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The Development of a Practical Framework for Selecting the Optimum PPP Contract for Construction Projects in Syria

Master Thesis

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The Development of a Practical Framework for Selecting the Optimum PPP Contract for Construction Projects in Syria

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Abstract

The collaboration between the Public and the Private sectors is an important issue that has attracted the attention of most governments around the world. ***P***ublic ***P***rivate ***P***artnership (***PPP***) is one important approach among many that meets this goal.

Syria, in the present time needs this type of contracts to reduce the huge pressure on the treasury by attracting the required funds for developing, extending and operating many vital and necessary projects. In fact, the best results obtained from PPP contracts depend on determining the ***C***ritical ***S***uccess ***F***actors (***CSFs***), which are influenced by the local strategies and related to the nature of each of these factors and its importance, without neglecting the nature of the project under consideration.

This research aims at developing a new framework that helps the decision makers in both Public and Private Sectors in selecting the optimum (i.e. the most suitable) PPP contract for the construction industry in Syria taking into account the most important CSFs. These factors are identified from previous literature. The following section shows the CSFs ranked according to their importance, for Public and Private Sectors independently and then for both sectors together. Then the influence of each factor on the most used PPP contracts in Syria is analyzed. This study proposes a new practical tool to help in the selection of the optimum PPP contract. The last part of this research work includes testing the model on a study case: The Logistic Platform in the Industrial City in Hassia (Homs – Syria).

Keywords: ***P***ublic ***P***rivate ***P***artnership (***PPP***), ***C***ritical ***S***uccess ***F***actors (***CSFs***), Syria

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CHAPTER 1

Introduction

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1.1 ***Research Background:***

The collaboration between the Public and the Private Sectors is an important issue that concerned most governments around the world. So, partnering is a way to fill in the financial gap between developing the infrastructure projects, and the financial ability of the governments specialized in developing these projects with preserving the public rights.

Partnership between the Public and Private Sectors is the key to achieve economic and social development. Thus, the investment through this method can establish large scale projects that will enhance the development, achieve economic progress and increase local products (through regional cooperation and integration across borders). This will also reduce unemployment by creating new job opportunities. This in turn, will lead to lower rates of poverty in addition to providing products and services of high quality by raising workers efficiency, developing departments of existing projects and contributing to the transfer of expertise and technology from the Private Sector to the Public which will eventually lead to sales and profits increase.

However, the absence of clear contracts lows and systems in Syria, has led to adopt exceptional decrees for special and unusual partnership projects. Such as Tartous and Latakia terminal containers, in addition to the decrees issued by the Supreme Council for Tourism after evaluating the previous phases to facilitate the procedures and give investors additional encouraging features (specially by contracting in BOT form). At the same time, many labors in the service sectors claimed the urgent need to amend some Syrian legislations, in service sectors, to allow the Private Sector to enter and contribute in many vital projects like (The Local Administration Law - The Law of Electricity Investment – The Law of Real Estate Development - Contracts Law and Laws governing some services such as sewage, water, transport, etc.).

1.2 ***Problem Definition:***

There is no clear framework for selecting ***P***ublic ***P***rivate ***P***artnership (***PPP***) contracts in Syria along with the absence of legislation which regulates the partnering process. In addition, there is a lack of experience on this procurement system despite the urgent need to find a suitable framework, for selecting the optimum PPP contract, depending on specified factors known as ***C***ritical ***S***uccess ***F***actors (***CSFs***) for PPP projects.

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1.3 ***Research Aim & Objectives:***

The aim of this research is to develop a new framework for selecting the optimum ***P***ublic ***P***rivate ***P***artnership (***PPP***) contract for the construction sector of Syria; through identifying and uncovering the key ***C***ritical ***S***uccess ***F***actors (***CSFs***) that affect PPP construction projects with clarifying the current practice and implementation of these projects in Syria.

1.4 ***Why Do We Need This Research?***

To develop the necessary principles to improve the quality of contract selection in the future and to help decision - makers in both Public and Private sectors select the optimum contract before implementing the project. Beside, the urgent need for this type of contracts in the present time of Syria to reduce the vast pressure on the government budget, through getting help from the Private sector to finance vital and necessary projects.

1.5 ***Research Methodology:***

As mentioned above, this research aims at developing a new framework that can help decision makers in both Public and Private Sectors select the optimum PPP contract for the construction field in Syria, taking into account the most important ***C***ritical ***S***uccess ***F***actors (***CSFs***). These factors are identified based on previous studies. The identified CSFs are then ranked according to their importance, for Public and Private Sectors independently, and collectively, with comparing the most important CSFs for the PPP projects in Syria with other four countries. Furthermore, after interviews with experts in both sectors, extra critical success factors were added which helped to distinguish the Syrian partnering environment. The influence of each factor will be analyzed at a later stage of this research for the most common PPP contracts in Syria leading to the development of a new practical model, which can help to recommend the optimum PPP contract. Thus, the present developed model consists of constant values deduced from the statistics and some input variables. The last part of this research includes testing the model on a study case: The Logistic Platform in the Industrial City in Hassia (Homs – Syria).

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CHAPTER 2

Introduction to Public – Private Partnership (PPP)

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2.1 ***Introduction:***

In the traditional method of contracting in Syria, the government provides the capital and operating costs required to build infrastructure projects and bear the risks related to the finance and construction (such as higher costs or delays). The most commonly used traditional methods of tendering in Syria are Price Offers and Competitive Bidding. And the latter is the dominant tendering method.

But with recognizing the importance of sustainable development and improving the competitiveness of the economy, it became necessary to attract huge investments in various sectors to help Syria play a logistical role in the region and to reduce the pressure on the treasury by seeking help from the private sector in terms of financing, developing, extending and operating vital facilities, services and infrastructure projects.

The Syrian government has already begun to provide some of the basic requirements to achieve successful partnerships between the Public and the Private Sector. These requirements include the political will to carry out and implement projects through granting exceptions and providing creative legislations for special projects in the absence of a clear PPP law, which ensures the rights and obligations of each party.

An example of these special and important projects is the Port of Latakia, which is a management plus revenue shared agreement (concession period 10+5 years). While, for Tartous Port it is an operating concession with equipment (concession period 10+5 years). In addition to some of the tourism projects in different Syrian provinces with BOT formula, generating renewable energies with BOO formula, road projects and telecommunication companies like MTN and Syriatel (BOT).

2.2 ***Definitions for The Frequently Used Terms:***

According to The National Council for *P*ublic-*P*rivate *P*artnerships in the USA, the concept of partnership defines as: [1]

> *"A legal relationship existing between two entities contractually associated as joint principals in a business".*

In this case, the two entities are the Public and the Private Sectors. So, the Public sector can be define as: [2]

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"The part of national economy providing basic goods or services that are either not, or cannot be, provided by the private sector. It consists of national and local governments, their agencies, and their chartered bodies. The public sector is one of the largest sectors of any economy".

And the Private sector as: [2]

"The part of national economy made up of private enterprises. It includes the personal sector (households) and corporate sector (companies), and is responsible for allocating most of the resources within an economy".

And the partnership contract between them is the PPP contract: [1]

"A Public-Private Partnership (PPP) contract is a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility".

2.3 ***Types of Public- Private Partnerships:***

PPP comes in a variety of forms and no two PPP projects are exactly the same. They vary in terms of how risks are allocated, in complexity and the degree of expertise required. Therefore, different types of partnerships translate into different types of contracts. Table 2.1 below shows the most commonly used PPP contracts with their definitions that were extracted from "*P*ublic-*P*rivate *P*artnerships: Terms Related to Building and Facility Partnerships", USA Government Accounting Office, April 1999.

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Table 2.1: The Most Commonly Used PPP Contracts [1]

Operations and Maintenance [O&M]: *A public partner contracts with a private partner to provide and/or maintain a specific service, under this contract option the public partner retains ownership and overall management of the public facility.*
Operations Maintenance & Management [OMM]: *A public partner contracts with a private partner to operate, maintain, and manage a facility or system proving a service. Under this contract option, the public partner retains ownership of the public facility or system, but the private party may invest its own capital in the facility or system. Any private investment is carefully calculated in relation to its contributions to operational efficiencies and savings over the term of the contract.*
Design-Build [DB]: *A DB is when the private partner provides both design and construction of a project to the public agency. The public sector partner owns the assets and has the responsibility for the operation and maintenance.*
Design-Build-Maintain [DBM]: *A DBM is similar to a DB except the maintenance of the facility for some period of time becomes the responsibility of the private sector partner. The public sector partner owns and operates the assets.*
Design-Build-Operate [DBO]: *A single contract is awarded for the design, construction, and operation of a capital improvement. Title to the facility remains with the public sector unless the project is a design/build/operate/transfer or design/build/own/operate project.*
Design-Build-Operate-Maintain [DBOM]: *The DBOM model is an integrated partnership that combines the design and construction responsibilities of design-build procurements with operations and maintenance. The public agency maintains ownership and retains a significant level of oversight of the operations through terms defined in the contract.*
Design-Build-Finance-Operate-Maintain [DBFOM]: *With the DBFOM approach, the responsibilities for designing, building, financing, operating and maintaining are bundled together and transferred to private*

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sector partners.

Design-Build-Finance-Operate-Maintain-Transfer [DBFOMT]:

The DBFOMT partnership model is the same as a DBFOM except that the private sector owns the asset until the end of the contract when the ownership is transferred to the public sector.

Build-Operate-Transfer [BOT]:

The private partner builds a facility to the specifications agreed to by the public agency, operates the facility for a specified time period under a contract or franchise agreement with the agency, and then transfers the facility to the agency at the end of the specified period of time. In most cases, the private partner will also provide some, or all, of the financing for the facility, so the length of the contract or franchise must be sufficient to enable the private partner to realize a reasonable return on its investment through user charges. At the end of the franchise period, the public partner can assume operating responsibility for the facility, contract the operations to the original franchise holder, or award a new contract or franchise to a new private partner.

Build-Transfer-Operate [BTO]:

The BTO model is similar to the BOT model except that the transfer to the public owner takes place at the time that construction is completed, rather than at the end of the franchise period.

Build-Own-Operate [BOO]:

The contractor constructs and operates a facility without transferring ownership to the public sector. Legal title to the facility remains in the private sector, and there is no obligation for the public sector to purchase the facility or take title.

Buy-Build-Operate [BBO]:

A BBO is a form of asset sale that includes a rehabilitation or expansion of an existing facility. The government sells the asset to the private sector entity, which then makes the improvements necessary to operate the facility in a profitable manner.

Developer Finance:

The private party finances the construction or expansion of a public facility in exchange for the right to build residential housing, commercial stores, and/or industrial facilities at the site. The private developer contributes capital and may

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operate the facility under the oversight of the government. The developer gains the right to use the facility and may receive future income from user fees.

Lease-Develop-Operate [LDO] or Build-Develop-Operate [BDO]:

Under these partnerships arrangements, the private party leases or buys an existing facility from a public agency, invests its own capital to renovate, modernize, and/or expand the facility, and then operates it under a contract with the public agency.

Lease/Purchase:

A lease/purchase is an installment-purchase contract. Under this model, the private sector finances and builds a new facility, which it then leases to a public agency. At the end of the lease term, the public agency owns the facility or purchases it at the cost of any remaining unpaid balance in the lease. Under this arrangement, the facility may be operated by either the public agency or the private developer during the term of the lease

Sale/Leaseback:

This is a financial arrangement in which the owner of a facility sells it to another entity, and subsequently leases it back from the new owner. Both public and private entities may enter into sale/leaseback arrangements for a variety of reasons. An innovative application of the sale/leaseback technique is the sale of a public facility to a public or private holding company for the purposes of limiting governmental liability under certain statues. Under this arrangement, the government that sold the facility leases it back and continues to operate it.

Turnkey:

A public agency contracts with a private investor/vendor to design and build a complete facility in accordance with specified performance standards and criteria agreed to between the agency and the vendor. The private developer commits to build the facility for a fixed price and absorbs the construction risk of meeting that price commitment. Generally, in a turnkey transaction, the private partners use fast-track construction techniques (such as design-build) and are not bound by traditional public sector procurement regulations.

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And the figure 2.1 below shows a range that reflects the involvement degree for both sectors (Public and Private) for five types of PPP contracts (OM, DBO, DBFO, BOT, BOO). As a result it is clear that the Private sector involvement in Operation- Maintenance (OM) contract is lower than the Public sector. While, in the Build- Own- Operate (BOO) contract, the Private sector contributes to a large extent. [3]

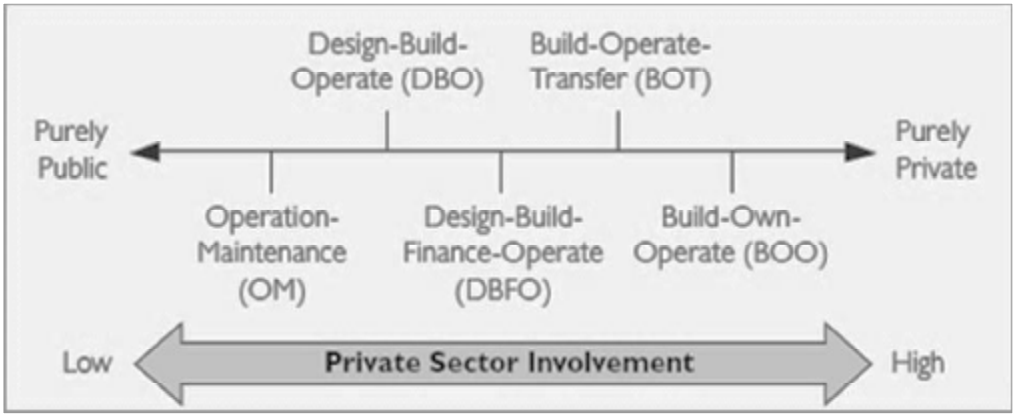

Figure 2.1: Continuum of PPP Contracts [3]

*2.4 **The Advantages of PPP Contracts:***

Anderson Consulting Services (1997) [4], and Young H. K., Chih Y. Y. and William Ibbs C. (2009) [3], illustrated a list of benefits that public sector expects to achieve from a PPP:

- The project life-cycle costs can be reduced by using a PPP.
- Using a PPP can achieve Faster Implementation by reducing project delivery time.
- A PPP can preserve or improve the quality and efficiency of infrastructure services.
- Risks related to construction, finance, and operation of projects can be shared between the two sectors.
- Financing options.
- A PPP allow the public sector to avoid up-front capital debt and reduce public sector administration costs.
- Greater performance measurement.

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- Increased public sector revenues.
- Innovative solutions in infrastructure development.
- True costing and true value.
- A PPP can increase the "value for money" spent for infrastructure services by providing more-efficient, lower-cost, and reliable services.
- A PPP can promote local economic growth and employment opportunities.

2.5 ***The Misconception of PPP Process:***

The absence of widespread experience with PPP process led to common misconceptions which are mentioned by Anderson Consulting Services (1997) [4], and Young H. K., Chih Y. Y. and William Ibbs C. (2009) [3].

- The prime benefit of PPPs is debt avoidance.
- PPPs are relatively new concepts that are not well understood in some countries.
- Both public and private sectors still lack appropriate knowledge and skills to implement such long-term projects.
- Competition in PPP projects is limited due to the high tendering costs.
- PPP projects are highly likely to be delayed by political debates, public opposition, and complex negotiation processes.
- Municipalities can always finance a project, more cost effectively than private partners.
- PPPs are used primarily for infrastructure projects.
- The municipality loses control over services under PPPs.
- Existing employees always lose under PPP.
- The private partner's requirement for profit will increase the cost of service.
- Service quality will decline under a PPP.
- Partnering is municipalities only reaction to dwindling resources.
- PPP is the same as privatization.

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2.6 ***Benefits of Consider PPP Contracts:***

Many countries have considered "value for money" as the main criteria in judging the merits of a PPP option for a project. [5]

Anderson Consulting Services (1997) [4] and The Economic and Social Commission for Asia and The Pacific (ESCAP), (2011) [5], point out that the state of the local economy, combined with new or growing service responsibility, with the need to entree innovative technology, formed the primary factors to seek alternative means of providing services and infrastructures, and increased efficiency in project delivery, operation and management, in addition to limiting the need to immediate cash spending, and relieving from the burden of the costs of design and construction.

But, public private partnership may not be the best option for delivering a public service or project. Thus, local governments should not assume that public private partnerships provide easy outs to difficult servicing issues. [6]

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CHAPTER 3

Identification of PPP Critical Success Factors (CSFs)

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3.1 ***Critical Success Factors (CSFs) Definition:***

Critical ***S***uccess ***F****actors* (***CSFs***) defined by Rockart, in 1982 as: [7]

"Those few key areas of activity in which favorable results are absolutely necessary for a manager or reach his/her goals".

3.2 ***Critical Success Factors (CSFs) for PPP Contracts:***

Critical Success Factors have been identified by many researchers to improve the success rate of PPP projects around the world. In the present study, a summary list of Critical Success Factors was developed based on previous similar studies. Table 3.1 shows these factors along with corresponding references.

The previous researches had shown the importance of each factor of the Critical Success Factors to obtain a successful PPP implementation. As a result it is very important to have a strong private consortium, well organized public agency and good governance to support the institutional structure for PPP project, where both sectors should share authority, responsibility and respect each other when carrying out negotiations and during the procurement process, which has to be competitive and transparent to enhance project value for money, in addition to risk sharing. So, the attitude of stakeholders in a PPP project will have an influence on the quality of outputs.

The government should also adopt special economic policies to maintain a stable and growing economic environment, where the private sector can operate with confidence by providing guarantees to ensure investments are protected. Also, the government needs to provide a legal framework (with minimal restriction on the private sector involvement), suitable and available financial market and political support. In addition to the social support which helps the PPP development and the procurement process to go smoothly, particularly at the earlier stages. [7]

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Table 3.1: List of The Critical Success Factors [7]

Critical Success Factors	Source
Strong private consortium	Jefferies et al. (2002) Tiong (1996) Birnie (1999)
Appropriate risk allocation and risk sharing	Qiao et al. (2001) Grant (1996) Arthur Andersen and Enterprise LSE (2000)
Competitive procurement process	Jefferies et al. (2002) Kopp (1997) Gentry and Fernandez (1997) Arthur Andersen and Enterprise LSE (2000)
Commitment /responsibility of public private sector	Stonehouse et al. (1996) Kanter (1999) NAO (200 lb)
Through and realistic cost /benefit assessment	Qiao et al. (2001) Brodie (1995) Hambros (1999)
Project technical feasibility	Qiao et al. (2001) Tiong (1996) Zantke and Mangels (1999)
Transparency in the procurement process	Jefferies et al. (2002) Kopp (1997) Gentry and Fernandez (1997) Arthur Andersen and Enterprise LSE (2000)
Good governance	Qiao et al. (2001) Frilet (1997) Badshah (1998)
Favorable legal framework	Bennett (1998) Boyfield (1992) Stein (1995)
Available financial market	Jones et al. (1996) Qiao et al. (2001) Jefferies et al. (2002) McCarthy and Tiong (1991) Akintoye et al. (200 lb)
Political support	Qiao et al. (2001) Zhang et al. (1998)
Multi-benefit objectives	Grant (1996) Stonehouse et al. (1996)
Government involvement by providing guarantees	Kanter (1999) Qiao et al. (2001) Zhang et al. (1998)
Sound economic policy	EIB (2000)
Stable macro-economic environment	Qiao et al. (2001) Dailami and Klein (1997)
Well organized public agency	Boyfield (1992) Stein (1995) Jones et al. (1996) Finnerty (1996)
Shared authority between public and private sectors	Stonehouse et al. (1996) Kanter (1999)
Social support	Frilet (1997)
Technology transfer	Qiao et al. (2001)

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3.3 ***The Definition of The Most Commonly Used CSFs:***

Hardcastle C.; Edwards P. J.; Akintoye A. and Li B. (2005) mentioned the definition of each factor from the nineteen ***C***ritical ***S***uccess ***F***actors (***CSFs***), and they are described as follows: [7]

Favorable legal framework:

Allows a PPP project to be developed without undue legal restriction on the private sector involvement.

