is undecided about its effectiveness. Only three respondents agreed with the statement, indicating a very minimal level of confidence or support for the current institutional framework of the PPP model. This minimal agreement, juxtaposed with the overwhelming disagreement, accentuates the general sentiment of criticism or skepticism among stakeholders regarding the current framework's operational efficacy.

The collective responses reflect a predominant perception among respondents that the institutional framework of the current Libyan PPP system is inadequate in ensuring effective coordination and clear definition of responsibilities. This insight is crucial for policymakers and practitioners, suggesting an urgent need for reevaluation and potential reform of the institutional aspects of the PPP framework to enhance its effectiveness and align better with stakeholder expectations and the practical requirements of PPP projects.

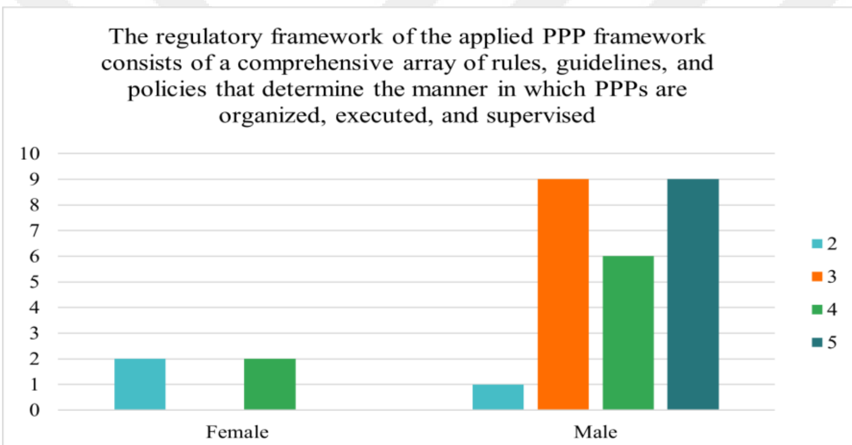

Figure 7.12: Regulatory Efficiency of the Current PPP

The interpretation of the responses illustrated in Figure 7.12 pertains to the statement regarding the comprehensiveness of the regulatory framework in the applied Public-Private Partnership (PPP) model in Libya indicates a predominantly negative perception among stakeholders.

With nine respondents 'Totally Disagreeing' and eight 'Disagreeing', a majority of 17 out of 29 participants express skepticism about the framework's ability to provide a comprehensive array of rules, guidelines, and policies for organizing, executing, and supervising PPPs. This strong leaning towards disagreement suggests a prevalent view that the current regulatory framework is insufficient and lacks the necessary detail and scope. Additionally, nine respondents remained 'Neutral', indicating either indecision, lack of information, or ambivalence about the regulatory framework's effectiveness. In contrast, only three respondents 'Agreed' with the statement, highlighting a minimal level of confidence in the current regulatory framework's comprehensiveness.

This overall response pattern underscores the need for a critical reassessment of the regulatory aspects of Libya's PPP framework, emphasizing the necessity for a more detailed, inclusive, and effective regulatory structure to guide PPP processes.

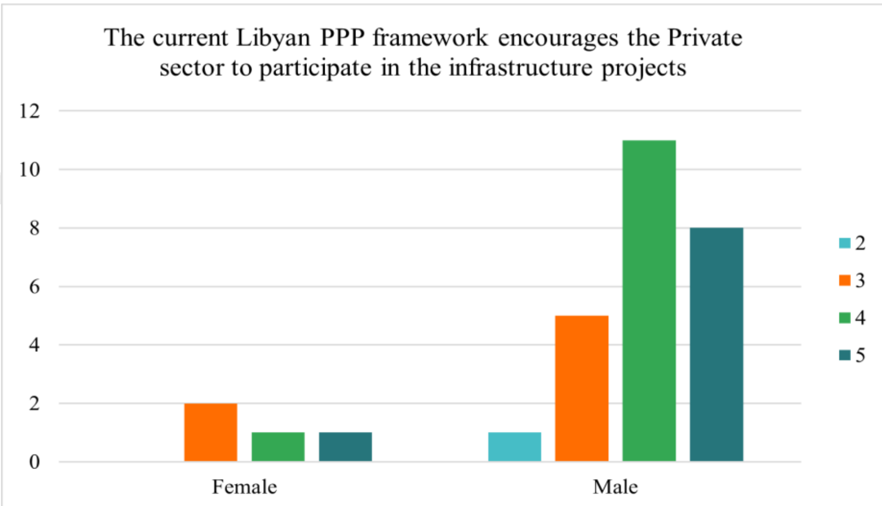

Figure 7.13: Private sector participation of the Current PPP

Figure 7.13 above shows the response to the statement regarding the current Libyan Public-Private Partnership (PPP) framework's effectiveness in encouraging private sector participation in infrastructure projects suggest a clear and predominant dissatisfaction among the participants.

A substantial majority of the respondents, totaling 21 out of 29, expressed a lack of confidence in the current PPP framework's ability to attract private sector involvement. Specifically, nine respondents indicated 'Totally Disagree' and twelve selected 'Disagree'. This overwhelming inclination towards negative responses reveals a strong consensus among stakeholders that the current PPP framework in Libya is perceived as ineffective in fostering private sector participation in infrastructure projects. The considerable number of 'Totally Disagree' responses further highlights deep-rooted concerns about the framework's attractiveness and suitability for private sector engagement. In addition, seven respondents chose 'Neutral', implying either a lack of definitive opinion, insufficient information to form a conclusive judgment, or uncertainty about the PPP framework's capacity to encourage private sector involvement. This suggests that a notable segment of the survey participants is either not fully aware of the framework's impact on private sector participation or is undecided about its effectiveness. Only one respondent agreed with the statement, indicating a minimal level of endorsement for the current PPP framework's ability to attract private sector involvement in infrastructure projects. This limited agreement, juxtaposed with the overwhelming disagreement, underscores the general sentiment of criticism or skepticism among stakeholders regarding the current framework's efficacy in this regard.

