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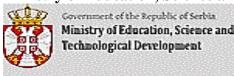
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PUBLIC-PRIVATE PARTNERSHIP (PPP) PROJECTS IN LIBYA - AN OVERVIEW

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Abstract. After years of instability in Libya, the Libyan public sector has a real need for the administrative skills and modern methods that the private sector can provide, in addition to the financial resources owned by some banks, which makes investing in Libya an attractive target for any potential investor. The recent drastic changes in the Libyan government's policy toward openness to foreign investment and a greater role for the private sector suggest that PPP-type schemes can be a powerful alternative to the traditional way in which the country purchases its projects. This led to the government's adoption of a PPP system, and the establishment of an entity to manage this approach called Libyan Public Private Partnership Company (LPPPC). On the other hand, the process of publicprivate partnership in infrastructure projects faces a wide range of risks, challenges, and obstacles that affect the success of the public-private partnership, which must be studied to avoid or mitigate them. It is important to have an appropriate methodological framework for evaluating proposed infrastructure projects before they are offered to PPP and to be able to identify the main factors affecting the project in order to assess the implementation capability and risks associated with the project. The proposed and used framework is the SWOT analysis to identify and analyze the strengths, weaknesses, opportunities, and threats (SWOT) surrounding the project.

Key words: PPP, Public Sector, Private Sector, Projects Evaluation, LPPPC, LIBYA.

1. INTRODUCTION

The early withdrawal of states and international bodies that intervened and contributed to the fall of the Gaddafi regime led to a political and military division that turned Libya into a proxy battlefield and a conflict driven by a complex network of internal and external interests.

It was clear that many of Libya's competing armed and political groups had no real incentive to engage in genuine political reconciliation efforts because they were out of government control or under external support and control.

Also, internally, the division of the Libyan sovereign institutions such as the Central Bank, the National Oil Corporation, and the Libyan Investment Authority contributed to depriving the country of basic economic and financial resources. The continuation of this situation will lead the country to the risk of economic and financial collapse and the deterioration of the humanitarian and living conditions in the country.

Overcoming the internal obstacles to building state institutions and stabilizing them in Libya requires a comprehensive solution that integrates all potent at the local and national levels on the basis of the network of relations between the state and local and international communities.

What Libya desperately needs is a strong, united government with local and external support that can provide stability in a post-conflict environment, take the lead in disarming and reintegrating militias, mediate between competing interests and centers of

power, and ensure a sustainable political transition. The stable environment in the country contributes to the trend toward rebuilding the state and its stalled projects through innovative modern methods, as well as that will contributes to sparing the state more spending from the public budget, which has been exhausted by the aforementioned events and divisions. The government's adoption of the strategy and principle of Public Private Partnership (PPP) may have a significant impact on accelerating the development process and creating new job opportunities, in addition to sparing the state and its institution many potential risks. [1] The public-private partnership (PPP) has not been applied in the Libyan industrial and construction sector during the past years despite the issuance of the General People's Committee decree no. (164/2004) regarding the founding of a company specialized in this sector which is named "Libyan Financial Investments Company", accordance with Article 12 of the Investment Law No. (9/2008), the name and purposes of the company were amended to the "Libyan Public-Private Partnership Company (LPPPC)" by the Presidency Council of the Government of National Accord, Decree No. (1/2020). The recent strategy changes in the Libyan government's policy towards opening up to the private sector and foreign investment on the basis of public-private partnerships could be a powerful alternative to the traditional way in which the government completes its projects. [2]

The main point here is to make sure the extent to which the private sector and Libyan contractors are prepared to go through the public-private partnership experience and form a real and reliable partnership after the adoption of this strategy by the Libyan government, and what are the expected practical steps to success of this new innovative strategy in Libya. As the public sector is in dire need of the modern practices that the private sector possesses, and as well as that the geographical location, opportunities, and economic resources available in Libya make it an attractive target for any investor, despite the investors and private sector's fear of the downsides of the current political instability in Libya. [3]