Political support:

Policy should increase inclinations towards PPPs and barriers faced.

Good governance & Well organized public agency:

The policy makers and government departments are fundamental for successful PPP implementation.

Stable macro-economic environment:

Governments must ensure that economic conditions are favourable.

Appropriate risk allocation and risk sharing & Commitment/ responsibility of public/ private sectors:

The attitude of the actors (stakeholders) in a PPP project has an influence on the quality of outputs.

Sound economic policy by the government:

Governments should adopt economic policies to maintain a stable and growing economic environment, where the private sector can operate with confidence.

Project technical feasibility:

It is important to review the associated technical problems. In particular, the private contractor needs to ensure that any engineering uncertainties are resolved.

Through and realistic cost/ benefit assessment:

Before a project is subjected to the procurement process, the public client should ensure that all the potential options that are beneficial to the government and end users are considered as part of the complete project feasibility study.

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Transparency in the procurement process & Competitive procurement process:

Enhance project value for money with the ability to transfer risk to the best party which is able to manage.

Government involvement by providing guarantees:

The private sector demand revenue guarantees or firmly committed from government to ensure that investments are protected.

Available financial market:

The availability of a suitable and adequate financial market.

Strong private consortium:

This relates to project implementability in the sense that where a project has the right actors.

Shared authority between public and private sectors:

This suggests that the public and private sector should respect each other when carrying out negotiations during the procurement process.

Technology transfer:

Transfer and share knowledge, experience and Technology from others are very important.

Multi-benefit objectives:

A PPP project needs to consider the private contractor's business objectives in addition to the direct objectives in achieving public services.

Social support:

Helps a PPP development and procurement process to go smoothly, particularly at the earlier stages, such as during land acquisition.

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3.4 ***An overview of Previous Literatures on CSFs for PPP Projects:***

The CSF method has been used in financial services as a management measure since the 1970s. Since 1982, it has been used in information system and then in the manufacturing industry in 1990s. There have been attempts to apply this method in construction management. In 1996 CSFs were explored for private contractors in competitive tendering and negotiation in BOT projects [7]. While in 2002 the CSFs were considered in the management of public clients in BOOT procurement [7].

Hardcastle C.; Edwards P. J.; Akintoye A. and Li B. (2005), analyzed the Critical Success Factors for *PPP*/***PFI*** (***P***rivate ***F***inance ***I***nitiative) projects in the UK construction industry and grouped Seventeen factor into five principal factors: (*Effective procurement, Project implementability, Government guarantee, Favourable economic conditions, Available financial market*). The political support factor lies outside this principal factor grouping. Hardcastle et.al also, ignores the technology transfer factor as it is more relevant to projects undertaken in developing countries. [7]

Ismail S. and Ajija SH. R. (2013), used a survey to rank the CSFs for PPP implementation in Malaysia. They found the top factors to be (*good governance, commitment and responsibility of public and private sectors, favourable legal framework, sound economic policy and available financial market*) [8]. They also illustrated that only four factors signified the ranking difference between the public and private sectors (*multi-benefit objectives, competitive procurement process, government involvement by providing guarantee and shared authority between public and private sectors*).

Helmy M. A. and Lindbergh J. (2011), evaluated the development strategies of Kuwait government, which include construction projects. The results were that the government needed to work on improving the environment for successful project implementation and to have full focus on three factors to make sure that the PPP will be successful in Kuwait construction sector. These factors were (*Effective Procurement, Project Implementability and Government Guarantee*). [9]

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CHAPTER 4

Data Collection & Analysis

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4.1 ***Data Collection & Analysis: First Questionnaire:***

4.1.1 ***Introduction:***

In order to achieve the research goal, list of factors were extracted from previous studies related to CSFs for PPP projects, as shown in Table 3.1.

Based on this initial list of possible CSFs, a questionnaire consisting of three main sections was designed (See Appendix 1). The first section was Critical Success Factors, was assigned to identifying the most important critical success factors for PPP construction projects in Syria. The second important part was PPP Contracts, aimed at identifying the most desirable PPP contract in Syrian Public and Private Organizations. The third and final part was Information about the current practice of the PPP projects in Syria, which consist of several questions aimed at studying the current practice of the PPP projects in Syria. It also included a request to add any possible additional factors, based on Syrian PPP experience to the initial nineteen Critical Success Factors. This section was considered as an interview and it was optional to answer the questions. Moreover, to make a clear view for all respondents, an appendix was added to the questionnaire. This appendix contains definitions for all PPP contracts that are mentioned in the survey.

4.1.2 ***Data Collection:***

The calculated sample size was 30. Assuming a response rate of 25%, 120 questionnaires were distributed to a group of Consultants and Managers in many Government Ministries interested in PPP projects such as Ministry of Local Administration, Ministry of Electricity, Ministry of Tourism, Ministry of Transport and The PPP Unit at the Level of the Economic Committee of the cabinet, etc. In addition to the directors and supervisors in the Private Sector, like construction enterprises, telecommunication firms, financial consultation companies and investors in the Industrial Cities in Syria. And, International Organizations involved in developing the Syrian business environment like some of the organizations related to the United Nation.

A total of thirty four respondents completed and returned the questionnaire; with a response rate reaching to approximately 74 % by the employees of the Public Sector, around 41 % by the workers of the Private Sector and the rest were completed by International Organizations. (Table 4.1 shows the distribution of respondents).

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Table 4.1: Distribution of Respondents

Organization Type		Frequency	Percent %
Valid	Public Sector	16	74.1
	Private Sector	14	41.2
	Others	4	11.8
	Total	**34**	**100.0**

Approximately, 18 % of the respondents have no less than twenty one year of experience in the work field (Table 4.2). And, around 9 % of them participated in at least five PPP Projects (Table 4.3).

Table 4.2: Years of Experience

Years of Experience		Frequency	Percent %
Valid	Less than 5 years	9	26.5
	6 – 10 years	9	26.5
	11 – 15 years	5	14.7
	16 – 20 years	5	14.7
	21 years above	6	17.6
Total		**34**	**100.0**

Table 4.3: Number of PPP Projects Undertaken

Number of *PPP* projects		Frequency	Percent %
Valid	None	17	50.0
	1	6	17.6
	2	2	5.9
	3	3	8.8
	4	3	8.8
	5 and above	3	8.8
Total		**34**	**100.0**

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4.1.3 ***Data Analysis of The Critical Success Factors (CSFs):***

The overall collected data from the first part (Critical Success Factors) were analyzed using the Statistical Package for the Social Sciences (SPSS) software. An important index was calculated for each of the identified CSFs. This index is the statistical average of the scores given by the respondents. The identified nineteen factors were ranked in a descending order of their important indices as shown in Table 4.4.

Table 4.4: Descriptive Statistics of Mean Score
Overall Respondents

CSFs	Mean (out of 5)	Rank
Favorable legal framework	4.148	1
Political support	4.147	2
Good governance	4.119	3
Stable macro-economic environment	4.118	4
Appropriate risk allocation and risk sharing	3.941	5
Sound economic policy	3.912	6
Project technical feasibility	3.883	7
Through and realistic cost/benefit assessment	3.882	8
Well organized public agency	3.854	9
Transparency in the procurement process	3.853	10
Government involvement by providing guarantees	3.794	11
Available financial market	3.765	12
Strong private consortium	3.735	13
Commitment/responsibility of public private sector	3.647	14
Shared authority between public and private sectors	3.412	15
Technology transfer	3.382	16
Competitive procurement process	3.353	17
Multi-benefit objectives	3.206	18
Social support	3.147	19

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As a result the top five Critical Success Factors in Syria are:

1. Favorable legal framework.
2. Political support.
3. Good governance.
4. Stable macro-economic environment.
5. Appropriate risk allocation and risk sharing.

This result seems somehow logical due to the lack of clear PPP Syrian law, which regulates the contracting process and sets the foundations of separation between two parties in conflict situations. Therefore, there is an urgently need to work on a draft copy of a partnership law, in conjunction with the preparation of a clear political decision that supports PPP projects through guiding the government to set and develop clear plans, policies and to encourage working on implementing them, in order to insure a favorable environment for existence, growth and development of these kinds of projects and to achieve stabilized macro-economy, which will in turn attract the private sector to invest in Syria with lower risks to handle.

Figure 4.1 below shows the descriptive statistics of mean score for the 19 Critical Success Factors based on the view of the overall respondents.

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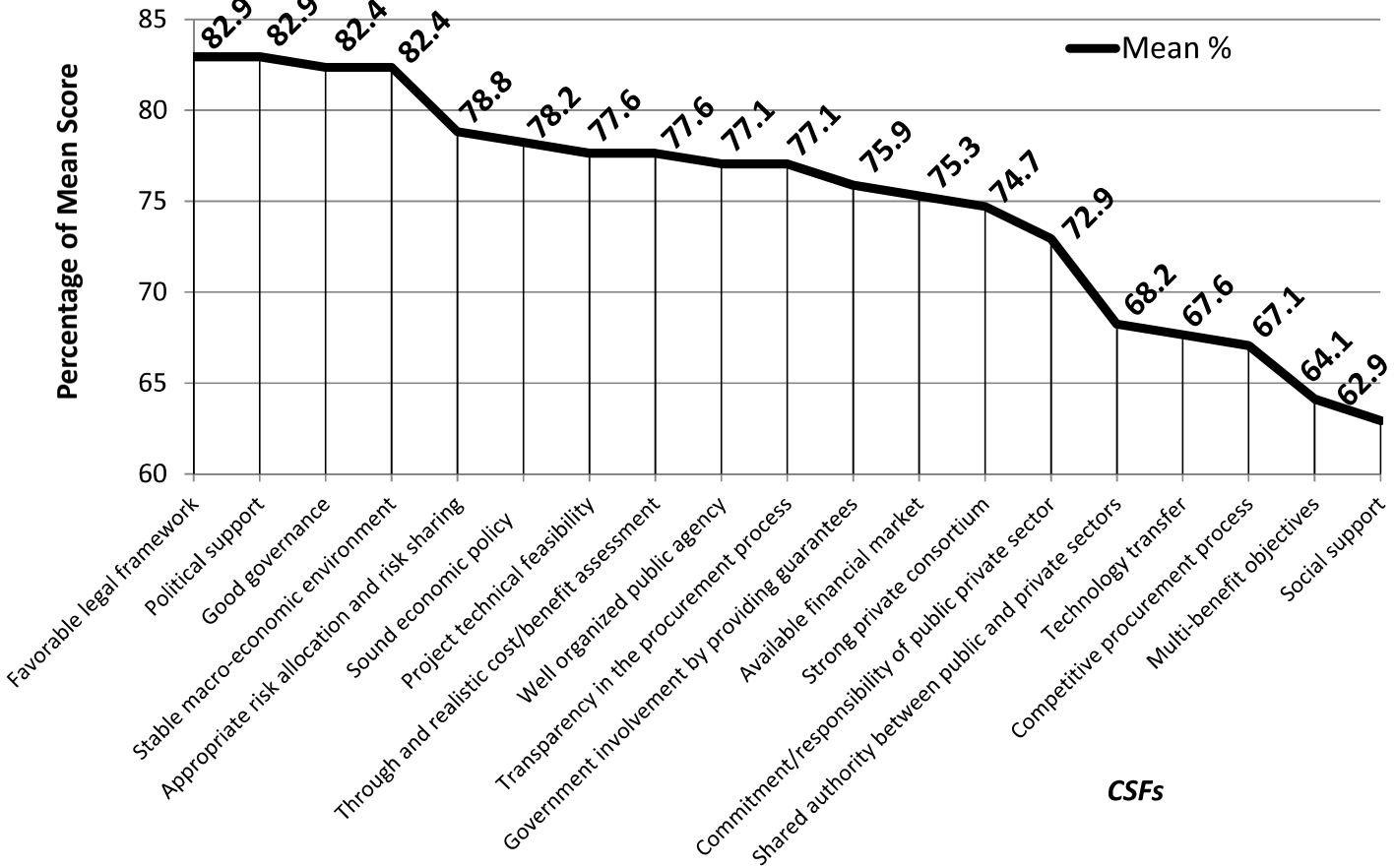
Figure 4.1: Descriptive Statistics of Mean Score
Overall Respondents



For comparison between the perception of both the Public and Private Sectors on the importance of the Critical Success Factors, the studied sample was divided into two groups, the first group includes respondents from the Public Sector (16 respondents) and the second jointly included respondents from the Private Sector and Other Sectors; such as The International Organizations (18 respondents). And, the identified nineteen Critical Success Factors were ranked according to their importance to these two mentioned groups independently. Table 4.5 below shows the ranking of the nineteen Critical Success Factors by the Public Sector respondents.

Table 4.5: Descriptive Statistics of Mean Score
Public Sector Respondents

CSFs	**Mean (out of 5)**	**Rank**
Favorable legal framework	4.188	1
Good governance	4.126	2
Stable macro-economic environment	4.125	3
Transparency in the procurement process	4.063	4
Well organized public agency	3.938	5
Political support	3.876	6
Strong private consortium	3.875	7
Sound economic policy	3.874	8
Available financial market	3.813	9
Project technical feasibility	3.752	10
Appropriate risk allocation and risk sharing	3.751	11
Government involvement by providing guarantees	3.750	12
Commitment/ responsibility of public private sector	3.689	13
Through and realistic cost/ benefit assessment	3.688	14
Competitive procurement process	3.438	15
Shared authority between public and private sectors	3.251	16
Technology transfer	3.250	17
Social support	3.188	18
Multi-benefit objectives	3.125	19

So, the top five Critical Success Factors for the Public sector in Syria are:

1. Favorable legal framework.
2. Good governance.
3. Stable macro-economic environment.
4. Transparency in the procurement process.
5. Well organized public agency.

Figure 4.2 below displays the descriptive statistics of mean score for the 19 Critical Success Factors based on the view of the Public Sector respondents.

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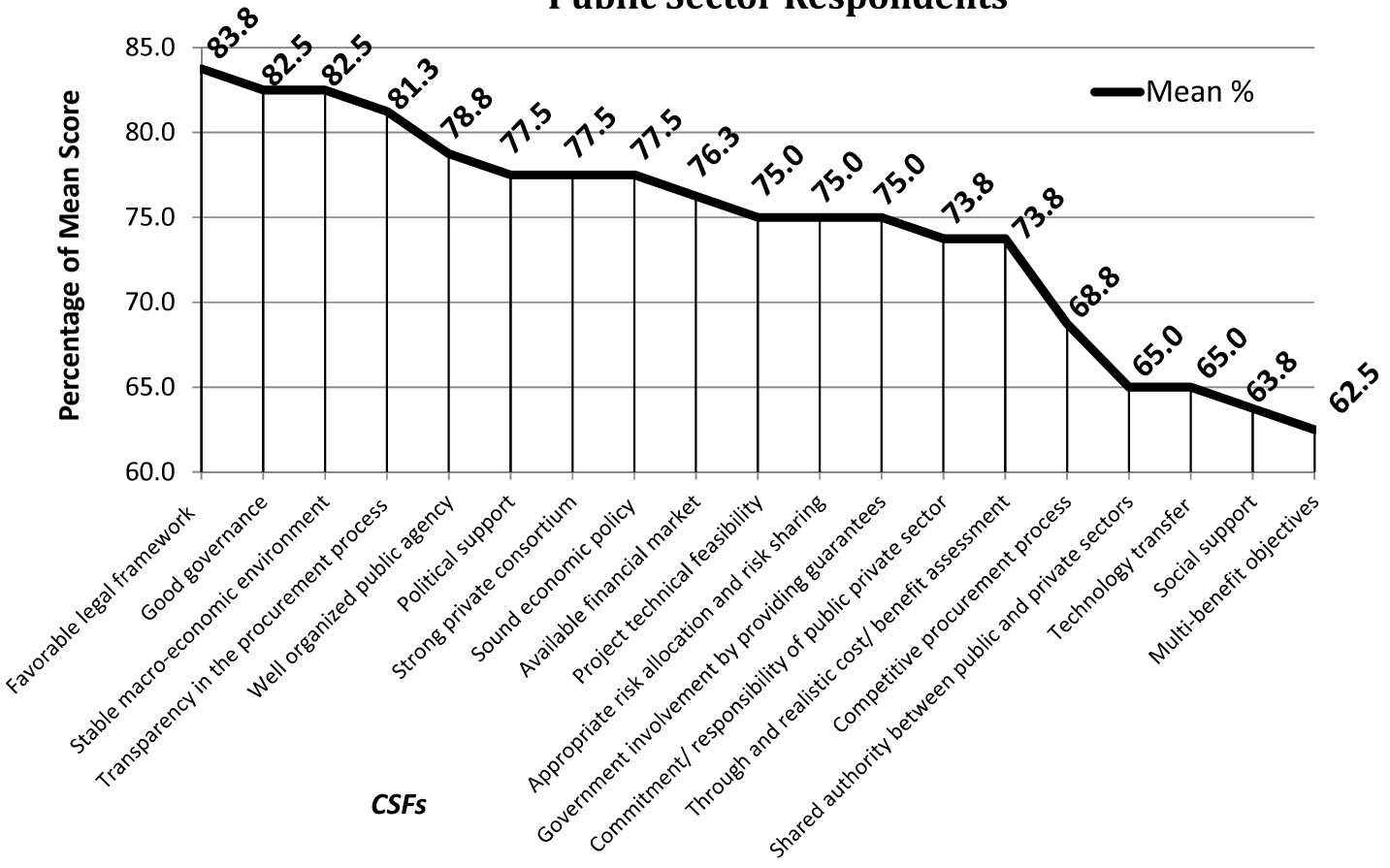
Figure 4.2: Descriptive Statistics of Mean Score
Public Sector Respondents



Also, table 4.6 displays the ranking and the mean score which ranges between 4.389 and 3.111 points for the nineteen Critical Success Factors based on the perception of the Private & Other Sectors respondents.