The overall responses indicate a prevailing view among the respondents that the existing Libyan PPP system falls short in effectively incentivizing and involving the private sector in infrastructure projects. This perspective is of significant importance to policymakers and practitioners, pointing towards a pressing need for a thorough reassessment and possible overhaul of the PPP framework. Such changes aim to improve its attractiveness and efficacy in fostering private sector engagement.

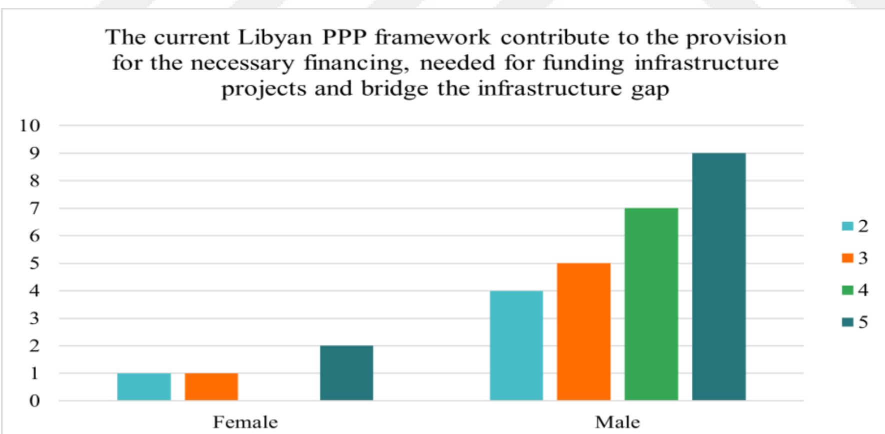

Figure 7.14: Financing Provision of the Current PPP

The interpretation of the responses illustrated in Figure 7.14 pertains to the statement regarding the contribution of the current Libyan Public-Private Partnership (PPP) framework in providing necessary financing for funding infrastructure projects and bridging the infrastructure gap reveals varied perspectives among the participants.

The majority of the respondents, totaling 18 out of 29, expressed a negative view regarding the current PPP framework's effectiveness in financing infrastructure projects.

Specifically, eleven respondents 'Totally Disagree' and seven 'Disagree' with the statement. This substantial leaning towards disagreement suggests that a significant number of stakeholders perceive the current PPP framework in Libya as ineffective in securing the necessary funds for infrastructure development and in addressing the infrastructure gap. The high number of 'Totally Disagree' responses especially underscores a strong sentiment of dissatisfaction with the framework's financial contribution. In contrast, six respondents opted for a 'Neutral' stance, indicating either indecision, lack of sufficient information to form a definitive opinion, or ambivalence regarding the PPP framework's role in financing. This suggests that a segment of the survey participants is either not fully informed about the framework's financial impact or is uncertain about its effectiveness in this area. Additionally, five respondents agreed with the statement, reflecting a minority view that supports the current PPP framework's ability to contribute to the necessary financing for infrastructure projects. This level of agreement, though outnumbered by the disagreement, highlights that there is some level of confidence in the framework's capacity to address financing needs in the sector.

Overall, the collective response pattern points to a predominant skepticism or dissatisfaction among stakeholders about the ability of the current Libyan PPP system to provide adequate financing for infrastructure development and to bridge the infrastructure gap.

7.10.1.3 Interpretation of Responses Regarding the Capability of the Proposed Public-Private Partnership framework to Finance Infrastructure Projects in Libya

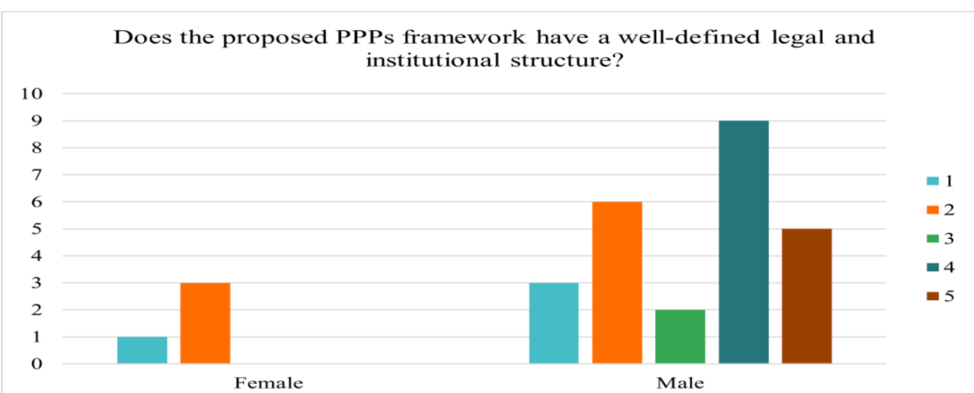

Figure 7.15 Capability of the Proposed PPP

Figure 7.15 above shows the response to the question regarding the clarity of the legal and institutional structure in the proposed Public-Private Partnership (PPP) framework present a diverse range of opinions among the participants.