2. PPP CONCEPT

In spite of the fact that the PPP is completely known in many countries, especially in Western countries as well as to many of the readers who are interested in this field, it is still relatively new in Libya. Actually, it appears clear that there is no single definition of PPP because the concept seems to be built on a set of principles instead of rules. These principles are primarily concerned with how to use the resources and managerial skills that the private sector possesses in the optimum ways, and then how to transfer real risks away from the public sector to the private sector, or how to share the risks that each party can manage. The PPP principles can be applied in many different ways in order to achieve project objectives. [4]

This flexibility is one of the most important points that increases the strength of PPP and makes it suitable for use in different conditions and environments. Also, the idea is based on the concept of giving the responsibilities of financing, construction, operation, and maintenance of the facility to the private sector for an agreed period, and at the end of this period, the ownership of the facility to be transferred to the government or investor, depending on the contract or agreement terms.

Asian Development Bank (ADB), defines the term public-private partnership that, "describes a range of possible relationships among public and private entities in the context of infrastructure and other services". [5]

Nowadays, an increasing number of countries are interested in implementing their projects in a public-private partnership style, and with many forms of contracts such as "build, operate and transfer", "build, operate and own", "build, own and operate" and "build, lease and transfer", or "Build-Transfer-Operate with some differences in the procurement methods for these projects, but the link and the common goal of all of them is the participation of the private sector in financing and managing these projects.

3. CHANCES OF PPP SUCCESS IN LIBYA

During the past decades, the country witnessed a remarkable increment in the demand for public services as a result of the population growth rate increment, and the failure of the government's policy to meet the needs of the population growth due to its policy of monopolizing, and its bad progress in the completion of the projects. In addition to that, the delay in adopting new plans despite the expansion of the geographical area of the country and the distance. The distances between its cities exacerbated the efforts of the government to fulfill its obligations toward its people.

However, the awakening of the government in the last years and the initiation of new projects to develop and implement new infrastructure and services were halted by the war or the revolution that erupted in the country in early 2011. Hence, it was necessary to search for political stability and new strategies that would help in completing the stalled projects, establish new infrastructure and service projects, and funding them from outsources of the state's general budget, in order to eliminate the administrative corruption in the state's entities and ensure the implementation of those projects in accordance with the best modern scientific practices.

In view of the above, there was an urgent need to activate and revise some of the previous government decisions to suit the coming stage and meet the aspirations and requirements of the population, and among these decisions is to activate the partnership between the public and private sectors by finding an effective body to lead the coming stage in accordance with the best international practices to present it to the Libyan public sector and the Libyan construction market as well as giving a greater role to the private sector and foreign investment. [3]

The first step was in 2004 to establish a new company under the name of Libya Investment Company to promote investments and secure financing for projects as well as manage investment portfolios, but this company was not activated as planned due to the traditional mismanagement at that time.

In the year 2020, with an innovative outlook, a new company with an independent legal capacity and financial liability was established to replace the old company under the name of Libyan Public Private Partnership Company (LPPPC). The concept of integrating the roles of promoting public-private partnership projects with the provision of various financial instruments is a major success factor in achieving the state's goals. Accordingly, LPPPC has to play an innovative and catalytic role in realizing the PPP strategy and developing financing and products financial for privately sponsored infrastructure projects in order to execute the projects in a proper and innovative way. The PPP method is highly suited to the requirements of the Libyan infrastructure and construction industry and is close to what the Libyan government describes as an acceptable strategy in that it is not an authoritarian capitalist system. But it is an organized structure that focuses on mutual benefits and serious cooperation between the public and private sectors. Also, the PPP approach provides a free feasibility study for the public sector regarding projects that are planned or intended to be established from the private sector, in order to secure their revenue, and they will not be involved in any project without a detailed study of the

usefulness of the project. Thus, the public-private partnership can be a new strategy and a powerful alternative that will provide a real opportunity for the Libyan government to realize its ambitious plans and projects.