Table 4.6: Descriptive Statistics of Mean Score
Private & Other Sectors Respondents

CSFs	Mean (out of 5)	Rank
Political support	4.389	1
Appropriate risk allocation and risk sharing	4.116	2
Good governance	4.114	3
Favorable legal framework	4.112	4
Stable macro-economic environment	4.111	5
Through and realistic cost/benefit assessment	4.056	6
Project technical feasibility	4.000	7
Sound economic policy	3.944	8
Government involvement by providing guarantees	3.833	9
Well organized public agency	3.778	10
Available financial market	3.722	11
Transparency in the procurement process	3.667	12
Commitment/responsibility of public private sector	3.612	13
Strong private consortium	3.611	14
Shared authority between public and private sectors	3.556	15
Technology transfer	3.500	16
Competitive procurement process	3.279	17
Multi-benefit objectives	3.278	18
Social support	3.111	19

And the top five Critical Success Factors for the private & other sectors in Syria are:

1. Political support.
2. Appropriate risk allocation and risk sharing.
3. Good governance.
4. Favorable legal framework.
5. Stable macro-economic environment.

Figure 4.3 below shows the descriptive statistics of mean score for the 19 Critical Success Factors by the Private & Other Sectors respondents.

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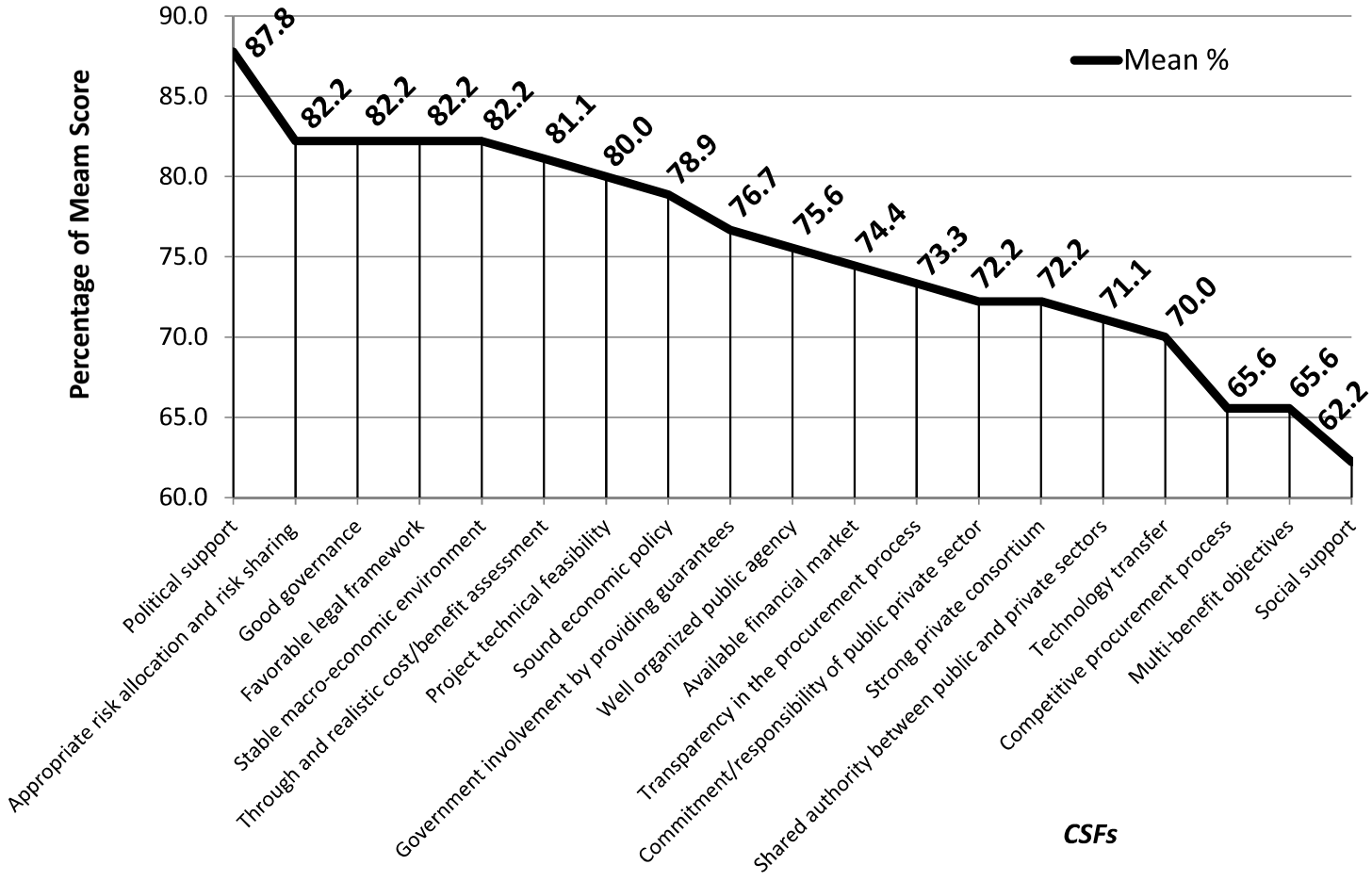
Figure 4.3: Descriptive Statistics of Mean Score
Private & Other Sectors Respondents



At the same time, an *Independent Sample t- Test* was conducted to find any significant difference in perception of the Public and Private Sectors related to the importance of the Critical Success Factors for the PPP projects in Syria. The results in Table 4.7 showed that there is no significant difference between the Public and Private Sectors perception.

Table 4.7: The Independent Sample t- Test

CSFs	**Significance**
Favorable legal framework	0.503
Political support	0.312
Good governance	0.746
Stable macro-economic environment	0.370
Appropriate risk allocation and risk sharing	0.100
Sound economic policy	0.806
Project technical feasibility	0.024
Through and realistic cost/ benefit assessment	0.385
Well organized public agency	0.808
Transparency in the procurement process	0.971
Government involvement by providing guarantees	0.200
Available financial market	0.573
Strong private consortium	0.258
Commitment/responsibility of public private sector	0.526
Shared authority between public and private sectors	0.274
Technology transfer	0.552
Competitive procurement process	0.326
Multi-benefit objectives	0.605
Social support	0.102

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Generally, Table 4.8 shows number of differences in the ranking of the top five CSFs in Syria, for Public and Private Respondents independently. The two groups shared three factors (*Favorable legal framework, Good governance and Stable macro-economic environment*) which ranked as the top three factors for the Public respondents. While they ranked in the third, fourth and fifth order for the Private respondents. On the other hand, the factors "*Transparency in the procurement process*" and "*Well organized public agency*" were ranked in the fourth and fifth order for the Public employees. While the factors "*Political support*" and "*Appropriate risk allocation and risk sharing*" were the top two important factors for the Private workers.

Table 4.8: The Top Five Critical Success Factors in Syria Ranked by The Public and The Private Sectors Independently

The Public Sector	The Private & Other Sector
— Favorable legal framework	Political support
♠ Good governance	Appropriate risk allocation and risk sharing
• Stable macro-economic environment	♠ Good governance
Transparency in the procurement process	— Favorable legal framework
Well organized public agency	• Stable macro-economic environment

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4.1.4 ***Comparison between Syria and other countries Regarding the Top five CSFs for PPP projects:***

Professor Dr. Ismail S. and Ajija SH. R. (2011), Compared between Malaysia and three other countries for the Top five CSFs for PPP Implementation [8], in the present study, Syria was added to this comparison.

Table 4.9 below illustrates the top five CSFs for Syria compared to four other countries (The United Kingdom, Australia, Hong Kong and Malaysia).

Generally, the results show many differences in the ranking of the top five CSFs for PPP projects in the studied countries. In other words, it shows differences between how these five countries see the importance of the CSFs.

Regarding the results in Table 4.9, Syria and the other four studied countries (The United Kingdom, Australia, Hong Kong and Malaysia), share one factor which is "*Appropriate risk allocation and risk sharing*". This factor was ranked second in The UK, Australia and Malaysia. However in Syria and Hong Kong it was ranked as fifth.

The factor "*Favourable legal framework*" was on the top of *CSFs* in Syria and Hong Kong, while it is in the third place in Malaysia. Similarly, the factor "*Stable macro- economic environment*" was ranked as fourth in Syria and Hong Kong. Also the factor "*Good governance*" ranked third for Syria, while it ranked first for Malaysia, and fourth for Australia.

We notice that Syria and Hong Kong share three factors (*Favourable legal framework*, *Stable macro- economic environment* and *Appropriate risk allocation and risk sharing*) with the same ranking (first, fourth and fifth) respectively.

In contrast, the factor "*Political support*" was ranked second in Syria, but it was ranked lower by the respondents in United Kingdom, Australia, Hong Kong and Malaysia.

The factors "*Strong and good private consortium*" and "*Commitment and responsibility of public and private sectors"* were in the top five ranking for The UK, Australia and Hong Kong. However, in Syria these factors were ranked thirteenth and fourteenth, respectively.

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Table 4.9: Top Five CSFs for Syria and Different Countries

No	Top Five CSFs for Syria	Top Five CSFs for Different Countries			
		UK	Australia	Hong Kong	Malaysia
1	— Favourable legal framework	■ Strong and good private consortium	♦ Commitment and responsibility of public and private sectors	— Favourable legal framework	♠ Good governance
2	Political support	❖ Appropriate risk allocation and risk sharing	❖ Appropriate risk allocation and risk sharing	♦ Commitment and responsibility of public and private sectors	❖ Appropriate risk allocation and risk sharing
3	♠ Good governance	○ Available financial market	■ Strong and good private consortium	■ Strong and good private consortium	— Favourable legal framework
4	● Stable macro-economic environment	♦ Commitment and responsibility of public and private sectors	♠ Good governance	● Stable macro-economic condition	Sound economic policy
5	❖ Appropriate risk allocation and risk sharing	Thorough and realistic assessment of the costs and benefits	Project technical feasibility	❖ Appropriate risk allocation and risk sharing	○ Available financial market

4.1.5 ***Analysis of The Extra Critical Success Factors:***

Through the last section of the questionnaire survey, eighteen extra factors were added by respondents. The extra factors were added based on the humble Syrian experience on partnership procurement, government reports about the problems facing the PPP project and other construction projects in Syria [10] and on various lectures attended for this purpose [11] & [12].

Table 4.10 below displays the sources of these additional factors.

Table 4.10: The Variant Sources of the Extra Factors

The Extra Factors	Source
Value for money	[12]
Tax Breaks	[12]
The ability to solve Problems	[11]
Experience	[11]
The creditworthiness of the General Contracting	[12]
Trust and Respect	[11]
Partner selection	[11]
Commitment to implement judicial rulings	[10]
Negotiation	[11]
Time commitment	[10]
The ability to bear the cost of the project	[12]
Commitment at all levels	[10]
Team building and training	[11]
Track record of the concerned country	[12]
Provide low-interest loans from local banks	[10]
Availability of work requirements	[10]
Cost of fuel, electricity, water, etc.....	[10]
Readiness level of the concerned sector / Nature of the service	[12]

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As it is obvious from the reports of the Committee of investment projects with vital aspects in the Syrian government [10] the modest partnership experience in Syria has suffered many difficulties. Therefore, the suggested solutions for these problems formed a group of factors that might contribute to the success of such types of projects.

- Commitment at all levels, especially time commitment and the commitment of both parties to implement the judicial rulings.
- The country achievement records for implementing similar projects.
- Readiness of the concerned sectors in these types of projects, which form a strong attraction to the private sector.
- The support that can be provided by the local banks through affording low-interest loans.
- Proven creditworthiness of govern to pay all dues.
- The need to control the prices of the materials used in the implementation and operation process, e.g. (Fuel, electricity, water, etc...).
- Features that can be provided like tax breaks e.g. (Company exemption from income tax, exemption from customs duties on equipment used in road, exemption from stamp tax, exemptions by other contracts and tax services, etc…).
- Partner selection with much experience.
- Team building and training with strong Problems saving ability.
- Trust and respect between the two sectors.

Table 4.11 displays the frequencies of the yes/no respondent's answers.

Table 4.11: Yes/No Frequencies for the Extra Factors

The Extra Factors	No	Yes	Yes %
Readiness level of the concerned sector/ Nature of the service	10	24	70.59
Cost of fuel, electricity, water, etc…...	12	22	64.71
Availability of work requirements	16	18	52.94
Provide low-interest loans from local banks	21	13	38.24
Track record of the concerned country	21	13	38.24

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Table 4.11: Yes/No Frequencies for the Extra Factors

The Extra Factors	No	Yes	Yes %
Team building and training	22	12	35.29
Commitment at all levels	22	12	35.29
The ability to bear the cost of the project	22	12	35.29
Time commitment	23	11	32.35
Negotiation	23	11	32.35
Commitment to implement judicial rulings	23	11	32.35
Partner selection	24	10	29.41
Trust and Respect	24	10	29.41
The creditworthiness of the General Contracting	24	10	29.41
Experience	25	9	26.47
The ability to solve Problems	28	6	17.65
Tax Breaks	28	6	17.65
Value for money	29	5	14.71

Only three factors out of the above list have been selected by 50% of the respondents or more. These are: Readiness level of the concerned sector/ Nature of the service, Cost of (fuel, electricity, water, etc.), and the Availability of work requirements.

Therefore, these three factors were added to the initial nineteen Critical Success Factors as they might be distinctive to the Syrian procurement environment.

As a conclusion, the results show that the concerned sectors should be on a level of readiness to achieve success. Where, in some cases, some activities are not absolutely independent of all others; such as, the organizational structure, employees, budget, etc…, which will affect the quality of the chosen contract. Also the reasonable cost of the implementing requirements like fuel, electricity and water etc. are important factor that lead to the success of the implementation and operation process in Syria, in addition to the availability of all work requirements and equipment.

Figure 4.4 displays the frequencies of respondents' nomination of the suggested additional CSFs.

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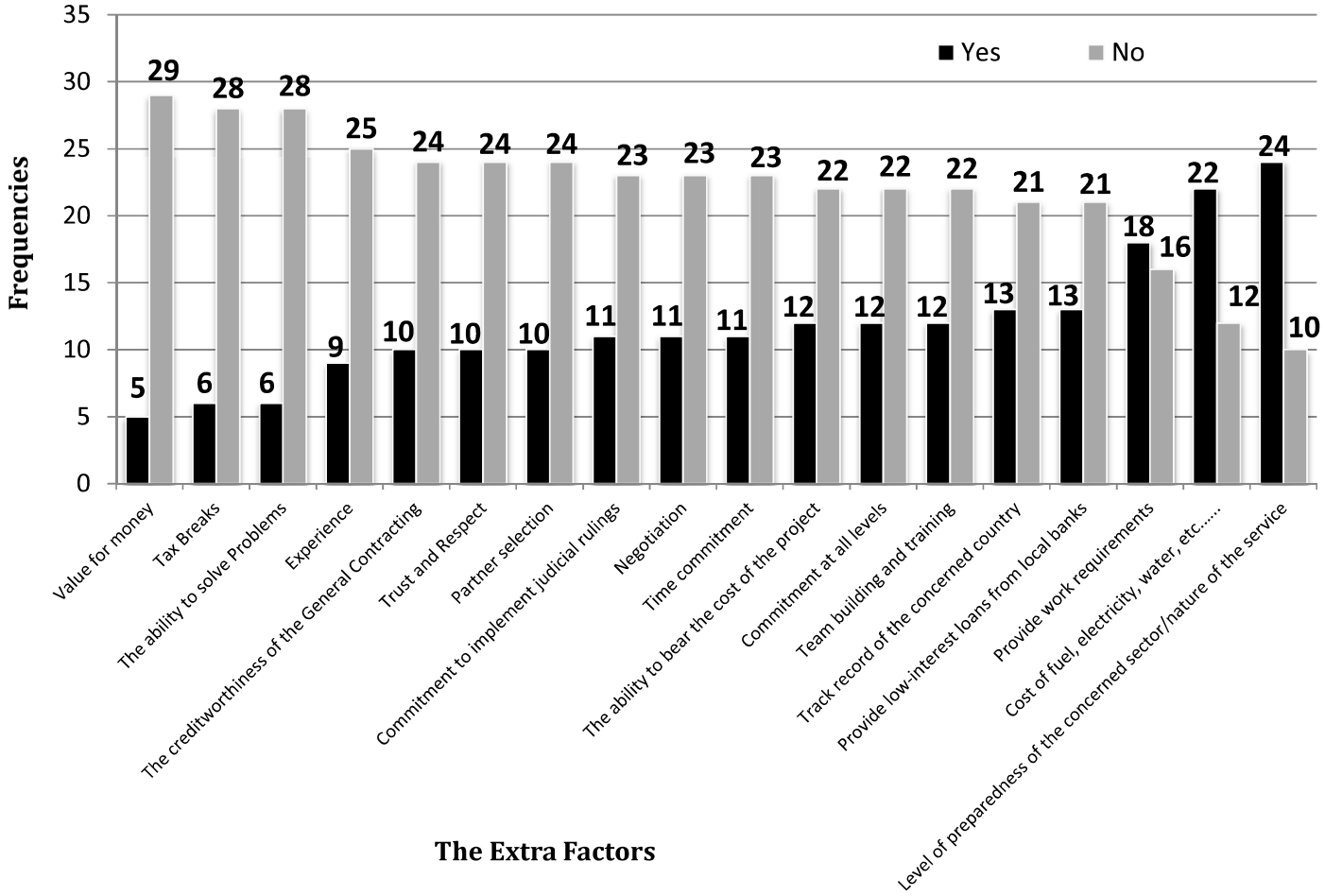
Figure 4.4: The Frequencies of the Extra Factors



4.1.6 ***Analysis of The Public Private Partnership (PPP) Contracts:***

Also, the respondents of this questionnaire were requested in (PPP contracts) part to identify the PPP contract that they see most desirable in the case of their organization, in order to identify the most favorable PPP contracts in Syria. Received data on preferred PPP contracts was analyzed using the same software (SPSS). The descriptive statistic of mean score was computed for four -point scale on each PPP contract. Then, the PPP contracts were ranked in descending order according to their mean scores.

In order to compare between the most favourable contracts in Syria and to choose the most suitable contract for the study case of this research (The Logistic Platform in the Industrial City in Hassia), the top three desirable contracts have been selected. As shown in Table 4.12 the top three preferred PPP contracts in Syria are: Build- Operate-Transfer (BOT), Operations Maintenance & Management (OMM) and Design-Build-Maintain (DBM).

Table 4.12: Descriptive Statistics of mean score for PPP Contracts

***PPP* Contracts**	**Mean (out of 4)**	**Rank**
BOT	2.765	1
OMM	2.412	2
DBM	2.382	3
Developer Finance	2.353	4
DBO	2.177	5
DBFOMT	2.176	6
DBOM	2.148	7
DBFOM	2.147	8
Turnkey	2.120	9
O&M	2.118	10
BDO	2.090	11
BTO	2.088	12
BBO	2.060	13
BOO	2.059	14
LDO	2.029	15
DB	1.912	16
Lease/ Purchase	1.530	17
Sale/ Leaseback	1.529	18

Figure 4.5 below shows the descriptive statistics of mean score for the PPP contracts by the overall respondents.