A total of fourteen respondents expressed agreement with the statement that the proposed PPP framework has a well-defined legal and institutional structure, with nine selecting 'Agree' and four opting for 'Totally Agree'. This indicates a notable level of confidence among these stakeholders in the clarity and definition of the legal and institutional aspects of the proposed framework. The presence of a relatively high number of 'Totally Agree' responses suggests that a significant subset of participants views the proposed framework as being particularly strong in these areas. Conversely, thirteen respondents expressed skepticism or disagreement, with eight choosing 'Disagree' and five opting for 'Totally Disagree'. This reflects a parallel level of concern or dissatisfaction among another segment of stakeholders regarding the adequacy of the proposed framework's legal and institutional structure. The number of 'Totally Disagree' responses indicates a substantial degree of skepticism within this group. Additionally, two respondents remained neutral, indicating either uncertainty, lack of decisive opinion, or insufficient information to assess the effectiveness of the proposed framework's legal and institutional structure. The overall responses reveal a split in perceptions among correspondents. There is a significant proportion of participants who are confident in the proposed PPP framework's legal and institutional clarity, matched by an equally significant proportion who are doubtful about these aspects.

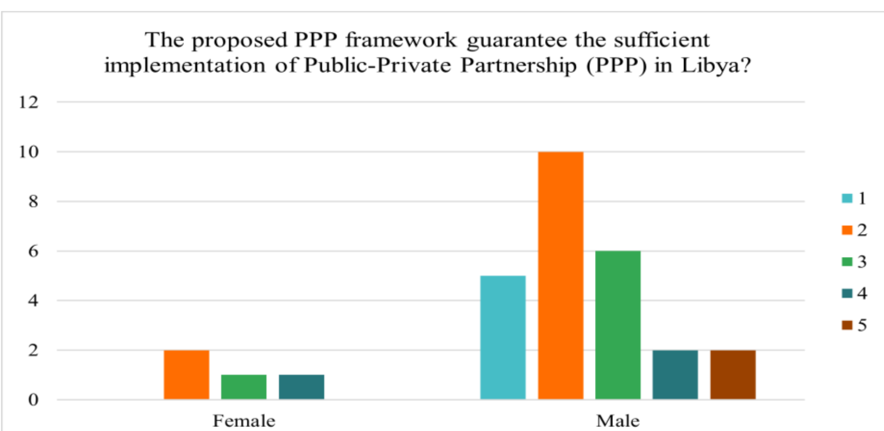

Figure 7.16 Implementation Efficiency of the Proposed PPP

The interpretation of the responses illustrated in Figure 7.16 about to the question about the effectiveness of the proposed Public-Private Partnership (PPP) framework in guaranteeing sufficient implementation of PPP in Libya indicate a generally positive perception among the participants.

A significant portion of the respondents, totaling 17 out of 29, expressed confidence in the proposed PPP framework. Specifically, twelve respondents selected 'Agree' and five opted for 'Totally Agree'. This substantial level of agreement suggests that a majority of the stakeholders have a favorable view of the proposed framework's ability to ensure effective implementation of PPPs in Libya. The number of 'Totally Agree' responses further emphasizes a strong endorsement by a considerable subset of participants, indicating a belief that the proposed framework is well-equipped to handle the demands of PPP implementation. Conversely, a smaller segment of five respondents expressed skepticism or disagreement with the proposed framework's efficacy, with two choosing 'Disagree' and another two opting for 'Totally Disagree'. This indicates that while there is a level of skepticism or concern among some stakeholders, it is notably less pronounced compared to the positive responses. Additionally, seven respondents remained neutral, suggesting either indecision, insufficient information to form a definitive opinion, or ambivalence about the proposed framework's capability in this regard. This neutral stance could point to a need for further information dissemination or clarification regarding the specifics of the proposed framework to address any uncertainties or reservations.

Overall, the response pattern reveals a predominantly favorable view towards the proposed PPP framework's ability to facilitate the sufficient implementation of PPP projects in Libya. The majority of stakeholders appear to support the framework's approach, suggesting optimism about its potential effectiveness. However, the presence of neutral and disagreeing responses also highlights the importance of addressing the concerns and uncertainties of a segment of the stakeholders to foster broader consensus and confidence in the proposed framework.

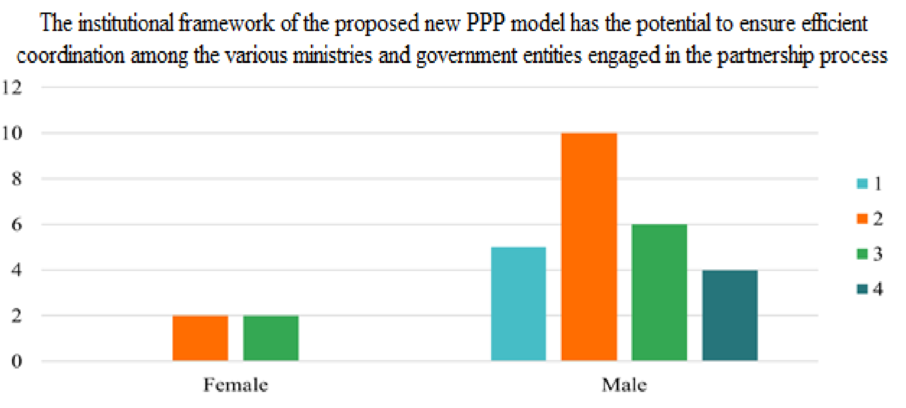

Figure 7.17 Allocation of duties of the Proposed PPP

Figure 7.17 above shows the responses to the statement concerning the potential of the institutional framework in the proposed new Public-Private Partnership (PPP) model to ensure efficient coordination among various ministries and government entities involved in the partnership process reveal a generally optimistic perception among the participants.