With regard to the private sector, previous research regarding the viability of applying the (PPP) strategy to the Libyan construction industry, concluded that the private sector is enthusiastic about the idea of participation and optimistic that the state's ability to provide appropriate incentives for investment in development projects to meet the needs of its citizens. [3]

3.1 ABUT LPPPC

Through actively investing in and enhancing publicprivate partnership opportunities, LPPPC is working to achieve long-term financial returns and tangible social and economic benefits through infrastructure development in Libya. Recently, the Libyan Public Private Partnership (LPPPC) is one of the largest development and investment funds in Libya. As it was entrusted with the responsibility of advancing social and economic development by diverting faltering government projects, which are difficult to continue to finance through the state's general budget. LPPPC acts as a catalyst in seeking to diversify and transform the Libyan economy and develop its private sector to generate sustainable financial returns and positive social and economic impacts by establishing the Public Private Partnership Unit as a hub for infrastructure development in Libya and establishing new industries in partnership with the best global institutions in this field. The LPPPC Infrastructure and Projects team is preparing for some of the most important and largest stalled projects in Libya by utilizing the expertise of distinguished local and international entities in this field to establish Libya as a center of excellence for public-private partnership, and the preferred partner for private investors. There are a number of studies on the possibility of implementing a number of investment projects in the process of research to explore opportunities to attract local and international private investment. It is subject to a systematic framework of study and evaluation before being offered to the partnership and subjected to the required feasibility study. This will be followed by the implementation of pioneering public-private partnership projects aimed at stimulating economic development [6]

4. METHODOLOGY FOR EVALUATING PPP PROJECTS LIBYA

Prior to offering any project as a PPP project, it should be subjected to a method of assessment and per-qualification, which is recommended to be done by the participation of experts from the PPP sector. This evaluation will help in making suitable conclusions about the project feasibility in terms of project characteristics and surrounding aspects. Such an evaluation could be carried out by usage many methods such as Delphi, brainstorming, SWOT analysis, etc. [7]

The LPPPC initially adopted a methodological framework for evaluating proposed infrastructure projects prior to being offered for PPP. This framework is able to identify the main factors affecting the project and the private sector in order to assess the implementation capacity and risks connected to the project. This framework proposes the use of the SWOT method for project analysis. As a result of the widespread planned and stopped projects in Libya the requirements of their testing, in a sense of inspection of their strengths and weaknesses, became a need. An objective and systematic project evaluation aimed at defining the strengths and weaknesses of each one, based on a Strengths-Weaknesses-Opportunities-Threats

(SWOT) analysis, would be realized by performing the case study. This type of analysis is proposed as powerful method for highlighting the main factors that effecting on the project. Obtained results can be used as improvement strategies. [6]

In order to obtain good results, the SWOT matrix should be completed in a precise and professional way. SWOT analysis matrix with their factors, which can be applied for project evaluation for PPP in Libya, is shown in Table 1. [8]

Table 1. SWOT Matrix.

SWOT Factors	Positive	Negative
Internal	Strengths	Weaknesses
External	Opportunitie s	Threats

4.1 WHY SWOT ANALYSIS

The SWOT analysis is very important in determining the factors affecting the evaluation of the project's success or not, by identifying the internal factors represented in strengths and weaknesses, as well as the external influences represented in opportunities and threats/challenges. SWOT analysis helps various

kinds of companies/entities in making conclusions and decisions about their plans and businesses by providing them with a wider and clearer picture, enabling them to draw up an applicable strategic and smart plan. Moreover, a SWOT analysis lets the companies/entities check and assure the planned business in a good and efficient manner when comparing, which provides a full comprehension of the environment of the work and aimed market. [8]

5. CHALLENGES FACING PPP IN LIBYA

The PPP in the state of Libya, represented by the LPPPC, looks forward with an optimistic view to achieving a great benefit for all members of society and its vital institutions through the implementation of a package of development projects through the implementation of the partnership system with the private sector. At the same time, it is aware of the extent of the obstacles to implementing these projects and the challenges that it may face, especially at the beginning, including: [6][9]