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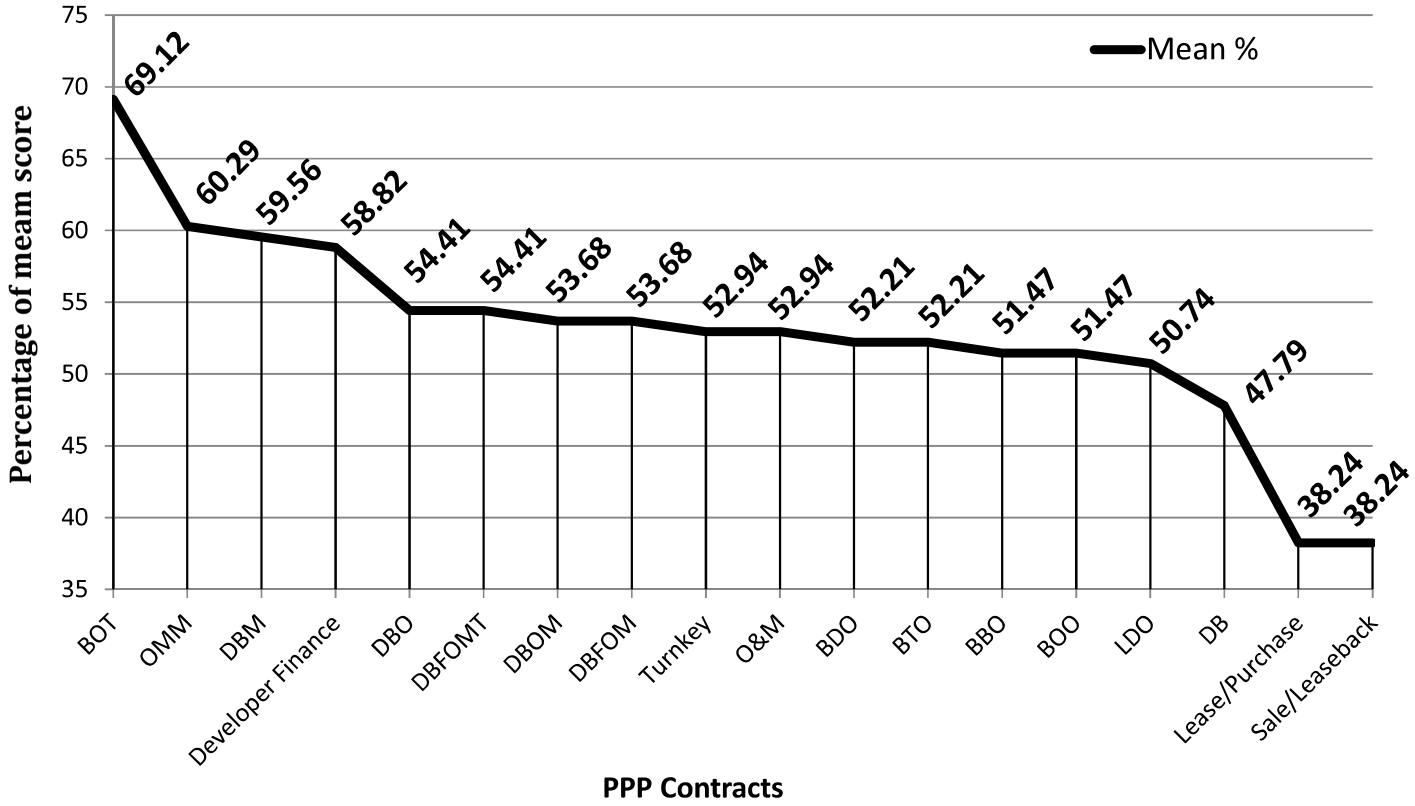
Figure 4.5: PPP Contracts



4.1.7 ***Current practice of the PPP projects in Syria:***

In fact, the main problem facing the PPP projects in Syria is the lack of legislations governing the rights obligations of various parties. This was expressed by most of the respondents. Another problem was highlighted; weakness in the administrative and legal competencies of the Public Sector and the immaturity of partnership experience in the Private Sector. Respondents also highlighted the lack of experienced private and public consulting organization in Syria specialized in financial, technical and legal aspects related to PPP projects.

It is clear that there is an urgent need to develop a legal, cultural and regulatory PPP environment. In addition the governmental needs to develop and support sound policies for PPP projects in Syria to determine the desired objectives and target sectors, with the aim of establishing a suitable environment that encourages both public and private sectors to engage in participatory projects. There is also a need for transition from a planned economy to a social market economy, which helps to increase the contribution of the Private Sector in GDP and increases the level of annual per capita income, which will in turn influence the popularity of these projects and increase the growth of enterprises.

In order to analyze the current practice of the PPP projects in Syria and to analyze all comments and the observations made by the respondents in the third section in the survey, the Ishikawa method was used [13]. This method is useful analysis tool that provides a systematic way of looking at effects and their respective causes through a diagram representation.

This diagram is based on a simple idea, similar in its stages, to the fish bone. Each arrow reflects the source of defect or deviation from the specifications in the quality of the production process, whether it is a major cause or a sub cause, it helps determine the target areas, to help collect more data for further study, also increases knowledge of the process that will help everyone learn and understand more about the factors that affect work, and how they are related to each other. [13]

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The Ishikawa method was used through the following basic steps:

1. The comments and the observations made by the questionnaire respondents regarding the current PPP practice in Syria have been collected.
2. The problem to be analyzed has been identified; the retardation of the PPP projects in Syria.
3. The key causes for these obstructions have been classified into four categories (The Public Sector, The Private Sector, Administration Environment, and The Investment Environment).
4. Using the Ishikawa diagram representation, for each key cause more specific causes/factors (sub-branches) have been identified through asking a series of why? Questions to establish a cause – and – effect relationship. This helped to uncover the root causes of a problem based on the respondent's answers.

As shown in Figure 4.6, the main problems are related to; limited sources of funding and poor experiences in both public and private sectors, the confusion between the concept of privatization & partnership that leads to a lot of misunderstanding and loss of opportunities, the absence of a regulatory authority and a clear PPP low, weak judiciary system and the multiplicity of authorities & Complex procedures.

Therefore, some essential factors should be worked on to start resolving these issues and to continue improving the partnership environment that should encourage companies to invest in Syria. This can be accomplished by the development of government plans, by providing feasible studies for the most important projects needed in Syria, moreover, there is an urgent need for transition from a planned economy to a social market economy, by providing training to human resources in both sectors to gain more knowledge and experience and to clarify the concept of the partnership for both sides. Such actions will benefit the country as a whole by supporting the partnership culture and the trust between all parties. As mentioned earlier, there is also a need to develop a clear PPP low by improving the regulatory standards and increasing the level of penalties against corruption.

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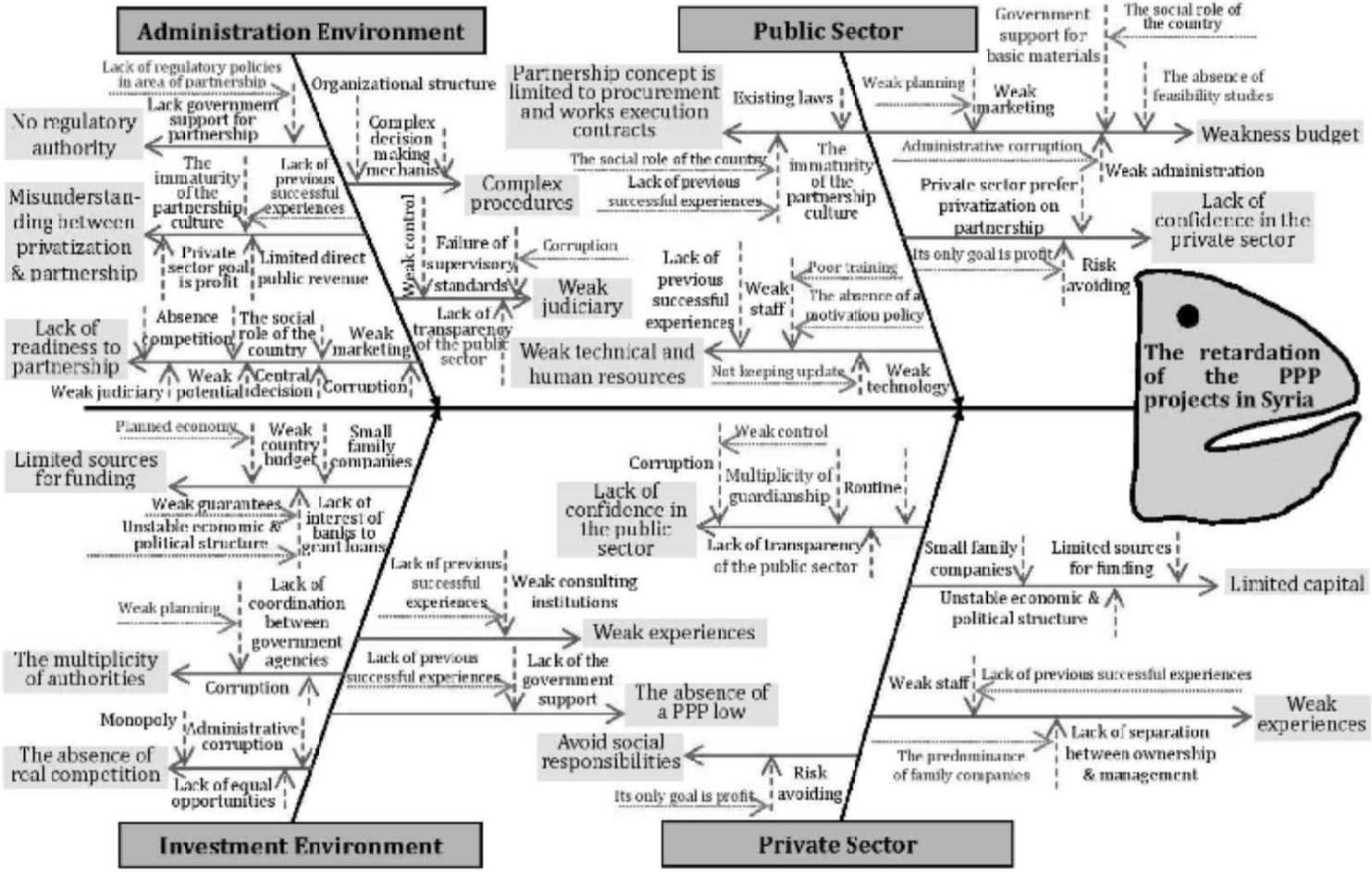

Figure 4.6: Ishikawa Diagram for Current practice of the PPP projects in Syria

4.2 ***Data Collection & Analysis: Second Questionnaire:***

4.2.1 ***Introduction:***

Depending on the previous results of the first survey, a second questionnaire was designed (see the Appendix 2), which aimed at determining the importance of each factor from the Critical Success Factors. And that's depending upon the respondents' perception to estimate the effect of each factor of the CSF factors on the three identified PPP contracts. Furthermore, to make a clear view for all respondents an appendix was added to the second questionnaire which contains definitions for all Critical Success Factors listed in the survey.

4.2.2 ***Data Collection:***

The calculated sample size was 30. Assuming a response rate of 25%, 120 questionnaires were distributed approximately to the same previous group of Consultants and Managers in various government ministries and concerned private companies which have been targeted in the first questionnaire.

A total of thirty two respondents completed the second survey. 65 % of respondents were from the staff of the Public Sector, around 28 % from the employees of the Private Sector and the rest 6.3 % were completed by International Organizations. (Table 4.13 shows the distribution of respondents).

Table 4.13: Distribution of Respondents

Organization Type		Frequency	Percent %
Valid	Public Sector	21	65.6
	Private Sector	9	28.1
	Others	2	6.3
	Total	**32**	**100.0**

Around 28 % of the respondents have longer than twenty one year of experience in the work field (Table 4.14 shows the respondents' years of experience).

Table 4.14: Years of Experience

Years of Experience		Frequency	Percent %
Valid	Less than 5 years	3	9.4
	6 – 10 years	6	18.8
	11 – 15 years	6	18.8
	16 – 20 years	8	25.0
	21 years above	9	28.0
Total		**32**	**100.0**

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4.2.3 ***Data Analysis:***

By using the Statistical Package for the Social Sciences (SPSS) software, the overall collected data from the second survey were analyzed. The descriptive statistic of mean score was computed for three-point scale, on the importance of each of the twenty two Critical Success Factors for each contract from the three identified PPP contracts. Table 4.15 shows the results which range between 1.31 and 2.88 points.

Table 4.15: Descriptive Statistics of Mean Score of The CSFs for Three PPP Contracts

CSFs	Mean (out of 3)		
	BOT	**OMM**	**DBM**
Favorable legal framework	2.88	1.63	2.28
Political support	2.06	1.47	2.63
Good governance	2.22	1.53	2.72
Stable macro-economic environment	2.75	2.16	1.50
Appropriate risk allocation and risk sharing	2.16	1.53	2.66
Sound economic policy	2.84	1.53	2.13
Project technical feasibility	2.78	1.59	2.13
Through and realistic cost/ benefit assessment	2.78	1.53	2.13
Well organized public agency	1.50	2.72	2.09
Transparency in the procurement process	2.69	2.03	1.44
Government involvement by providing guarantees	2.81	1.59	2.13
Available financial market	2.78	1.38	1.97
Strong private consortium	2.75	2.25	1.63
Commitment/ responsibility of public private sector	2.81	1.50	2.09
Shared authority between public and private sectors	2.09	2.69	1.44
Technology transfer	1.59	2.13	2.72
Competitive procurement process	2.16	1.50	2.75
Multi-benefit objectives	2.75	2.06	2.59
Social support	2.00	1.31	2.53
Readiness level of the concerned sector/ Nature of the service	2.13	1.53	2.66
Cost of fuel, electricity, water, etc…...	2.06	2.66	1.31
Availability of work requirements	2.19	2.13	2.03

Figure 4.7 below displays the descriptive statistics of mean score for the importance of the CSFs for three PPP contracts by the overall respondents.

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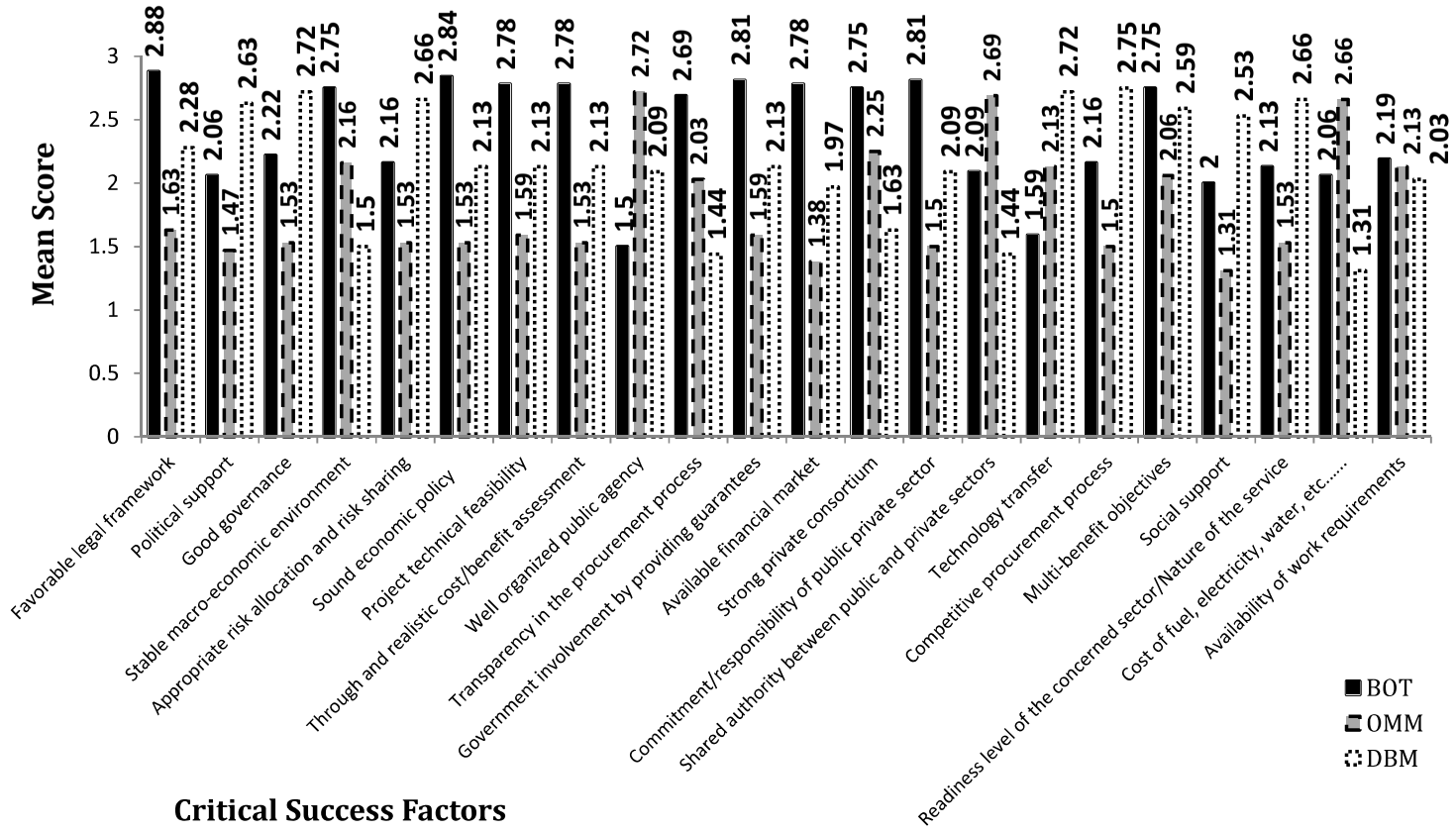
Figure 4.7: The Importance of The CSFs for Three PPP Contracts



4.3 ***Data Collection & Analysis: Third Questionnaire:***

4.3.1 ***Introduction:***

In order to develop a suitable framework for selecting the optimum PPP contract based on the respondents' perception of the effect of each factor of the CSF on the three shortlisted PPP contracts and the studied project, which is The Logistic Platform in The Industrial City in Hassia. A third survey was designed (see the Appendix 3), to determine the importance of each factor from the Critical Success Factors (CSFs) for the previous specified project.

Note: For more comprehensive information on the Industrial City in Hassia and The Logistics Platform, please check the data contained in chapter 5.

4.3.2 ***Data collection:***

This questionnaire was distributed to a group of General Directors of the industrial cities in Syria and experts from other public stakeholders to determine their perception of the importance of each factor from the Critical Success Factors for The Logistic Platform in Hassia.