A majority of the respondents, totaling 17 out of 29, expressed a positive view of the proposed institutional framework. Specifically, twelve respondents 'Agree' and five 'Totally Agree' with the statement, indicating substantial confidence in the framework's potential for efficient coordination. The presence of a considerable number of 'Totally Agree' responses underscores a strong endorsement by a significant portion of the stakeholders, suggesting that they view the proposed framework as being particularly capable of fostering effective collaboration among the involved parties. Conversely, a minority of four respondents expressed skepticism, choosing 'Disagree'. While this indicates some level of concern or disagreement regarding the proposed framework's efficiency in coordination, the absence of any 'Totally Disagree' responses suggests that such concerns are not as pronounced or extreme among the participants. Additionally, eight respondents remained neutral. This neutrality could imply uncertainty, lack of sufficient information to form a decisive opinion, or ambivalence about the proposed framework's ability to ensure efficient coordination. This suggests that while there is a general leaning towards a positive perception, there is also a need for more information or clarity regarding the specifics and operational dynamics of the proposed institutional framework.

The overall response pattern reflects a predominantly favorable view towards the potential of the proposed new PPP model's institutional framework in ensuring efficient coordination among involved government entities and ministries. The majority of respondents appear to support the framework's approach and see it as capable of effectively managing the partnership process. However, the presence of neutral and disagreeing responses indicates the importance of further engagement and communication with stakeholders to address their concerns and solidify broader consensus on the framework's potential and effectiveness.

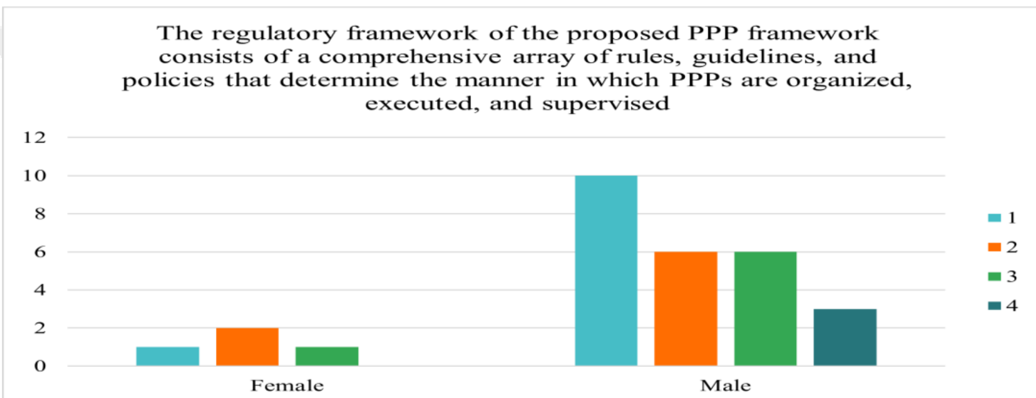

Figure 7.18 Regulatory Efficiency of the Proposed PPP

Figure 7.18 above shows the responses to the statement on the comprehensiveness of the regulatory framework in the proposed Public-Private Partnership (PPP) model, which includes a variety of rules, guidelines, and policies for organizing, executing, and supervising PPPs, indicate a predominantly positive outlook among the participants.

A significant majority of respondents, amounting to 19 out of 28, view the proposed PPP framework's regulatory aspects favorably. Specifically, eleven respondents 'Totally Agree' and eight 'Agree' with the statement, reflecting substantial confidence in the framework's comprehensive and effective regulatory structure. The high number of 'Totally Agree' responses especially highlights a strong endorsement of the framework's regulatory comprehensiveness, suggesting that these stakeholders perceive it as well-equipped to guide and manage the PPP processes effectively. On the other hand, a smaller group of three respondents expressed disagreement, albeit none opted for 'Totally Disagree', which might indicate that while there are some reservations about the regulatory framework's comprehensiveness, these concerns are not extremely severe. Furthermore, six respondents chose a 'Neutral' position, indicating either indecision, a lack of sufficient information to form a firm opinion, or ambivalence about the regulatory framework's effectiveness. This neutrality suggests that there might be a need for further clarification or information dissemination regarding the details and functionalities of the proposed regulatory framework to address these uncertainties.

It is obvious that the collective response pattern reflects a generally favorable perception of the regulatory framework within the proposed PPP model. The majority of correspondents show optimism about its potential to provide a thorough and effective set of guidelines and policies for PPPs.

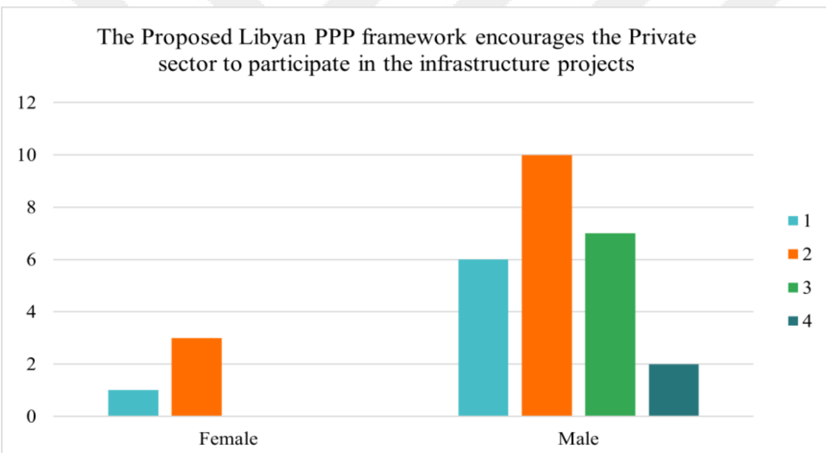

Figure 7.19 Private sector participation of the Proposed PPP

The responses illustrated in Figure 7.19 of statement regarding the encouragement of private sector investment in infrastructure projects by the proposed Libyan Public-Private Partnership (PPP) framework suggest a strong positive sentiment among the participants.