- Administrative, political and financial corruption in Libya is one of the most important obstacles to building the Libyan economy, and a major reason for the failure of all reform attempts pursued by the state for a long time. According to a report issued by Transparency International (2021), Libya scored 17 points out of 100 on integrity [10], This is reflected in the state's spending on development projects without clear results being reflected or appearing on the ground.
- The split in a number of the main and sovereign institutions of the state is considered one of the biggest challenges in the current situation, as each branch or region deals with the government or with the geographically dominant party of the government.
- Political instability and armed conflict from time to time still pose a major challenge to economic building and reconstruction, especially in remote areas, which may discourage foreign investment and international standing. Since Libya is a country with a large geographical area (total area of 1,759,540 km² compared to its population (6.871 million, 2020), therefore, protection and insurance require significant additional expenses that affect the total cost of investment.
- One of the most important challenges facing the participation of the private sector in Libya is the lack of legislation or laws in force to control the relationship between the parties to the partnership, which defines duties and responsibilities in all details of the contract and everything related to partnerships. The lack of an incomplete draft law

on public-private partnership (PPP) leads to some complications in the processes of organizational partnership in the Libyan state, through which the improvement and development of the economic environment in Libya will begin.

- The weakness of the financial sector Libya state is a consequence of the state's control over most of the financial and banking sector by 85%, as well as the fact that the financial and banking sector in Libya lags behind international banks. A welldeveloped banking sector has become one of the essential components for achieving sustainable growth. The success and development of investment and the private sector depend on the support and facilities of the banking sector. [11]
- Governmental bureaucracy, the procedures for establishing a company in Libya takes a period that may exceed 35 days, which made Libya lately ranked 186 out of a total of 190 countries, according to the World Bank Report 2020. [12]

However, i t is important to study those problems and difficulties in order to take them into account when evaluating any project prepared for the PPP and to develop appropriate solutions to them in a manner that suits each case separately. Also, the degree of risk of each problem and the possibility of avoiding or managing it varies according to the region and place

6. CONCLUSIONS

There is a general and strong trend on the part of the Libyan government toward taking advantage of the financing, technological and administrative capabilities of the local and foreign private sector to implement many projects under the control and supervision of the state and its financial contribution. This research indicated that the best practice for investment in Libya recently is the PPP method for the many reasons that have been mentioned above in detail.

It is very important for the companies such as LPPPC to choose best practices and methodologies for project evaluation in order to present it as a public-private partnership project. SWOT analysis shows that it is an acceptable and reliable methodology for

the company to draw a clear and comprehensive picture of all the conditions surrounding the project and its characteristics in order to reach the appropriate conclusion to make the right decision.

REFERENCES

- [1] Dessì, Andrea, and Ettore Greco, eds. The Search for Stability in Libya: OSCE's Role between Internal Obstacles and External Challenges. Vol. 1. Edizioni Nuova Cultura, 2018.
- [2] LPPPC official website, http://www.ppp.ly/.
- [3] Hassouna, Rushdi. "Viability of applying the public private partnership (PPP) strategy to the Libyan construction industry." Proceedings 21st Annual ARCOM Conferenc, 2008.
- [4] Renshaw, Mark, Bill Maxted, and De Montfort Univ., Leicester (United Kingdom). Dept. of Land Management;. The Private Finance Initiative: Literature Review. De Montfort University, Department of Land Management, School of the Built Environment, 1997.
- [5] Felsinger, Klaus. Public-private partnership handbook. Asian Development Bank (ADB), 2008.
- [6] Reference Procedures Guide for Public-Private Partnership Projects in Libya, LPPPC, 2021.
- [7] Parakhina, Valentina. Evaluation Of Public-Private Partnership Models: Methodological Aspects And International Features. 797-805. 10.15405/epsbs.2021.07.95., 2021.
- [8] Leigh, Doug. "SWOT analysis." Handbook of Improving Performance in the Workplace: Volumes 1-3:115-140., 2009.
- [9] Rahman, Aminur Maio. Private Sector Amid Conflict: The Case of Libya. World Bank, 2020.
- [10] Transparency International, https://www.transparency.org/en/countries/libya., 2021.
- [11] Zhang, Jian. "2.3 Financial Sector." Unlocking North Africa's Potential through Regional Integration (2012): 85., 2012.
- [12] Business, Doing. "Comparing Business Regulation in 190 Economies." International Bank for Reconstruction and Development. The World Bank. Washington 135, 2020.