Table 4.16 below, shows the expertise of the targeted consultant group which consists of five respondents completed this survey, where about 60 % of them have experience in work domain between 16 and 20 years.

Table 4.16: Years of Experience

Years of Experience		Frequency	Percent %
Valid	Less than 5 years	0	0.0
	6 – 10 years	0	0.0
	11 – 15 years	0	0.0
	16 – 20 years	3	60.0
	21 years above	2	40.0
Total		**5**	**100.0**

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4.3.3 ***Data Analysis:***

The results of this survey were analyzed using (SPSS) software, and the mean score was extracted for the importance and the impact of each factor of the critical success factors for the studied project (The Logistic Platform in Hassia). The following Table 4.17 illustrates these results which range between 3 and 5 points.

Table 4.17: Descriptive Statistics of Mean Score of The CSFs for The Logistic Platform in Hassia

CSFs	**Mean (out of 5)**
Favorable legal framework	5.00
Political support	3.80
Good governance	4.20
Stable macro-economic environment	5.00
Appropriate risk allocation and risk sharing	3.80
Sound economic policy	4.00
Project technical feasibility	4.20
Through and realistic cost/benefit assessment	4.20
Well organized public agency	3.40
Transparency in the procurement process	4.00
Government involvement by providing guarantees	3.80
Available financial market	3.80
Strong private consortium	4.20
Commitment/responsibility of public private sector	3.80
Shared authority between public and private sectors	3.00
Technology transfer	3.60
Competitive procurement process	4.00
Multi-benefit objectives	3.80
Social support	3.25
Readiness level of the concerned sector/Nature of the service	3.60
Cost of fuel, electricity, water, etc.	3.00
Availability of work requirements	3.80

Figure 4.8 below shows the descriptive statistics of mean score of the importance of the CSFs for the logistic platform in Hassia by the targeted consultant group.

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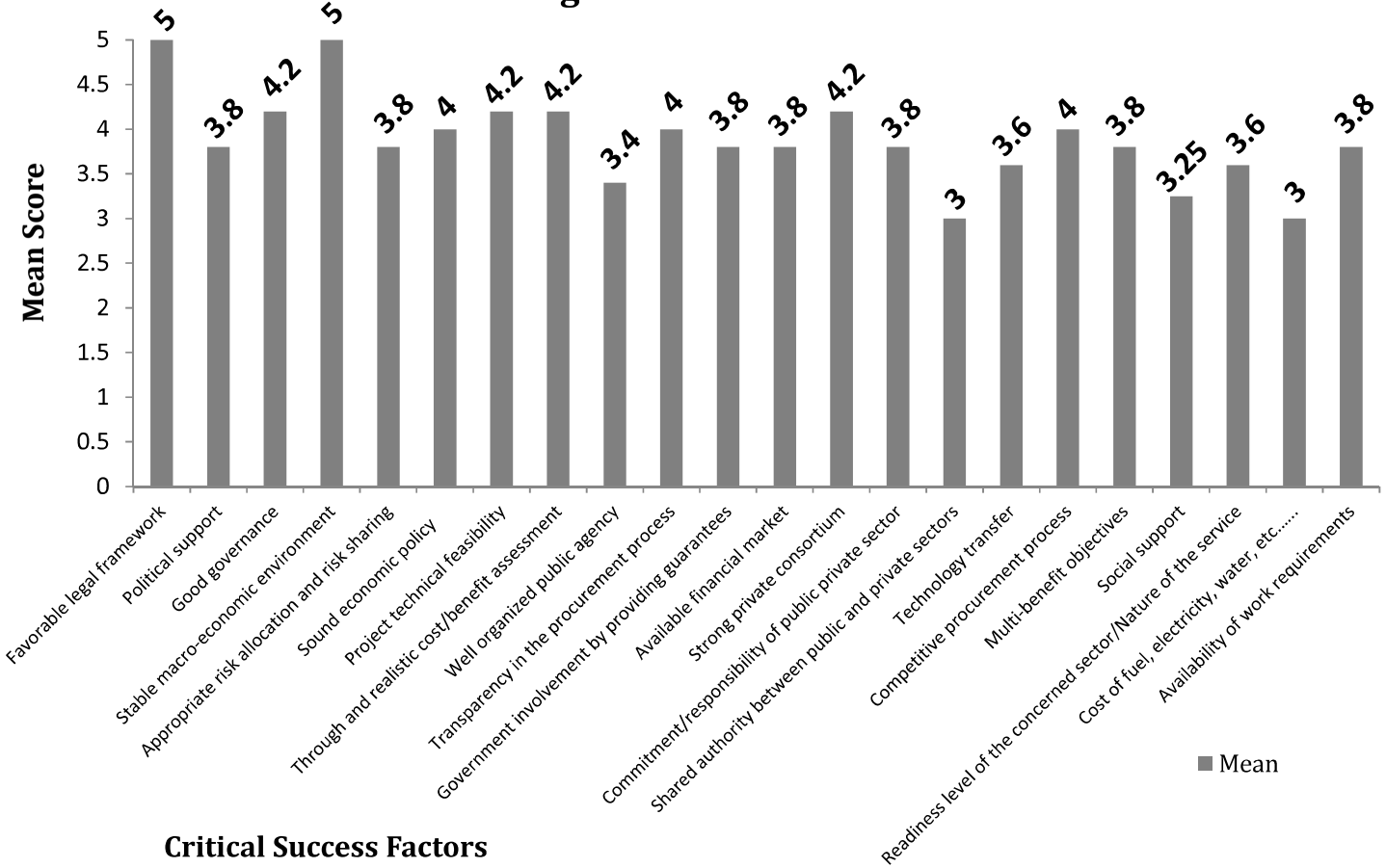
Figure 4.8: The Importance of The CSFs for The Logistic Platform in Hassia



To unite the outcomes of this questionnaire with the results of the second survey (Table 4.15) to be all out of three-point scale, the mean score values of the (Table 4.17) were transferred from five-point scale to be out of three, and the computed values are displayed in (Table 4.18).

Table 4.18: Descriptive Statistics of Mean Score of The CSFs for The Logistic Platform in Hassia

CSFs	**Mean (out of 3)**
Favorable legal framework	3.00
Political support	2.28
Good governance	2.52
Stable macro-economic environment	3.00
Appropriate risk allocation and risk sharing	2.28
Sound economic policy	2.40
Project technical feasibility	2.52
Through and realistic cost/benefit assessment	2.52
Well organized public agency	2.04
Transparency in the procurement process	2.40
Government involvement by providing guarantees	2.28
Available financial market	2.28
Strong private consortium	2.52
Commitment/responsibility of public private sector	2.28
Shared authority between public and private sectors	1.80
Technology transfer	2.16
Competitive procurement process	2.40
Multi-benefit objectives	2.28
Social support	1.95
Readiness level of the concerned sector/Nature of the service	2.16
Cost of fuel, electricity, water, etc…...	1.80
Availability of work requirements	2.28

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CHAPTER 5

Case Study – The Logistic Platform in the Industrial City in Hassia

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5.1 ***The Industrial City in Hassia:***

5.1.1 ***Introduction:***

The Syrian Government gives special attention to the industrial cities and zones in Syria. There are four big industrial cities (Adra in the province of Damascus Countryside – Sheikh Al Najjar in Aleppo – Hassia in Homs and the industrial city of Deir Al Zour in the governorate of Deir Al Zour) and about 101 industrial zone distributed on various Syrian provinces.

According to the report of The Ministry of Local Administration, set until the end of 2013 [14], The Directorate of The Industrial Cities & Zones (ICZS) in the ministry, showed that the industrial cities made great success in promoting and attracting investments of local, Arab and foreign investors, valued at more than 542 billion Syrian pounds. And provided 110273 job opportunities in record time, it also absorbed the significant expansion in industrial investments, through insurance plots equipped with the services of modern and integrated infrastructure at cost price, with comfortable premiums and equipped with all utilities that support the industries. In addition to the application of one stop shop method in most investors' transactions and the procedures for obtaining licenses in implementation of investment projects.

5.1.2 ***History of The Industrial City in Hassia:***

The preparatory studies for the industrial city in Hassia started in 1998. They included schematic and technical studies. While, the actual execution started in the midst of 2001. But, it has officially launched in 2004 by Legislative Decree No. /57/, over an area of 2500 hectares with total cost of approximately nine billion Syrian pounds, the real investment started in the beginning of 2005. This city has different kinds of industries (food processing, chemicals, engineering, textiles, metal, etc…). It also includes an area for craftsmanship containing all crafts, which support heavy and intermediate industries. In addition to a free zone, train station, dry port, housing area and branches of the major banks in Syria. Thus, the industrial city in Hassia is expected to meet all of the investors needs to support the local economy. [14]

Also, the report of The Ministry of Local Administration [14] gives an idea about the implementation plan for The Industrial City in Hassia which was set by experts and divided into four stages. The first stage started in 2002 and the final one will be ready as planned in 2018. The total area of these stages is 1207 hectares. The figure 5.1 below depicts the percentage of implementing the infrastructure and allotting for each phase separately.

It is noted that the overall mean of implementation of infrastructure in all stages amounted to 58%, while the percentage of allotment of plots in these stages reached to 40%.

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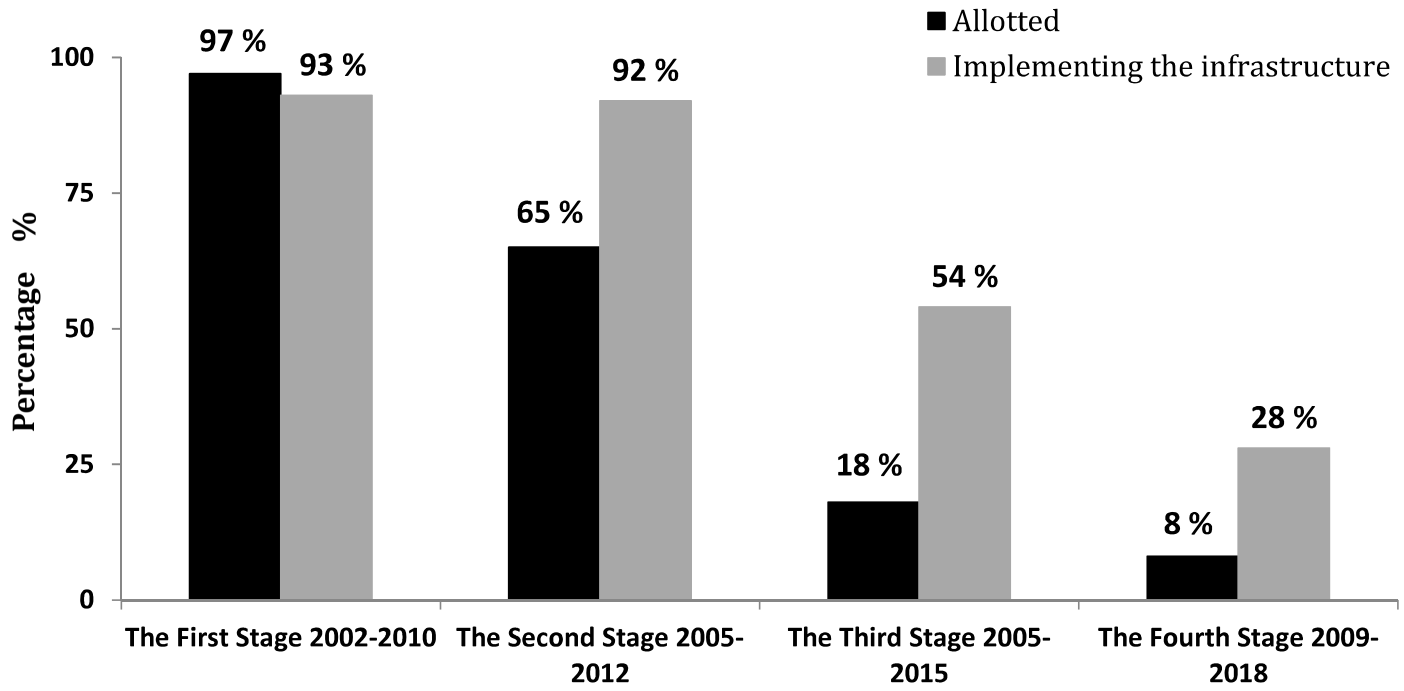

Figure 5.1: The Development of the Implementation and the Allotment in Hassia [14]

5.1.3 ***Statistical Information about The Industrial City in Hassia:***

Table 5.1 below demonstrates the basic statistic information about the industrial city in Hassia until the end of 2013. It shows that the total number of plots in Hassia is around 508 (under construction & in operation) with a rate reaching to 55 % of the total area of the city. The industrial city in Hassia has attracted invested capital up to 102 Billion Syrian pounds, provided 17827 job opportunities and achieved investment revenues up to 4.229 SY.P Billions.

Table 5.1: Statistical Information about the Industrial City in Hassia [14]

Statistical Information about the Industrial City in Hassia				**Unit**
Area and allotted	Total area		2500	hectares
	The area of the industrial plots	Total	758	hectares
		Allotted	420	hectares
	Ratio of allotted plots area		55%	-
Number of plots (under construction - in operation)	Number of plants under construction		332	Plots
	Number of plants in operation		176	Plots
	Total number of plants		508	Plots
The number of workers in construction and operation	Number of workers		17827	workers
Expenditure for execution of infrastructures and acquisitions	Infrastructure Plan for 2013		0.210	SY.P Billions
	Annual expenditure for execution of infrastructures for the end of 2013		0.006	SY.P Billions
	Ratio of annual expenditure		3%	-
	The accumulative expenditure on electricity transfer stations		0.421	SY.P Billions
	The accumulative expenditure for execution of infrastructures		5.342	SY.P Billions
	The accumulative expenditure on selling lands		0	SY.P Billions
	The accumulative expenditure for execution of infrastructures and acquisitions		5.342	SY.P Billions
Accumulative net investment revenues	Revenues plan for 2013		0.178	SY.P Billions

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Table 5.1: Statistical Information about the Industrial City in Hassia [14]

Statistical Information about the Industrial City in Hassia			Unit
	Annual net investment revenues	0.286	SY.P Billions
	Ratio of the annual revenue plan	16%	-
	The accumulative net investment revenue	4.229	SY.P Billions
Capital contributions offered by the state for the industrial cities	Capital contribution offered by the state for acquisition	0	SY.P Billions
	Capital contribution offered by the state for execution	1.490	SY.P Billions
	Total capital contribution offered by the state for execution & acquisition	1.490	SY.P Billions
Invested capital in Hassia	Invested capital for plots under license to build	22.720	SY.P Billions
	Invested capital for plots under construction	27.600	SY.P Billions
	Invested capital for plots in operation	51.700	SY.P Billions
	Total invested capital	102.020	SY.P Billions
Arab, foreign and cooperating companies	Allotted	25	Plots
	Under construction	25	Plots
	In operation	14	Plots
	Total	64	Plots
	Invested capital	9.425	SY.P Billions
	Employment opportunities	3625	workers

Figure 5.2 below depicts the cumulative net investment revenues from selling the industrial plots, fees and fines, payments and benefits reach to 4.229 billion, and the total amount spent on the implementation of infrastructure 5.342 billion.

Also figure 5.3 shows the volume of investments in Hassia which exceed 102 billion distributed as follows: 27.6 billion for plots under construction, 51.7 billion for facilities in operation and 22.720 billion for facilities under license.

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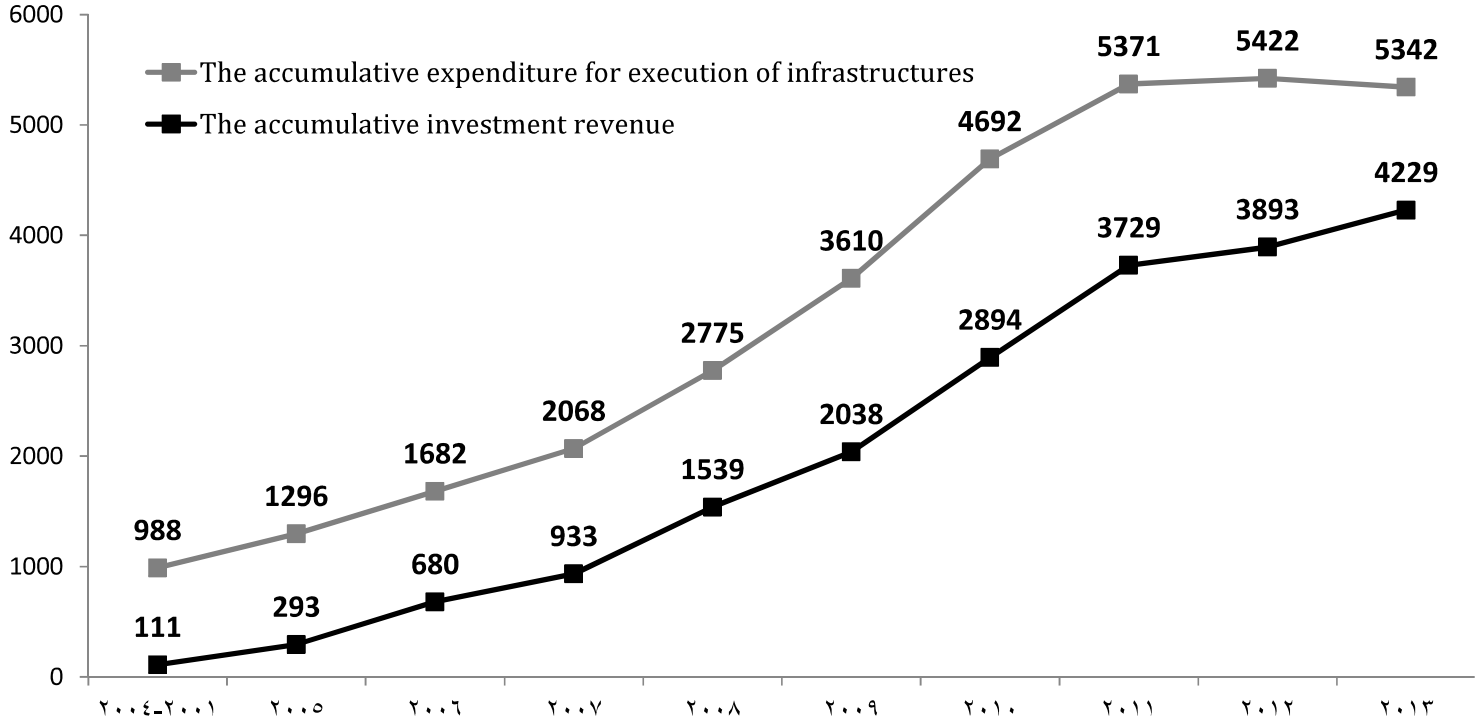

Figure 5.2: Revenues and Expenditures in Hassia [14]