A clear majority of the respondents, totaling 20 out of 29, expressed affirmative views about the proposed PPP framework's ability to attract private sector investors. Specifically, thirteen respondents chose 'Agree' and seven opted for 'Totally Agree'. This substantial level of agreement indicates a significant confidence among stakeholders in the proposed framework's potential to foster private sector participation in infrastructure projects. The number of 'Totally Agree' responses underscores a robust endorsement of the framework, suggesting that these stakeholders view it as particularly effective in engaging private investors. On the other hand, a minor segment of two respondents expressed disagreement. The absence of any 'Totally Disagree' responses might imply that while there are some reservations, these are not severe or widespread. Additionally, six respondents remained neutral, indicating either uncertainty, lack of sufficient information to form a definitive opinion, or ambivalence about the proposed framework's capability in this area. This neutrality suggests that a segment of the survey participants might require more information or clarity regarding how the proposed framework specifically encourages private sector investment.

The overall response pattern reflects a predominantly favorable view of the proposed Libyan PPP framework's ability to encourage private sector participation in infrastructure development. The majority of participants appear to support the framework's approach, indicating optimism about its potential effectiveness. However, the presence of neutral and a small number of disagreeing responses also highlights the importance of further engagement with stakeholders to address any concerns and enhance understanding of the framework's benefits and mechanisms for attracting private investment.

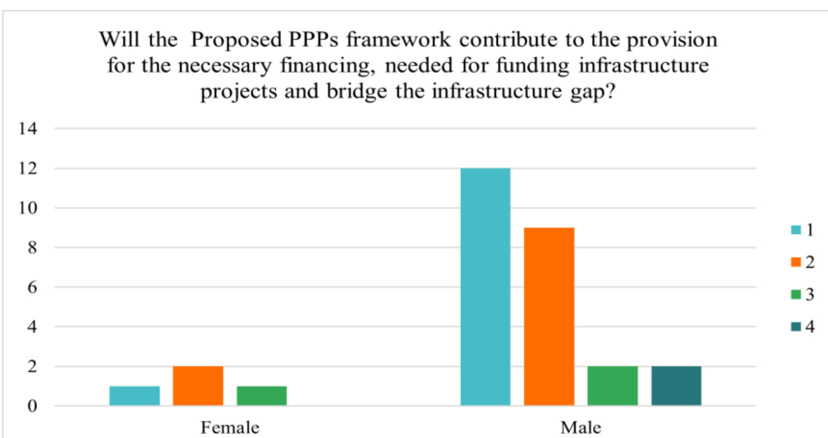

Figure 7.20 Financing Provision of the Proposed PPP

Figure 7.20 above shows the responses to the question regarding the contribution of the proposed Public-Private Partnership (PPP) framework towards providing necessary financing for infrastructure projects and bridging the infrastructure gap in Libya indicate a highly positive perception among the participants.

An overwhelming majority of the respondents, amounting to 24 out of 29, have expressed confidence in the proposed PPP framework's ability to address financial needs in the infrastructure sector. Specifically, thirteen respondents 'Totally Agree' and eleven 'Agree' with the assertion that the proposed framework will contribute significantly to funding infrastructure projects and closing the infrastructure gap. This strong level of agreement suggests that the majority of stakeholders view the proposed framework as a potent tool for mobilizing necessary financial resources for infrastructure development. The substantial number of 'Totally Agree' responses highlights an emphatic endorsement of the framework's potential in this regard. Meanwhile, a smaller segment comprising only two respondents expressed disagreement, and none selected 'Totally Disagree'. This indicates that while there are some reservations, these concerns are not predominant among the participants. Additionally, three respondents maintained a neutral stance, indicating either a lack of decisive opinion, insufficient information to make a conclusive judgment, or ambivalence about the framework's capacity to provide the required financing for infrastructure projects. This neutral perspective suggests that a segment of the respondents may need further information or clarity regarding the financial mechanisms and efficacy of the proposed framework.

The collective response pattern reveals a strong consensus among stakeholders in favor of the proposed Libyan PPP framework's ability to effectively contribute to the financing of infrastructure projects and in addressing the existing infrastructure gap. The majority of stakeholders appear to be optimistic about its potential effectiveness. However, the presence of neutral and a few disagreeing responses also underscores the importance of further communication and engagement with stakeholders to address any lingering concerns and to solidify broader confidence in the framework's financial capabilities.

In conclusion The responses related to the current Libyan PPP framework indicate a clear consensus among stakeholders that there are significant areas needing improvement. There is a prevalent perception of inadequacy in the current PPP framework's legal and institutional structures, functional setup, regulatory aspects, private sector engagement, and financial capacity. Stakeholders express a need for clearer, more effective, and well-defined structures and strategies. These insights are crucial for policymakers and practitioners, highlighting an urgent need for a comprehensive reassessment and potential enhancement of the current PPP framework in Libya. Such improvements are essential to increase its efficacy, reliability, and attractiveness to private sector investors, and to ensure it provides adequate financing for infrastructure development and bridges the infrastructure gap.

Conversely, the responses regarding the proposed PPP framework reflect a more optimistic outlook. There is a notable confidence among a significant portion of participants in the proposed framework's legal and institutional clarity, although it is matched by some skepticism. The majority of stakeholders support the proposed framework's approach to implementation, institutional coordination, regulatory structure, private sector engagement, and financial contribution to infrastructure projects. However, the presence of neutral and some disagreeing responses highlights the need for further stakeholder engagement and communication. This engagement is vital to address concerns, enhance understanding of the framework's benefits, and solidify broader confidence in its potential effectiveness.