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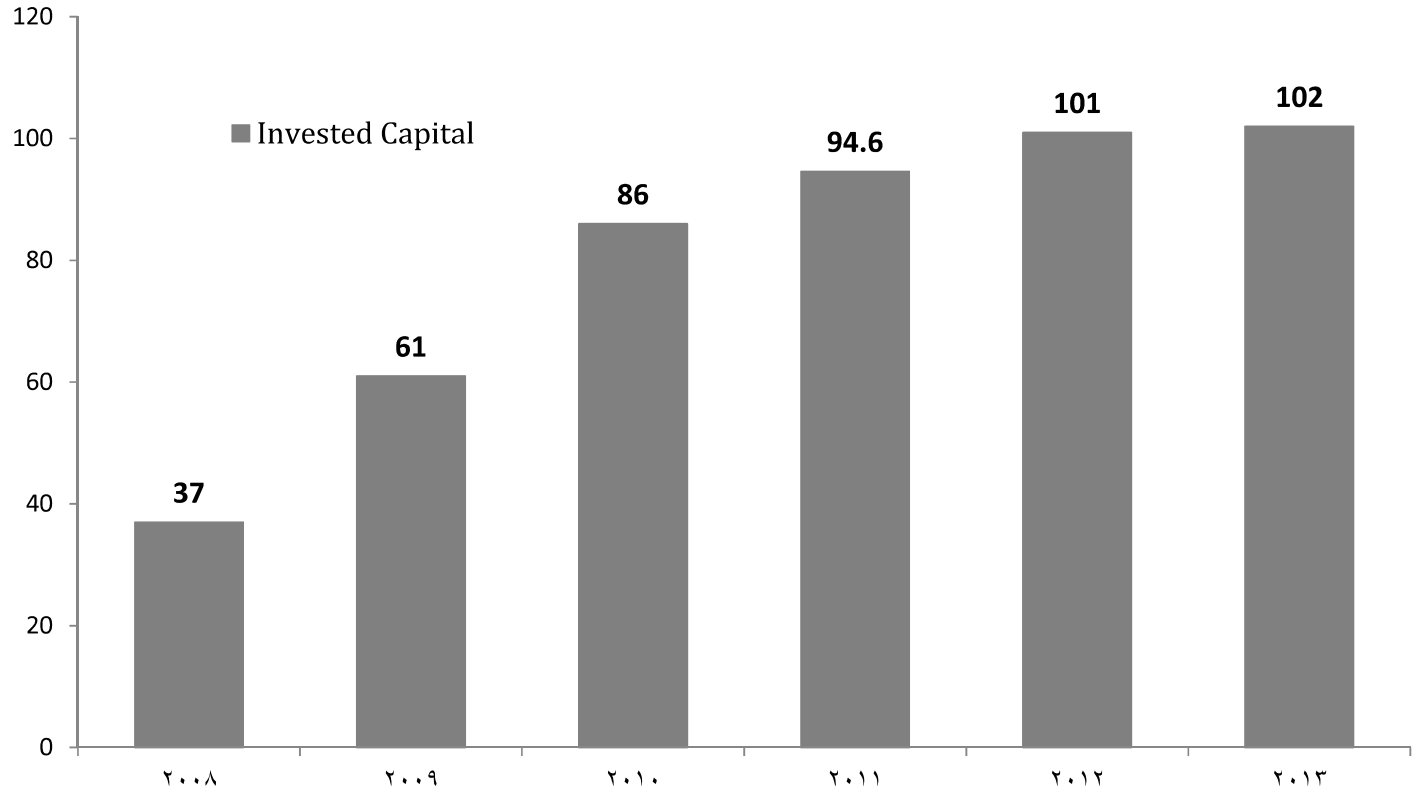

Firure 5.3: Invested Capital in Hassia [14]

5.2 ***The Logistic Platform in Hassia:***

5.2.1 ***Introduction:***

The concept of logistics platform originated in France in the 60s as a result of advances in the management operation studies. It grew with the initial goal of organizing and optimizing the flow of goods distributed in a disorderly fashion at cargo terminals on the border of large cities. With the development of this concept over sixty logistic platforms were found in the world, for example (ZAL and PLAZA/ Spain, Bremen GVZ/ Germany, Sogaris and Eurocenter/ France, District of Nola/ Italy, Dallas Logistic Hub/ USA, Campinas Logistics Platform/ Brazil). [15]

5.2.2 ***The Definition of Logistic Platform:***

In this respect, the best known definition of logistic platform is probably provided by the European Association of Freight Villages EUROPLATFORMS, as:

> *"A defined area within which all activities relating to transport, logistics and the distribution of goods, both for national and international transit, are carried out by various operators."* [16]

5.2.3 ***An Overview of The Logistic Sector in Syria:***

In Syria the logistic sector is virtually non-existing as a distinct sector of transport and international trade. Traditional methods are used for warehousing and in a very limited space like the storage area related to the dry port of Aleppo and other sites near Damascus airport to provide the needs of air transit. As for international road or maritime shipping agents, the areas devoted to warehouse were small and did not exceed 1000 m^2, and used only for making and breaking bulk loads. Besides, they are all under the responsibility of the customs authorities.

With the encouragement of the European Union to promote the Mediterranean as a trading area, the first Euro-Mediterranean conference for transport was held in 2005 to develop the Mediterranean transport services with EU Member states and with neighboring Mediterranean countries (Turkey, Jordan and Lebanon). Consequently, the European Investment Bank decided to commission a study in terms of the needs of logistic platforms in the Mediterranean partner countries, and on the potential for creating a network of platforms in the region named MEDLOG. [17]

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In this context, several workshops have been held between all the concerned governmental parties and the European Investment Bank to review the main lines of a preliminary study of logistics station and its reference conditions, where a donation was obtained from the FEMIP Trust Fund in the European Investment Bank to provide technical assistance for the preparation of the overall economic feasibility study for the establishment of the logistic platform in the industrial city of Hassia. Accordingly, the European Investment Bank announced for reference conditions for the preparation of a feasibility study for the logistics platform on 5/1/2011, where the bidding process was scheduled on May of the year 2011 in Luxembourg city to choose the party that will study the economic feasibility of the project during 240 days, knowing that the review of the dry port studies and its integration with the logistics platform project will be noted.

The Syrian government and the Ministry of Transport pay special attention to enhancing the efficiency of current logistics to serve the increasing flow of current goods where it would bypass the process of building infrastructures to reach the level of administration and to simplify the process of goods transit and exploitation of the area and explore the workload and tracers best ways to organize the announcement dossier for the operation of this station and that's due to the shortness of the Syrian beach and tight spaces allocated to the Syrian ports and the need to liberate them from the warehouse operations and work to transfer them to other areas.

Also The experts of the European Investment Bank clarified in their reports the stakeholders of this project, which are at international level the relevant actors within the MEDLOG network in Syria: Ministry of transport, the local Authorities, the Syrian railway company, the customs authorities, the free zones administration, the port authorities of Latakia, the chamber of commerce of Damascus, Aleppo, and international chamber of commerce. At local level the target groups evolve around 3 main entities that can play an important role in achieving the platform in Hassia: national authority, administrative promoter/ operator of EMLP, users of the EMLP - owners of concessions: ministries and public institutions, transport companies, logistics operators and freight forwarders involved in or affected by the EMLP, development banks active in the transport sector in Syria.

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5.2.4 ***Choosing The Final Site of The Logistic Platform in Syria:***

In case of Syria, the industrial city in Hassia has been chosen for The Logistic Platform by the European Investment Bank and all the stakeholders, taking into account first the site's strategic geographical location which was a main trade road in the old days (along the north- south route through the Middle East from Turkey to Saudi Arabia (via Jordan) and by sea, goods continue to move to Iraq), and second, the region's dynamic development and prospects, and the opportunity offered by the development of the industrial city of Hassia.

The Euro Mediterranean logistics platform (EMLP) in Hassia will be developed on the expansion land of the industrial city north of the dry port with an area reaching to approximately 62 hectares in a first phase with the possibility of expanding the platform to 82 hectares at a later stage.

These logistic platforms are defined according to freight characteristics, time, distance and geography, and make the most of each mode of transport in order to benefit the freight's competitiveness.

5.2.5 ***The Objectives of The Euro Mediterranean Logistics Platform (EMLP) Project:***

The establishment of the logistics platform will facilitate the managerial process of transferring goods, technical knowledge and experience among the Mediterranean countries. It will also increase the reliability of the goods' transfer process which can be achieved by using good telecommunication system that ensures a source for shared services.

In addition, implementing such a project is financially profitable due to the features that Hassia could offer in terms of getting connection to the road and rail transport and the stability of the results, which will effectively reduce the costs of transport operations at a 10% discount rate through providing multi-modal transport that constitute an important element of attracting investors.

Referring to the reports of the European Investment Bank and the EUROMED Transport Project [17], [18], [19], which show the utmost importance of the logistic platforms not only to help solve port congestion problems, but has also faced the challenges of postponement and cross-docking strategies, in order to minimize total logistic costs and tackle the growing volatility of consumer markets. So, integration with air transport is

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fundamental for products with greater added value, or very short shelf-lives. This type of infrastructure also enables the use of agglomeration economies, in relation to the services required by platform operators, and also helps reduce transport externalities such as, congestion and pollution.

Syria has a high – quality and efficient industrial infrastructure in many sectors. This industry is geared primarily towards the domestic market and towards neighboring countries. Quality logistics should be held to support the competitiveness of Syrian products on the international markets. Where in 2010 (before the Syrian crisis started) the Syrian foreign trade had a volume of about 27.6 billion USD and was focused on EU Member states (37%), Arab countries (40%), various Asian countries (16%), and Turkey (7%). Plus the Syrian foreign trade volume which form 50% of Syrian GDP for the year 2010 according to the economic indicators, this rate enables the Syrian economy to be integrated with the global economy, where the main products are minerals, textiles, clothing, fresh and processed food, leather goods, chemicals and semi-finished goods.

Also EUROMED Transport Project shows [19] the objectives of the EMLP project, which are:

1. Contribute to the development of Syria's potential as a regional transport hub.
2. Reduce costs of freight transport at the international, national, sub national and urban level.
3. Support the conversion from the traditional organization of transport towards specialist logistics activities and services (efficient and value adding).
4. Further develop the industrial city of Hassia as a growth pole and innovation Centre for transport, logistic and manufacturing.
5. And the services that might be provided comprise:
   - Transport services (forwarding, inland and international transport, agents, handling, etc.)
   - Services for drivers and vehicles (reception, repair, inspection, technical control, etc.)
   - Logistics services (e.g. storage, packing/ quality control, order preparation, cold store, etc.)

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- Control and police services (customs, laboratories, etc.)
- Tertiary services (bank, insurance, etc.)
- Data transmission services (logistics, contractual, commercial data, and official documents).

In addition to the Potential functions of the EMLP that might include:

1. Urban distribution: to improve the organization, distribution and collection of goods in Homs and Hama.
2. Freight forwarding or national parcel delivery: to rationalize transport flows between the various urban and industrial centers of Syria.
3. Transit or international freight forwarding: to simplify and rationalize the organization of international flows of transport (e.g. for exports to the EU, Iraq, etc.)
4. Industrial logistics: to optimize the organization of a sector or a specific type of goods (for example, car spaces, food processing, etc.)
5. International industrial logistics: to organize imports and re-exports effectively from a free area (or similar)
6. Large-scale concentration of flows and rationalization of the use of means of transport.
7. Rationalization of the use of storage and handling facilities by operators within the platform.

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CHAPTER 6

Developing & Testing a Practical Model for Selecting a PPP Contract

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6.1. ***Developing a Practical Model for Selecting a PPP Contract:***

6.1.1 ***Introduction:***

In order to assist the decision makers in partnership projects in the construction field in Syria, from both the Public & Private sectors, to choose the best possible PPP contract. Due to the lack of experience in this domain, a tool was designed aimed to provide practical models for managers in order to recommend the optimum PPP contract type.

This tool was developed for the PPP projects in Syria. It is based on the importance of the ***C***ritical ***S***uccess ***F***actors (***CSFs***) of the PPP projects in Syria and their impact on Syrian-partnership projects. The outputs of this tool reflect the values that indicate the optimum PPP contract for the studied project.

6.1.2 ***Choice of Methods:***

The practical model is composed of two matrices:

The first matrix ($a_{(n*3)}$) consists of (n) rows represents the Critical Success Factors for PPP projects (n=19+3=22, nineteen Critical Success Factors found from previous researches (Table 3.1). In addition to the three extra Critical Success Factors which distinguish the Syrian PPP experience (Table 4.11)), and (3) columns represent the three identified contracts (BOT, OMM, DBM) which are the most desirable PPP contracts in Syria (Table 4.12). And the values inside represent the importance of each factor of the critical success factors for each contract from the three specified partnership contracts.

The second matrix ($b_{(n*1)}$) consists of (n) rows also represents the Critical Success Factors (n=22, as shown above), and (1) column represents the studied PPP project and the values of this column indicate the importance of each factor from the Critical Success factors for the studied case (PPP project).

The result of this model are calculated by multiplying the Transpose of the first matrix with the second matrix, $(a_{(n*3)})^T * (b_{(n*1)}) = (c_{(3*1)})$. The result matrix ($c_{(3*1)}$) consists of (3) rows and (1) column, and its values reflect the relationship between the importance of each factor of the Critical Success Factors for the specified PPP contract and for the studied project. The highest one will donate the most suitable contract for the project under consideration.

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6.1.3 ***Inputs of Framework:***

Thus, the proposed model consists of constant values based on statistical analysis and some input variables.

The first matrix (a (n*3)) consists of constant values concluded from the results of the second questionnaire (see Table 4.15), which depends on the perception of the respondents to identify the importance of each factor of the Critical Success Factors for the three PPP contracts (BOT- OMM- DBM).

The second matrix (b (n*1)) consists of input variables, which are different from one project to another and depends on the importance of each factor of the Critical Success Factors for the studied PPP project.

6.1.4 ***Outputs of Framework:***

The results matrix (c (3*1)) consists of three calculated values concluded by multiplying the constant values of the first matrix (a (n*3)) with the input variables of the second matrix (b (n*1)), and the highest outcome value indicates the best PPP contract for the considered project.

Figure 6.1 below shows the developed practical model for selecting the optimum PPP contract for construction projects in Syria.

As a result, this developed model can be tested on various construction PPP projects in Syria, by filling the variables of the second matrix (b (n*1)), with the perception of the studied project experts about the effect of each factor of the CSF on their project, to indicate the optimum PPP contract, where in this study the previous model will be tested on The Logistic Platform in the industrial city in Hassia.

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Figure 6.1: The Practical Model for Selecting The Optimum PPP contract

CSFs	(a (n*3))				(b (n*1))		(c (3*1))
	BOT	OMM	DBM		The Project		The results
Favorable legal framework	2.28	1.63	2.88	T	X		
Political support	2.63	1.47	2.06		X		
Good governance	2.72	1.53	2.22		X		
Stable macro-economic environment	1.50	2.16	2.75		X		
Appropriate risk allocation and risk sharing	2.66	1.53	2.16		X		
Sound economic policy	2.13	1.53	2.84		X		
Project technical feasibility	2.13	1.59	2.78		X		
Through and realistic cost / benefit assessment	2.13	1.53	2.78		X		
Well organized public agency	2.09	2.72	1.50		X		
Transparency in the procurement process	1.44	2.03	2.69		X		Y
Government involvement by providing guarantees	2.13	1.59	2.81		X		Y
Available financial market	1.97	1.38	2.78	*	X	=	Y
Strong private consortium	1.63	2.25	2.75		X		
Commitment / responsibility of public / private sectors	2.09	1.50	2.81		X		
Shared authority between public and private sectors	1.44	2.69	2.09		X		
Technology transfer	2.72	2.13	1.59		X		
Competitive procurement process	2.75	1.50	2.16		X		
Multi-benefit objectives	2.59	2.06	2.75		X		
Social support	2.53	1.31	2.00		X		
Level of preparedness of the concerned sector / Nature of the service	2.66	1.53	2.13		X		
Cost of fuel, electricity, water, etc.....	1.31	2.66	2.06		X		
Provide work requirements	2.03	2.13	2.19		X		

6.2. ***Testing The Model on a Study Case:***

6.2.1 ***Introduction:***

The last part of this research work includes testing the previous practical model on a study case: The Logistic Platform in the Industrial City in Hassia (Homs – Syria).

6.2.2 ***Input Variables for the Case Study:***

In addition to the constant values which are deduced from the second questionnaire (see Figure 6.1), the variable values which are related to the pattern of the studied project were compensated with the values extracted from the results of the third survey (Table 4.18), which represents the consultants point of view about the importance of each factor of the Critical Success Factors for the project of The Logistics Platform in Hassia.

6.2.3 ***Output Variables for the Case Study:***

Figure 6.2 shows the testing of the practical model on the Logistic Platform in Hassia. The testing results shows that The Build- Operate- Transfer (BOT) contract received the highest value (124.38) among the other studied contracts, so it is the optimum partnering contract which is recommended for the studied project (The Logistic Platform in Hassia) and that's depending upon the viewpoint of experts and curators of the contracts business in Syria, this result indicates the popularity of this contract (BOT) in Syria which allows implementing major projects with the required efficiency within a specified time and rely on funding from the private sector.

On the other hand, the implementation of this type of contracts for this project (The Logistic Platform) is somewhat unfair for the public sector, where the full revenues of the project return to the private sector according to the BOT formula through the contract operation period.

Nevertheless, the logistics sector is almost non-existent in Syria, so we need the participation of the private sector in building the necessary facilities for this project and the renovation of the main streets and upgrading its technical status and prepare a comprehensive study for the road network in order to separate transit on domestic traffic and rehabilitation of the near airports to the industrial city and connect them with a railways network and main roads, in addition to assisting in the building and designing the database and training the human resources to operate the project and manage the movements of the goods and warehouses to reach an integrated operation in order to achieve significant returns to Syria.

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Figure 6.2: Testing The Practical Model on a Study Case
(The Logistic Platform in Hassia)

CSFs	(a (22*3))				(b (22*1))		(c (3*1))
	BOT	OMM	DBM		The Project		The results
Favorable legal framework	2.28	1.63	2.88	T	3.00		
Political support	2.63	1.47	2.06		2.28		
Good governance	2.72	1.53	2.22		2.52		
Stable macro-economic environment	1.50	2.16	2.75		3.00		
Appropriate risk allocation and risk sharing	2.66	1.53	2.16		2.28		
Sound economic policy	2.13	1.53	2.84		2.40		
Project technical feasibility	2.13	1.59	2.78		2.52		
Through and realistic cost / benefit assessment	2.13	1.53	2.78		2.52		
Well organized public agency	2.09	2.72	1.50		2.04		
Transparency in the procurement process	1.44	2.03	2.69		2.40		124.38
Government involvement by providing guarantees	2.13	1.59	2.81		2.28		93.13
Available financial market	1.97	1.38	2.78	*	2.28	=	110.68
Strong private consortium	1.63	2.25	2.75		2.52		
Commitment/responsibility of public/private Sectors	2.09	1.50	2.81		2.28		
Shared authority between public and private sector	1.44	2.69	2.09		1.80		
Technology transfer	2.72	2.13	1.59		2.16		
Competitive procurement process	2.75	1.50	2.16		2.40		
Multi-benefit objectives	2.59	2.06	2.75		2.28		
Social support	2.53	1.31	2.00		1.95		
Level of preparedness of the concerned sector / Nature of the service	2.66	1.53	2.13		2.16		
Cost of fuel, electricity, water, etc…...	1.31	2.66	2.06		1.80		
Provide work requirements	2.03	2.13	2.19		2.28		

CHAPTER 7

Conclusion and Recommendations

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7.1. ***Conclusion:***

The aim of this study was to develop a new model for selecting the optimum PPP contract for construction projects in Syria. In order to achieve this goal, list of factors were extracted from previous studies, which are related to the ***C***ritical ***S***uccess ***F***actors (***CSFs***) for PPP projects ranked in terms of their importance for Syria. The top five factors for Syria were (*Favorable legal framework, Political support, Good governance, Stable macro-economic environment, appropriate risk allocation and risk sharing*).