7.10.2 Descriptive Statistics

The responses show variation across the questions, indicating differing levels of agreement or disagreement among respondents on various aspects of the current and proposed PPP frameworks.

7.10.2.1 Current PPP Framework

Table 7.1 below showcasing responses regarding the effectiveness of the currently implemented Public-Private Partnership (PPP) framework in Libya for financing infrastructure projects, reveals that: The average scores of the responses varied between 3.79 and 4 on a five-point Likert scale.

Particular	Gender	Q1	Q2	Q3	Q4	Q5	Q6
Mean	1.86	3.90	3.97	3.86	3.79	4.00	3.83
Median	2	4	4	4	4	4	4
Mode	2	4	4	4	3	4	5
Standard Deviation	0.35	0.98	0.94	0.95	1.01	0.85	1.14
Range	1	3	3	3	3	3	3
Minimum	1	2	2	2	2	2	2
Maximum	2	5	5	5	5	5	5
Count	29	29	29	29	29	29	29

Table: 7.1: Effectiveness of the Current PPP Framework

The responses indicate notable dissatisfaction with the current PPP framework in Libya. This is particularly evident in question six, which addresses the framework's contribution to financing infrastructure projects, where the mean score is exactly 4.00, the highest among the first six questions. This suggests a strong consensus on the need for improvement in financial aspects.

For the rest of the questions, the mean scores hover around 3.8 to 3.9, indicating a general disagreement but with some variations in intensity. This could imply specific areas within the legal, institutional, coordination, and regulatory frameworks, as well as private sector engagement, where stakeholders see room for significant enhancement.

The median and mode values, mostly aligning with the mean, reinforce these insights. However, the standard deviation, especially in question five (1.01), indicates diverse opinions on the current framework's ability to encourage private sector participation.

7.10.2.2 Proposed PPP Framework

Table 72, which represents responses concerning the effectiveness of the proposed Public Private Partnership framework in Libya for financing infrastructure projects, reveals that: The average scores of the responses ranged from 1.79 to 3.83 on a five-point Likert scale.

Particular	Gender	Q7	Q8	Q9	Q10	Q11	Q12
Mean	1.86	3.07	2.48	2.38	2.07	2.14	1.79
Median	2	3	2	2	2	2	2
Mode	2	2	2	2	1	2	1
Standard Deviation	0.35	1.39	1.12	0.94	1.03	0.88	0.90
Range	1	4	4	3	3	3	3
Minimum	1	1	1	1	1	1	1
Maximum	2	5	5	4	4	4	4
Count	29	29	29	29	29	29	29

Table 7.2 Effectiveness of the Proposed PPP Framework

The proposed PPP framework receives more favorable responses. Lower mean scores (ranging from 1.79 to 3.83) suggest a more favorable outlook and strong approval of the proposed improvements in these areas. Particularly, question twelve, concerning the framework's provision of necessary financing, and question eleven, on private sector participation attraction, received the most positive responses, with mean scores of 1.79 and 2.07, respectively. This indicates strong support for these aspects of the proposed framework which could imply that the proposed changes are seen as addressing the critical gaps identified in the current framework.

However, for question seven, which focuses on legal, institutional, and coordination aspects, the responses, while leaning towards agreement, also show some variation (as indicated by the high standard deviation). This variation suggests that while there is general optimism about the proposed changes, there are still concerns or uncertainties among some stakeholders. These might relate to the practicality of implementation, the depth of proposed reforms, or the adaptability of these changes in the Libyan context.

In conclusion, the responses to the study reveal a clear dichotomy between the perceived inadequacies of the current PPP framework in Libya and the optimism surrounding the proposed framework. While the proposed framework is seen as addressing many of the critical issues identified in the current system, particularly in financing and private sector engagement. The insights gained from these responses provide valuable guidance for policymakers and practitioners in shaping a more effective and responsive PPP framework for Libya's infrastructure development

CHAPTER VIII

CONCLUSION

Over the last two decades, governments have encountered challenges in the pursuit of economic growth and enhance competitiveness through upgrading their basic infrastructure. In the pursuit of this objective, there has been an increasing tendency to engage the private sector in the provision of financial resources, design, construction, and the management of infrastructure projects. The utilization of Public-private partnerships (PPPs), which were previously scarce and narrowly applied, have recently emerged as a prominent and effective approach for the provision of public services, advancing economic competitiveness and enhancing infrastructure offering. These Collaborative ventures are increasingly perceived as a feasible approach to bridge the infrastructure gap in infrastructure among many countries (UNECE, 2008, p. 4)

The historical origins of collaborative efforts between private and public entities may be observed in ancient civilizations. During the era of ancient Rome, certain public facilities, such as baths and highways, were provided by individuals and organizations in exchange for certain rights or privileges. (Wettenhall, 2003, p. 71). The late 20th century saw a revival of PPP, particularly in the 1970s and 1990s. Around this time, there was a noticeable global trend of government toward embracing different forms PPP models. The attempt to switch from the conventional approach to public procurement was linked to the arrival of neoliberalism. Advocacy for PPPs was pushed as a way to deal with concerns about the growing public debt issues that gained prominence in the 1970s and 1980s.

The lack of regulatory framework that regulate the relationship between public and private entities in Libya could hinders the establishment of clear duties and responsibilities within partnership contracts and all associated aspects. Yet, in spite of the global advancement of Public-Private Partnerships, there is still a particular specific gap in understanding how to enhance and strengthen Libya's PPP regulatory structure.