Furthermore, the ranking process on the importance was repeated for both the public and the private respondents independently with the purpose of comparing the perception of both sectors regarding the importance and the impact of each factor from the Critical success Factors. Moreover, a comparison between Syria and four other countries (the United Kingdom, Australia, Hong Kong and Malaysia) was made for the Top five CSFs for PPP Implementation.

Three extra Critical Success Factors were also added to the previous list, which are obtained from the Syrian partnership experience. These factors were (*Readiness level of the concerned sector/ Nature of the service*, *Cost of (fuel, electricity, water, etc.)*, and *Availability of work requirements*).

On the other hand, list of PPP contracts were ranked on the most favourable PPP contract for both sectors in Syria. The top three desirable PPP contracts were: Build- Operate - Transfer (BOT), Operations Maintenance & Management (OMM) and Design - Build - Maintain (DBM). In addition, the current practice of the PPP projects in Syria was analyzed using Ishikawa diagram.

A new practical model was developed to help the decision makers in both sectors to select the optimum PPP contract, taking into consideration the importance of each factor from the ***C***ritical ***S***uccess ***F***actors (***CSFs***) on the three identified PPP contracts and the studied project. Thus, the developed model consists of constant values based on the views of experts in the field (through a structured questionnaire) and some input variables related to the study project. Consequently, by tasting this model on the chosen study case (The Logistic Platform in the Industrial City in Hassia), the results highly recommended the (BOT) contract as the most appropriate contract for the studied project and that's depending on the perspective of the experts who participated in this study.

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7.2. ***Recommendations:***

This study has identified twenty two critical success factors that influence public and private partnership projects in the Syrian construction industry. Nineteen of these factors were initially identified based on comprehensive review of previous similar studies and using a questionnaire survey to uncover their importance level in Syria.

This questionnaire also sought to discover any additional factors that characterize the Syrian construction industry. As a result three additional factors have been identified: *Readiness level of the concerned sector/ Nature of the service, Cost of (fuel, electricity, water, etc.) and Availability of work requirements.*

Analyzing the current practice of PPP implementation in Syria highlighted many obstacles facing partnering contracts as illustrated using an Ishikawa diagram. The main problems facing PPP projects in Syria are lack of legislations, weakness in the administrative and legal competencies of the public sector, the immaturity of the partnership experience in the private sector and lack of experienced private and public consulting organizations in Syria specializing in financial, technical and legal aspects of PPP projects.

It is clear from the findings of the conducted questionnaire that there is an urgent need in Syria to develop a legal, cultural and regulatory PPP environment. There is also a need for transition from a planned economy to a social market economy, which can help to increase the contribution of the private sector in developing the Syrian economy.

And, the influence of the key identified CSFs has been analyzed aiming at developing a new practical framework to help decision makers in the process of selecting the optimum PPP contact for a particular project.

Finally, for future research works it is recommended to implement the previous developed tool (practical framework) for both public and private sectors independently, with comparison between the two results to find any significant difference in perception of the Public and Private respondents. In addition, the possibility to convert this tool into a software application to become an expert system that is easy to use.

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Appendix 1: The First Questionnaire

Damascus University
Faculty of Civil Engineering
Departure of Engineering Management and Construction
MSc in IT Management in construction

TEMPUS

Number:

Please return by email to alice.kahvajian@hotmail.com

The purpose of this project is to develop a new framework to help selecting the optimum PPP contract in construction sector in Syria through identifying the most important critical success factors of PPP projects.

Note:

- All responses given will be treated with the utmost confidence and the results will be used for research purposes only.
- In case of filling this form electronically, please double click on the chosen [text field/ check box] and press on the [default text /checked] then ok.

Contact Information:

Organization: _____

First Name: _____ Last Name : _____

Job Title: _____

_____

City: _____

Email: _____

Mobile Phone: _____ Phone: _____ Fax: _____

Organization Information:

Organization Name: _____

My organization is a: ☐ Public Sector ☐ Private Sector
☐ Others*
*Please specify: _____
_____

Years of experience: ☐ Less than 5 years ☐ 6 – 10 years
☐ 11 – 15 years ☐ 16 – 20 years
☐ 21 years above

Number of PPP projects I'm involved in:
☐ None ☐ 1
☐ 2 ☐ 3
☐ 4 ☐ 5 and above

1

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Critical Success Factors:

In this section, we are trying to know your view on the most important critical success factors for PPP construction projects in your organization.
Please check the box that you feel is most appropriate for each factor.

Note: The Critical Success Factors (CSFs) defines by Rockart as:
"Those few key areas of activity in which favorable results are absolutely necessary for a manager or reach his/her goals".

CSF's	Very Low	Low	Normal	High	Very High
strong private consortium	☐	☐	☐	☐	☐
appropriate risk allocation and risk sharing	☐	☐	☐	☐	☐
competitive procurement process	☐	☐	☐	☐	☐
commitment/ responsibility of public private sector	☐	☐	☐	☐	☐
through and realistic cost/benefit assessment	☐	☐	☐	☐	☐
project technical feasibility	☐	☐	☐	☐	☐
transparency in the procurement process	☐	☐	☐	☐	☐
good governance	☐	☐	☐	☐	☐
favorable legal framework	☐	☐	☐	☐	☐
available financial market	☐	☐	☐	☐	☐
political support	☐	☐	☐	☐	☐
multi-benefit objectives	☐	☐	☐	☐	☐
government involvement by providing guarantees	☐	☐	☐	☐	☐
sound economic policy	☐	☐	☐	☐	☐
stable macro-economic environment	☐	☐	☐	☐	☐
well organized public agency	☐	☐	☐	☐	☐
shared authority between public and private sectors	☐	☐	☐	☐	☐
social support	☐	☐	☐	☐	☐
technology transfer	☐	☐	☐	☐	☐

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PPP Contracts:

In this section, we are trying to know your view on the most desirable PPP contract for your organization.
Please check the box that you feel is most appropriate for each contract.

Note: Please see the appendix at the end of this questionnaire, which contains the definition for each contract from the contracts shown below.

PPP Contract	Shortcut	Undesirable	Normal	Desirable	Very Desirable
Operations and Maintenance	[O&M]	☐	☐	☐	☐
Operations Maintenance & Management	[OMM]	☐	☐	☐	☐
Design-Build	[DB]	☐	☐	☐	☐
Design-Build-Maintain	[DBM]	☐	☐	☐	☐
Design-Build-Operate	[DBO]	☐	☐	☐	☐
Design-Build-Operate-Maintain	[DBOM]	☐	☐	☐	☐
Design-Build-Finance-Operate-Maintain	[DBFOM]	☐	☐	☐	☐
Design-Build-Finance-Operate-Maintain-Transfer	[DBFOMT]	☐	☐	☐	☐
Build-Operate-Transfer	[BOT]	☐	☐	☐	☐
Build-Transfer-Operate	[BTO]	☐	☐	☐	☐
Build-Own-Operate	[BOO]	☐	☐	☐	☐
Buy-Build-Operate	[BBO]	☐	☐	☐	☐
Developer Finance		☐	☐	☐	☐
Lease-Develop-Operate	[LDO]	☐	☐	☐	☐
Build-Develop-Operate	[BDO]	☐	☐	☐	☐
Lease/Purchase		☐	☐	☐	☐
Sale/Leaseback		☐	☐	☐	☐
Turnkey		☐	☐	☐	☐

3

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Damascus University
Faculty of Civil Engineering
Departure of Engineering Management and Construction
MSc in IT Management in construction

TEMPUS

Information about the current practice of the PPP projects in Syria:

1. Do you know of any successful PPP Project in Syria? What was the reason behind its success?

2. Could you please tell me your opinion about the main problems of the PPP projects in Syria?

3. What are the main factors that cause these problems? Does the solutions for such problems constitute critical success factors for PPP projects in Syria?

4

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4. Do you feel safe / confident when participating in PPP projects? Do you trust the second party (public / private)?

5. What is your company's return by participating in PPP projects?

6. What is your opinion on laws and regulations controlling PPP contracts in Syria?

7. Do you have any additional points you would like to mention?

5

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8. In your opinion can we add one of the following factors to the critical success factors for PPP construction projects in Syria? If yes please check the appropriate box

☐ Partner selection	☐ Level of preparedness of the concerned sector / nature of the service
☐ Trust and Respect	☐ Provide work requirements
☐ Commitment at all levels	☐ Experience
☐ Team building and training	☐ Negotiation
☐ The ability to solve Problems	☐ Tax Breaks
☐ The ability to bear the cost of the project	☐ Provide low-interest loans from local banks
☐ Cost of fuel, electricity, water	☐ The creditworthiness of the General Contracting
☐ Time commitment	☐ Commitment to implement judicial rulings
☐ Track record of the concerned country	☐ Value for money

Date: / / 2012

Thank you for participating in this study

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Appendix:

PPP Contracts:

Operations and Maintenance [O&M]:

A public partner contracts with a private partner to provide and/or maintain a specific service, under this contract option the public partner retains ownership and overall management of the public facility.

Operations Maintenance & Management [OMM]:

A public partner contracts with a private partner to operate, maintain, and manage a facility or system proving a service. Under this contract option, the public partner retains ownership of the public facility or system, but the private party may invest its own capital in the facility or system. Any private investment is carefully calculated in relation to its contributions to operational efficiencies and savings over the term of the contract.

Design-Build [DB]:

A DB is when the private partner provides both design and construction of a project to the public agency. The public sector partner owns the assets and has the responsibility for the operation and maintenance.

Design-Build-Maintain [DBM]:

A DBM is similar to a DB except the maintenance of the facility for some period of time becomes the responsibility of the private sector partner. The public sector partner owns and operates the assets.

Design-Build-Operate [DBO]:

A single contract is awarded for the design, construction, and operation of a capital improvement. Title to the facility remains with the public sector unless the project is a design/build/operate/transfer or design/build/own/operate project.

Design-Build-Operate-Maintain [DBOM]:

The DBOM model is an integrated partnership that combines the design and construction responsibilities of design-build procurements with operations and maintenance. The public agency maintains ownership and retains a significant level of oversight of the operations through terms defined in the contract.

Design-Build-Finance-Operate-Maintain [DBFOM] :

With the DBFOM approach, the responsibilities for designing, building, financing, operating and maintaining are bundled together and transferred to private sector partners.

Design-Build-Finance-Operate-Maintain-Transfer [DBFOMT]:

The DBFOMT partnership model is the same as a DBFOM except that the private sector owns the asset until the end of the contract when the ownership is transferred to the public sector.

Build-Operate-Transfer [BOT]:

The private partner builds a facility to the specifications agreed to by the public agency, operates the facility for a specified time period under a contract or franchise agreement with the agency, and then transfers the facility to the agency at the end of the specified period of time. In most cases, the private partner will also provide some, or all, of the financing for the facility, so the length of the contract or franchise must be sufficient to enable the private partner to realize a reasonable return on its investment through user charges. At the end of the franchise period, the public partner can assume operating responsibility for the facility, contract the operations to the original franchise holder, or award a new contract or franchise to a new private partner.

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Build-Transfer-Operate [BTO]:

The BTO model is similar to the BOT model except that the transfer to the public owner takes place at the time that construction is completed, rather than at the end of the franchise period.

Build-Own-Operate [BOO]:

The contractor constructs and operates a facility without transferring ownership to the public sector. Legal title to the facility remains in the private sector, and there is no obligation for the public sector to purchase the facility or take title.

Buy-Build-Operate [BBO]:

A BBO is a form of asset sale that includes a rehabilitation or expansion of an existing facility. The government sells the asset to the private sector entity, which then makes the improvements necessary to operate the facility in a profitable manner.

Developer Finance :

The private party finances the construction or expansion of a public facility in exchange for the right to build residential housing, commercial stores, and/or industrial facilities at the site. The private developer contributes capital and may operate the facility under the oversight of the government. The developer gains the right to use the facility and may receive future income from user fees.

Lease-Develop-Operate [LDO] or Build-Develop-Operate [BDO]:

Under these partnerships arrangements, the private party leases or buys an existing facility from a public agency, invests its own capital to renovate, modernize, and/or expand the facility, and then operates it under a contract with the public agency.

Lease/Purchase:

A lease/purchase is an installment-purchase contract. Under this model, the private sector finances and builds a new facility, which it then leases to a public agency. At the end of the lease term, the public agency owns the facility or purchases it at the cost of any remaining unpaid balance in the lease. Under this arrangement, the facility may be operated by either the public agency or the private developer during the term of the lease

Sale/Leaseback:

This is a financial arrangement in which the owner of a facility sells it to another entity, and subsequently leases it back from the new owner. Both public and private entities may enter into sale/leaseback arrangements for a variety of reasons. An innovative application of the sale/leaseback technique is the sale of a public facility to a public or private holding company for the purposes of limiting governmental liability under certain statues. Under this arrangement, the government that sold the facility leases it back and continues to operate it.

Turnkey:

A public agency contracts with a private investor/vendor to design and build a complete facility in accordance with specified performance standards and criteria agreed to between the agency and the vendor. The private developer commits to build the facility for a fixed price and absorbs the construction risk of meeting that price commitment. Generally, in a turnkey transaction, the private partners use fast-track construction techniques (such as design-build) and are not bound by traditional public sector procurement regulations.

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Appendix 2: The Second Questionnaire

Damascus University
Faculty of Civil Engineering
Department of Construction Management
MSc in IT Management in construction

TEMPUS

Dear Sir/ Madam:

Please return by email to alice.kahvajian@hotmail.com

The purpose of this research is to determine your perception of the importance of each factor from the ***C**ritical **S**uccess **F**actors* (***CSFs***) for the three identified ***P**ublic **P**rivate **P**artnership* (***PPP***) contracts which are shown below.

Note:

- All responses given will be treated with the utmost confidence and the results will be used for research purposes only.
- In case of filling this form electronically, please double click on the chosen [text field/ check box] and press on the [default text /checked] then ok.

Organization Information:

Organization Name: _____

My organization is a: ☐ Public Sector ☐ Private Sector
☐ Others*
*Please specify: _____

Years of experience: ☐ Less than 5 years ☐ 6 – 10 years
☐ 11 – 15 years ☐ 16 – 20 years
☐ 21 years above

Essential information about three PPP contacts:

PPP Contracts	Shortcut	The Contract Period	Public Sector	Private Sector
Build – Operate – Transfer	[BOT]	Start ↓ Finish	– ownership	Builds – Operates Transfers the facility to the Public Sector
Operations Maintenance & Management	[OMM]	Start ↓ Finish	retains ownership	Operate– Maintain– Manage
Design – Build – Maintain	[DBM]	Start ↓ Finish	Own – Operate	Design – Build – Maintain

1

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Damascus University
Faculty of Civil Engineering
Department of Construction Management
MSc in IT Management in construction

TEMPUS

Please check the box that you feel is most appropriate for each factor, e.g. if you feel that the **Favorable legal framework** has **high** effects on **BOT** then please check 'box high'.
Note: There is an appendix at the end of this survey contains a definition for each factor.

CSFs	*PPP* Contracts	Low	Normal	High
Favorable legal framework	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Political support	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Good governance	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Stable macro-economic environment	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Appropriate risk allocation and risk sharing	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Sound economic policy by the government	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Project technical feasibility	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Through and realistic cost / benefit assessment	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Well organized public agency	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Transparency in the procurement process	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Government involvement by providing guarantees	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐

2

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CSFs	*PPP Contracts*	Low	Normal	High
Available financial market	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Strong private consortium	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Commitment / responsibility of public / private sectors	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Shared authority between public and private sectors	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Technology transfer	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Competitive procurement process	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Multi-benefit objectives	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Social support	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Readiness level of the concerned sector / Nature of the service	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Cost of fuel, electricity, water, etc.....	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐
Availability of work requirements	BOT	☐	☐	☐
	OMM	☐	☐	☐
	DBM	☐	☐	☐

Date: / / 2013

Thank you for participating in this study

3

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Appendix:

Critical Success Factors (CSFs):

Favorable legal framework:
Allows a PPP project to be developed without undue legal restriction on the private sector involvement.

Political support:
Policy should increase inclinations towards PPPs and barriers faced.

Good governance & Well organized public agency:
The policy makers and government departments are fundamental for successful PPP implementation.

Stable macro-economic environment:
Governments must ensure that economic conditions are favourable.

Appropriate risk allocation and risk sharing & Commitment/responsibility of public/private sectors:
The attitude of the actors (stakeholders) in a PPP project has an influence on the quality of outputs.

Sound economic policy by the government:
Governments should adopt economic policies to maintain a stable and growing economic environment, where the private sector can operate with confidence.

Project technical feasibility:
It is important to review the associated technical problems. In particular, the private contractor needs to ensure that any engineering uncertainties are resolved.

Through and realistic cost/ benefit assessment:
Before a project is subjected to the procurement process, the public client should ensure that all the potential options that are beneficial to the government and end users are considered as part of the complete project feasibility study.

Transparency in the procurement process & Competitive procurement process:
Enhance project value for money with the ability to transfer risk to the best party which is able to manage.

Government involvement by providing guarantees:
The private sector demand revenue guarantees or firmly committed from government to ensure that investments are protected.

Available financial market:
The availability of a suitable and adequate financial market.

Strong private consortium:
This relates to project implementability in the sense that where a project has the right actors.

Shared authority between public and private sectors:
This suggests that the public and private sector should respect each other when carrying out negotiations during the procurement process.

Technology transfer:
Transfer and share knowledge, experience and Technology from others are very important.

Multi-benefit objectives:
A PPP project needs to consider the private contractor's business objectives in addition to the direct objectives in achieving public services.

Social support:
Helps a PPP development and procurement process to go smoothly, particularly at the earlier stages, such as during land acquisition.

Readiness level of the concerned sector/Nature of the service:
In some cases, some activities are not absolutely independent of all others like the organizational structure, employees, budget, etc... which effect on the quality of the chosen contract.

Cost of fuel, electricity, water, etc...:
The cost of materials which are used in the implementation and operation process.

Availability of work requirements:
Insure that all work requirements and equipments are available.