In confronting this matter, it's imperative to lay down fundamental element and subsequently combine them to create a systematic approach for grasping and resolving the issue at hand. Therefore, a conceptual framework has been constructed to captures the essence of Public-Private Partnerships, encapsulate its fundamental, a range of PPP models are examined. The research is further enhanced by an examination of the prerequisites for the success of Public-Private Partnerships (PPPs), with a focus on revealing the unique characteristics that distinguish PPPs apart from alternative project delivery approaches. Taking into account global best practices and their potential application in the Libyan context. It emphasized the importance of a supportive stable political environment, a robust institutional and legal structure, and points out the unique features of PPPs, such shared accountability, risk sharing, and greater innovation. The benefits and drawbacks were carefully considered, with recognizing that although PPPs may spur innovation and boost efficiency, they also present the risks of restricted public control and possible market imbalances.

The research subsequently went to investigate the factors that motivate engagement in Public-Private Partnership. Chapter three delineated the primary drivers behind the adoption of Public-Private Partnerships (PPPs), with particular emphasis on the attraction of private finance, cutting-edge technology, and the promise for increased efficiency and improve transparency. This chapter of the thesis highlights the pragmatic rationales behind the pursuit of Public-Private Partnerships (PPPs) and their perceived advantages in this field of infrastructure development.

After that, the research shifted towards providing a comprehensive analysis of the Public-Private Partnership (PPP) process, encompassing a thorough examination of each stage, ranging from project planning to the subsequent operation and maintenance. This chapter aims to provide a comprehensive analysis of the functioning of public-private partnerships (PPPs) and their assessment across several aspects. the research took into account to delve into risk management, procurement techniques, financing, and the nature of public-private collaboration in order to enhance understanding of PPPs. This chapter is a comprehensive roadmap for stakeholders that are contemplating the implementation of Public-Private Partnerships (PPPs).

Chapter Five undertakes an in-depth look of Libya's infrastructure within both global and regional contexts framework. The chapter commenced by providing an overview of the global infrastructure issues from a macroscopic perspective. considering budgetary limitations, the obsolescence of existing infrastructure, the escalation calls for sustainable solutions, and the dynamic influence of digitalization. The research also casts a spotlight on the infrastructural shortcomings in Arab nations, highlighting its root causes and the consequences on economic productivity, social welfare and environmental sustainability. Attention was also given to the infrastructure progression in Libya, mapping out the role of the private sector and identifying the pronounced deficiencies in the nation's infrastructure framework. in addition, the research SWOT analysis was conducted to assess Libya's infrastructure landscape, balancing the country's resource wealth and strategic advantages against challenges like political turbulence and limited private sector engagement. in addition, the analysis identified potential opportunities and acknowledged threats such as ongoing political unrest and economic dependency.

Taking into consideration these diverse elements, the chapter started by presenting an all-encompassing viewpoint on the broad infrastructure obstacles, afterwards narrowing its focus to the specific context of Libya. The revelations presented in this chapter are of utmost importance as they not only unveil the intricacies of Libya's infrastructure but also highlight the urgent need for a methodical plan for revamping Libya's infrastructure. These insights underpin the rationale behind the adoption the PPP framework proposed in Chapter Six

Chapter six introduces a proposal framework for developing Public Private Partnership in Libya. The foundational knowledge established in the preceding chapters is vital for grasping the nuances of PPPs. Moreover, without highlighting case studies, the research could overlook the varied regulatory and legal framework that have been implemented by both developed and developing nations. Consequently, selection of case studies was picked according to geographic diversity and successful experiences.

Then, the chapter propose Public Private Partnership Model for Libya. The research call for establishing a novel public entity referred to as the Libyan Authority for Public-Private Partnerships, to be a central authority that supervises all partnership projects proposed by the government. The model is positioned as a solution to bridge Libya's infrastructure gap. Distinctive socio-economic and political context of the nation has been taken into consideration when PPP model for Libya is designed. Recognizes the fundamental importance of an enabling legal and institutional framework was also presented. The cornerstone of the model is based on a detailed legislative framework designed to promote clarity, transparency, and investor confidence, which are crucial factors in the context of post-conflict Libya. Crafting of functional structure was also discussed, aimed at establishing robust operational guidelines and providing clear organizational functions in order to ensure efficiency and effectiveness throughout the PPP lifecycle.

The chapter then discussed the Scenarios for implementation of PPP which offer a realistic and practical roadmap, delineating the systematic deployment of PPPs throughout several sectors in Libya. Furthermore, the chapter presented Policy recommendations which are designed to guide the Libyan government and potential private sector partners, enhancing a regulatory framework that encapsulates the essential components for a successful PPP environment.

In expanding upon these steps and frameworks, the thesis offers a comprehensive model that not only aligns with the existing Libyan context but also possesses the resilience to evolve with the country's dynamic changes. This model stands as a vanguard proposal that, if implemented with fidelity, could potentially has the potential to significantly drive infrastructure development in Libya.

8.1 Main Finding of the Study

1. Many developing countries have made tremendous progress in strengthening the foundations for public-private partnership, with persistent endeavors to enhance legal, institutional, and regulatory frameworks. These initiatives also include developing human capacity, setting up appropriate structures and instruments for financial and technical assistance, monitoring and managing risks, and their financial implications. Although there has been noticeable advancement in the experiences of developing countries (Arab countries in particular) to construct and enhance appropriate frameworks for implementing partnership between public and private sector, challenges still exist in various aspects and differing extents, this includes areas such as legislative and

regulatory frameworks, supporting financing capabilities, or developing technical and management capabilities. Libya remains among those nations where there is a deficiency in legislation and regulatory frameworks that bolster the public-private partnership model.

2. Libya requires an enhancement of governance regarding collaborations with the private sector, along with the development of human and institutional capabilities to establish an inviting climate for private investment. Consequently, it has been suggested to form the Libyan Authority for Public-Private Partnership (LAPPP). This body would be tasked with the improvement of international practices in the realms of project organization, funding, procurement, execution, contract administration, and liaising with the private sector, all aimed at bolstering the confidence of investors.

3. The presence of PPP Authorities or PPP Laws is not enough to replace the necessity for political commitment and comprehensive reforms that address the fundamental problems with infrastructure governance.

4. In order to effectively formulate a policy that showcases the government's readiness to engage in collaborative efforts with the private sector for the provision of public services, it is imperative to evaluate potential opportunities for Public-Private Partnerships (PPPs). In order to maximize the effectiveness of the policy, it is imperative that it is seamlessly incorporated into broader sector investment strategies.

5. To ensure efficiency and build momentum, it is imperative to complement the establishment of a legislative framework for public-private partnership with the formulation of sector plans and reforms. This holistic approach is essential for procurement entities, as it fosters momentum and generates interest in the PPP process.

6. The adoption of partnerships as a model for the management and the execution of infrastructure projects necessitates a robust and facilitative legal framework to bolster investment. This requires the enactment of legislation to govern the interactions between public and private entities, aimed at dismantling all bureaucratic hurdles and constraints encountered by the private sector. It is crucial to ensure that such a framework promotes fair competition among committed investors who are interested in undertaking these projects.

7. In order to ensure the effectiveness and sustainability of a legal framework, it should be supported by proper institutional structure. The presence of a well-equipped and adequately staffed PPP Unit, along with clearly defined role for both the Ministry of Finance and entities responsible for procurement, enhances the likelihood of establishing a solid project pipeline and expediting its implementation.

8. For a genuine partnership to exist, it is imperative that the viewpoints of the partners are robust and earnest, wherein one party acknowledges the objectives of the other party and respects their right to pursue and attain these objectives. While the private sector prioritizes profit maximization, the public sector is primarily concerned with attaining social benefits for all stakeholders and promoting sustainable development.

9. The research uncovered that, Libya has been grappling with a persistent budget deficit in recent years, resulting in the government debt beyond 100 billion dinars. This situation has been exacerbated by escalating current expenditures, which have absorbed more than 80% of the budget, drastically reducing the portion allocated to capital expenditures. The small size of the allocation for capital expenditures compared to the needs for these expenditures has resulted in a widening deficit that continues to grow each day. The poor state of infrastructure in the country, including its roads, bridges, airports, and power stations—many of which are in a need for rehabilitation and that necessitating substantial investments from the state for either new projects or the restoration of existing infrastructure. In light of these factors, among others, it is clear that the public sector cannot solely fulfill the high demand for escalating costs of necessary infrastructure investments. This predicament has led to an urgent call for the consolidation of financial and technical resources from both sectors to address the gap in infrastructure spending.

10. Involving the private sector with the public sector frequently results in enhanced service delivery and lower costs through increased efficiency, new technology, and management techniques

8.2 Further Steps

a) The government should be tasked to delineate the specific partnership projects that are to be executed within the scope of an integrated development strategy. This should encompass the entire range of political, economic, social, cultural, and environmental. Concurrently, it should develop a framework that prioritizes developmental milestones corresponding to their respective phases of progress. This necessitates the creation and utilization of a comprehensive and accessible database, which serves as a foundation for the government to advance its developmental agenda.

b) In order to optimize the efficacy of partnerships, it is necessary to thoroughly complete and enhance the legal, legislative, and institutional frameworks that oversee them, which includes the establishment of unambiguous mechanisms for the resolution of disputes. A cohesive policy and comprehensive legislation that encompasses all aspects of public-private partnerships is imperative. along with a robust institutional and organizational structures which is essential to foster a stable and favorable climate for facilitating such collaborative efforts. Additionally, it is imperative to establish precise procedures and clearly outline the duties and obligations of all parties involved in the application of laws and regulations concerning these collaborations. This is essential in order to foster transparency, stimulate competition, and guarantee equitable practices.

c) Emphasizing the critical role of the state of the in overseeing and providing a monitoring system that ensures adherence to contracts between public and private sectors while also ensuring that, the appropriate price and service is delivered to citizens. It is equally important that the state's supervisory function should be exercised in a manner that avoids excessive control or domination, as such behavior could stifle productivity.

d) It is essential to instill a thorough understanding of public-private sector partnerships across ministries and relevant authorities, to integrate the principles of partnership approaches within public institutions that are used to conventional procurement methods.

e) Providing adequate guarantees to stimulate both local and foreign investment partner in collaborative projects, ensuring a balanced risks allocation between public and private entities.

f) Enhancing the capabilities of entities involved with public-private partnership initiatives, such as Libyan Authority for Public Private Partnership (LAPPP) and relevant entities and ministries, is essential. This involves developing human skills and establishing the requisite legal, technical, and administrative know-how to effectively to implement partnership ventures between public institutions and private enterprises, thereby guaranteeing effectiveness and fulfilling the objectives outlined in partnership agreements.
g) Improving the overall business ecosystem and macroeconomic environment is crucial in order to foster an attractive investment landscape. Such enhancements encompass instituting compelling incentives and the formulation of a legislative and regulatory framework that stimulates the private sector, thus widening its involvement in high-priority areas.
h) The presence of robust government backing at the highest level is widely recognized as a crucial element in instilling confidence and providing reassurance to the private sector. Companies seeking to get into a new PPP market seek robust political endorsement from top government echelons, such as the President or Prime Minister.
i) Enhancing advisory and preliminary research is key to properly structuring partnership projects, these research encompassing studies that consider economic and financial factors, as well as public interest, to guarantee the sustainability and effectiveness of partnership projects in achieving the desired objectives.

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