4

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Appendix 3: The Third Questionnaire

Damascus University
Faculty of Civil Engineering
Departure of Engineering Management and Construction
MSc in IT Management in construction

TEMPUS

Number:

Please return by email to alice.kahvajian@hotmail.com

The purpose of this paper is to determine your perception of the importance of each factor from the ***C**ritical **S**uccess **F**actors* (***CSFs***) for a specific project (**The Logistic Platform in the Industrial City in Hassia**).

Note:

- All responses given will be treated with the utmost confidence and the results will be used for research purposes only.
- In case of filling this form electronically, please double click on the chosen [text field/ check box] and press on the [default text /checked] then ok.

Personal Information:

Organization: _____

Job Title: _____

The Logistic Platform in the Industrial City in Hassia:

The best known definition of logistic platform is probably provided by the European Association of Freight Villages EUROPLATFORMS, as "A defined area within which all activities relating to transport, logistics and the distribution of goods, both for national and international transit, are carried out by various operators".

The Syrian government gives an attention to enhance the efficiency of current logistic to serve the increasing flow of currents goods where it would bypass the process of building infrastructures to reach the level of the administration and to simplify the process of goods transit and exploitation of the area and explore the workload and that's due to the shortness of the Syrian beach and tight spaces allocated to the Syrian ports and the need to liberate them from the warehouse operations and work to transfer it to other areas.

In case of Syria the industrial city of Hassia has been chosen for The Logistic Platform by the European Investment Bank and all the stakeholders taking into account the site's strategic geographical situation, the region's dynamic development and prospects, and the opportunity offered by the development of the industrial city of Hassia.

Therefore, the establishment of the logistics platform will facilitate the management process of transferring goods and transferring the technical knowledge and experience between countries and also increase the reliability of the goods transfer process.

In addition implementing such a project is profitable financially and that's for the features that Hassia could offer in terms of getting connection to the road and rail transport and the stability of the results, which effectively reduce the costs of transport operations at 10% discount rate through providing multi-modal transport, which constitute an important element to attract investors.

1

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Damascus University
Faculty of Civil Engineering
Departure of Engineering Management and Construction
MSc in IT Management in construction

TEMPUS

Please check the box that you feel is most appropriate for the importance of each factor from the Critical Success Factors (*CSFs*) for **The Logistic Platform in the Industrial City in Hassia.** e.g. if you feel that the **Favorable legal framework** has **high** effects on **The study case** then please check 'box high'. **Note**: There is an appendix at the end of this survey contains a definition for each factor.

CSFs	Very Low	Low	Normal	High	Very High
Favorable legal framework	☐	☐	☐	☐	☐
Political support	☐	☐	☐	☐	☐
Good governance	☐	☐	☐	☐	☐
Stable macro-economic environment	☐	☐	☐	☐	☐
Appropriate risk allocation and risk sharing	☐	☐	☐	☐	☐
Sound economic policy	☐	☐	☐	☐	☐
Project technical feasibility	☐	☐	☐	☐	☐
Through and realistic cost/benefit assessment	☐	☐	☐	☐	☐
Well organized public agency	☐	☐	☐	☐	☐
Transparency in the procurement process	☐	☐	☐	☐	☐
Government involvement by providing guarantees	☐	☐	☐	☐	☐
Available financial market	☐	☐	☐	☐	☐
Strong private consortium	☐	☐	☐	☐	☐
Commitment/responsibility of public private sector	☐	☐	☐	☐	☐
Shared authority between public and private sectors	☐	☐	☐	☐	☐
Technology transfer	☐	☐	☐	☐	☐
Competitive procurement process	☐	☐	☐	☐	☐
Multi-benefit objectives	☐	☐	☐	☐	☐
Social support	☐	☐	☐	☐	☐
Readiness level of the concerned sector/Nature of the service	☐	☐	☐	☐	☐
Cost of fuel, electricity, water, etc.....	☐	☐	☐	☐	☐
Availability of work requirements	☐	☐	☐	☐	☐

Date: / / 2013

Thank you for participating in this study

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Appendix:

Critical Success Factors (CSFs):

Favorable legal framework:
Allows a PPP project to be developed without undue legal restriction on the private sector involvement.

Political support:
Policy should increase inclinations towards PPPs and barriers faced.

Good governance & Well organized public agency:
The policy makers and government departments are fundamental for successful PPP implementation.

Stable macro-economic environment:
Governments must ensure that economic conditions are favourable.

Appropriate risk allocation and risk sharing & Commitment/responsibility of public/private sectors:
The attitude of the actors (stakeholders) in a PPP project has an influence on the quality of outputs.

Sound economic policy by the government:
Governments should adopt economic policies to maintain a stable and growing economic environment, where the private sector can operate with confidence.

Project technical feasibility:
It is important to review the associated technical problems. In particular, the private contractor needs to ensure that any engineering uncertainties are resolved.

Through and realistic cost / benefit assessment:
Before a project is subjected to the procurement process, the public client should ensure that all the potential options that are beneficial to the government and end users are considered as part of the complete project feasibility study.

Transparency in the procurement process & Competitive procurement process:
Enhance project value for money with the ability to transfer risk to the best party which is able to manage.

Government involvement by providing guarantees:
The private sector demand revenue guarantees or firmly committed from government to ensure that investments are protected.

Available financial market:
The availability of a suitable and adequate financial market.

Strong private consortium:
This relates to project implementability in the sense that where a project has the right actors.

Shared authority between public and private sectors:
This suggests that the public and private sector should respect each other when carrying out negotiations during the procurement process.

Technology transfer:
Transfer and share knowledge, experience and Technology from others are very important.

Multi-benefit objectives:
A PPP project needs to consider the private contractor's business objectives in addition to the direct objectives in achieving public services.

Social support:
Helps a PPP development and procurement process to go smoothly, particularly at the earlier stages, such as during land acquisition.

Readiness level of the concerned sector/Nature of the service:
In some cases, some activities are not absolutely independent of all others like the organizational structure, employees, budget, etc... which effect on the quality of the chosen contract.

Cost of fuel, electricity, water, etc...:
The cost of materials which are used in the implementation and operation process.

Availability of work requirements:
Insure that all work requirements and equipments are available.

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Appendix 4: Related Publications

Ministry of Higher Education & Scientific Research
Jordan University of Science and Technology

Jordan Journal of Civil Engineering

An International Refereed and Indexed Research Journal

Irbid,
28th Apr. 2014

Dear *Eng. Alis Kalwalijian*

I am very pleased to inform you that your paper entitled:

The Identification of Critical Success Factors (CSFs) for Public Private Partnership (PPP) Construction Projects in Syria

has been accepted for publication and it will appear in the coming issues of the *Jordan Journal of Civil Engineering, (Vol. 8, 2014)*.

Thank you again for your contribution to the Jordan Journal of Civil Engineering (JJCE).

With best regards,

Jordan Journal of Civil Engineering
Editor in Chief
Fouad Gharaybeh

Prof.Fouad Gharaybeh

Issued by: The Scientific Research Fund, Ministry of Higher Education & Scientific Research, Amman-Jordan
Published By: Deanship of Research, Jordan University of Science and Technology, Irbid 22110, Jordan

Tel. (962-2) 7201000 Ext. 22104, Fax. 00962272010 73, P.O.Box, 3030, Irbi

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The Identification of Critical Success Factors (CSFs) for Public Private Partnership (PPP) Construction Projects in Syria

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ABSTRACT

The collaboration between the Public and the Private sectors is an important issue that has attracted the attention of most governments around the world. Public Private Partnership (PPP) is one important approach among many that meets this goal.

Syria, in the present time needs this type of contracts to reduce the huge pressure on the treasury by attracting the required funds for developing, extending and operating many vital infrastructure projects. In fact, the best results obtained from PPP contracts depend on determining the Critical Success Factors (CSFs), which are influenced by the local strategies and related to the nature of each of these factors and its importance, without neglecting the nature of the project under consideration.

This research aims at identifying the critical success factors that influence PPP projects in Syria based on previous similar studies supported by a structured questionnaire survey. It also attempts to uncover the current PPP practice and highlight the main obstacles that hinder its implementation in the Syrian construction industry. The identified CSFs are ranked according to their importance, for Public and Private Sectors independently and collectively. This research ultimately aims at developing a new practical framework to help decision makers both in Public and Private Sectors in selecting the optimum PPP contract for the construction industry in Syria taking into account the most important CSFs.

KEYWORDS: Public Private Partnership (PPP), Critical Success Factors (CSFs), Syria.

INTRODUCTION

Partnering between the Public and the Private Sectors is a way to fill in the financial gap between developing the infrastructure projects, and the financial ability of the governments specialized in developing these projects with preserving the public rights.

Partnership between the Public and Private Sectors is the key to achieve economic and social development. Thus, the investment through this method can establish large scale projects that will enhance the development, achieve economic progress and increase local products (through regional cooperation and integration across borders). This will also reduce unemployment by creating new job opportunities. This in turn, will lead to lower rates of poverty in addition to providing products and services of high quality by raising workers efficiency, developing departments of existing projects and contributing to the transfer of expertise and technology from the Private Sector to the Public which will eventually lead to sales and profits increase.

RESEARCH AIM & OBJECTIVES

There is no clear framework for selecting Public Private Partnership (PPP) contracts in Syria along with the absence of legislation which regulates the partnering process. In addition, there is a lack of experience on this procurement system despite the urgent need for this type of contracts in the present time of Syria to reduce the vast pressure on the government budget through getting help from the Private sector to finance vital and necessary projects.

The aim of this research is uncover the key critical success factors that affect PPP construction projects and to clarify its current

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practice and implementation in Syria as a first step to develop a new practical framework to help the decision makers in both of the public and private sectors in selecting the optimum Public Private Partnership (PPP) contract. This research has been carried out in The Faculty of Civil Engineering-Damascus University- Syria, between 17/10/2012 and 30/9/2013.

RESEARCH METHODOLOGY

As mentioned above, this research ultimately aims at developing a new framework to help decision makers in both in Public and Private sectors to select the optimum PPP contract for construction projects in Syria, taking into account the most important Critical Success Factors (CSFs). As illustrated in Figure 1, initial factors were initially identified based on a comprehensive review of similar previous studies. The identified CSFs were then used to design a questionnaire survey. The survey was supported to interviews to identify additional factors in the Syrian partnering environment and to understand the current practice of using PPP contracts in Syria. This helped to uncover nineteen CSFs and to rank them according to their importance, for Public and Private Sectors independently and collectively before comparing the most important CSFs in Syria with four other countries.

In the second phase of this research, the influence of each of the identified CSFs will be analyzed with the aim to develop a new practical framework, which can help to recommend the optimum PPP contract considering the relevant factors, which usually influence this decision in Syria.

Figure 1, research methodology.

INTRODUCTION TO PUBLIC - PRIVATE PARTNERSHIP (PPP)

According to The National Council for Public-Private Partnerships in the USA, the concept of partnership is defined as:

"A legal relationship existing between two entities contractually associated as joint principals in a business" (The National Council for Public-Private Partnerships, 2010).

In this case, the two entities are the Public and the Private Sectors. The Public sector is defined as:

"The part of national economy providing basic goods or services that are either not, or cannot be, provided by the private sector. It consists of national and local governments, their agencies, and their chartered bodies. The public sector is one of the largest sectors of any economy" (Business Dictionary, 2011).

And the Private sector is:

"The part of national economy made up of private enterprises. It includes the personal sector (households) and corporate sector (companies), and is responsible for allocating most of the resources within an economy" (Business Dictionary, 2011).

And the partnership contract between them is known as a PPP contract. A Public-Private Partnership (PPP) contract is "a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility" (The National Council for Public-Private Partnerships, 2010).

PPP contracts come in a variety of forms and it is not likely to find two PPP projects that are exactly the same. They vary in terms of how risks are allocated, in complexity and the degree of expertise required. Therefore, different types of partnerships translate into different types of contracts.

The most famous PPP contracts mentioned by The National Council for Public-Private Partnerships in the USA are: Operations and Maintenance (O&M), Operations Maintenance & Management (OMM), Design-Build (DB), Design-Build-Maintain (DBM), Design-Build-Operate (DBO), Design-Build-Operate-Maintain (DBOM), Design-Build-Finance-Operate-Maintain (DBFOM), Design-Build-Finance-Operate-Maintain-Transfer (DBFOMT), Build-Operate-Transfer (BOT), Build-Transfer-Operate (BTO), Build-Own-Operate (BOO), Buy-Build-Operate (BBO), Developer Finance, Lease-Develop-Operate (LDO) or Build-Develop-Operate (BDO), Lease/Purchase, Sale/Leaseback, Turnkey (The National Council for Public-Private Partnerships, 2010).

In the traditional methods of contracting in Syria, the government provides the capital and operating costs required to build infrastructure

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projects and bear the risks related to the finance and construction (such as higher costs or delays). The most commonly used traditional methods of tendering in Syria are Price Offers and Competitive Bidding. The latter is the dominant tendering method.

But recognizing the importance of sustainable development and improving the competitiveness of the economy, it became necessary to attract huge investments in various sectors to help Syria play a logistical role in the region and to reduce the pressure on the treasury by seeking help from the private sector in terms of financing, developing, extending and operating vital facilities, services and infrastructure projects.

The Syrian government has already begun to provide some of the basic requirements to achieve successful partnerships between the Private Sectors. These requirements include the political will to carry out and implement projects through granting exceptions and providing creative legislations for special projects in the absence of a clear PPP law, which ensures the rights and obligations of each party.

An example of these special and important projects is the Port of Latakia, which is a management plus revenue shared agreement (concession period 10+5 years). Other PPP projects include tourism projects in different Syrian provinces with BOT formula.

A BRIEF OVERVIEW OF PREVIOUS LITERATURE

Critical Success Factors (CSFs) are defined as:

"Those few key areas of activity in which favorable results are absolutely necessary for a manager or reach his/her goals" (Hardcastle et al., 2005).

The CSF method has been used in financial services as a management measure since the 1970s. Since 1982, it has been used in information systems and then in the manufacturing industry from 1990s. There have been attempts to apply this method in construction management. In 1996 CSFs were explored for private contractors in competitive tendering and negotiation in BOT projects (Hardcastle et al., 2005).

In 2002 CSFs were considered in the management of public clients in BOOT procurement (Hardcastle et al., 2005).

Hardcastle, Edwards, Akintoye and Li (2005) analyzed the Critical Success Factors for PPP and Private Finance Initiative (PFI) projects in the UK construction industry and grouped seventeen factors into five principal groups: (Effective procurement, Project implementability, Government guarantee, Favourable economic conditions, and Available financial market). The political support factor lies outside this principal factor grouping. Hardcastle et.al also, ignores the technology transfer factor as it is more relevant to projects undertaken in developing countries (Hardcastle et al., 2005).

Professor Ismail and Ajija (2013) used a survey to rank the CSFs for PPP implementation in Malaysia. They found the top factors to be (good governance, commitment and responsibility of public and private sectors, favourable legal framework, sound economic policy and available financial market). They also illustrated that only four factors signified the ranking difference between the public and private sectors; (Multi-benefit objectives, Competitive procurement process, Government involvement by providing guarantee, and finally Shared authority between public and private sectors).

Helmy and Lindbergh (2011) evaluated the development strategies of the Kuwaiti government, which included construction projects. The results were that the government needed to work on improving the environment for successful project implementation and to have full focus on three factors to make sure that the PPP will be successful in Kuwait construction sector. These factors were (Effective Procurement, Project Implementability and Government Guarantee) (Helmy and Lindbergh, 2011).

The following section shows how previous studies helped in the process of identifying the key critical success factors for PPP projects in Syria.

IDENTIFICATION OF CRITICAL SUCCESS FACTORS FOR PPP PROJECTS IN SYRIA

Critical success factors have been identified by many researchers to improve the success rate of PPP projects around the world. In the present study, a summary list of Critical Success Factors was developed based on previous similar studies.

Table 1 shows these factors along with the corresponding references.

Table 1: List of the Critical Success Factors (Hardcastle et al., 2005)

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Based on this initial list of possible CSFs, a questionnaire consisting of three main sections was designed. A copy of this questionnaire is available upon request. The first section was assigned to identifying the most important critical success factors for PPP construction projects in Syria. The second part of the questionnaire aimed at identifying the most desirable PPP contracts in Syrian Public and Private Organizations. The third and final part aimed at studying the current practice of PPP projects in Syria. The questionnaire also included a request to add any possible additional factors.

The calculated sample size was 30. Assuming a response rate of 25%, 120 questionnaires were distributed to consultants and managers in many government ministries interested in PPP projects and to directors and supervisors in the Private Sector and international organizations involved in developing the Syrian business environment.

A total of 34 respondents completed and returned the questionnaire. 47 % of respondents were from the Public Sector, around 41 % from the Private Sector and the rest 12% were international organizations.

Approximately 18 % of respondents have longer than twenty one years of experience, and around 9% of them participated in at least five PPP Projects.

The collected data from the first part was analyzed using the Statistical Package for Social Sciences (SPSS) software. An important index was calculated for each of the identified CSFs. This index is the statistical average of the scores given by the respondents. The identified nineteen factors were ranked in a descending order of their important indices as shown in Table 2.

Table 2: CSFs in order of their importance in Syria

For comparison between the perception of both Public and Private Sectors on the importance of the Critical Success Factors, the studied sample was divided into two groups, the first group included respondents from the public sector and the second jointly included respondents from the private sector and other sectors; such as international organizations. Table 2 shows the different ranking of the nineteen Critical Success Factors by all respondents, public sector and the private & other sectors respondents.

At the same time, an Independent Sample t-Test was conducted to find any significant difference in perception of the Public and Private Sectors related to the importance of the Critical Success Factors for the PPP projects in Syria. The result showed that there is no significant difference between the Public and Private Sectors perception.

Through the last section of the questionnaire survey, eighteen extra factors were added by respondents. These extra factors were added based on the humble Syrian experience on partnership procurement, government reports about the problems facing PPP projects and other construction projects in Syria and on various lectures attended for this purpose. Table 3 displays the sources of these additional factors.

Table 3: Sources of Possible Additional Factors

Only three factors out of the above list have been selected by 50% of the respondents or more. These are; Readiness level of the concerned sector/ Nature of the service; Cost of (fuel, electricity, water, etc.); and the Availability of work requirements.

Therefore, these three factors were added to the initial nineteen Critical Success Factors as they might be distinctive to the Syrian procurement environment.

Figure 2 shows the frequency of respondents' nomination of the suggested additional CSFs.

Figure 2: The Frequencies of the Suggested Additional CSFs

Also the respondents of this questionnaire were requested to identify the PPP contract that they see most desirable in the case of their organization, in order to identify the most favorable PPP contracts in Syria.

Received data on preferred PPP contracts was analyzed using the same software (SPSS). The descriptive statistic of the mean score was computed for four - point scale on each PPP contract. Then, the PPP contracts were ranked in a descending order according to their mean score.

As shown in Table 4, the top three preferred PPP contracts in Syria are: Build - Operate - Transfer (BOT), Operations Maintenance & Management (OMM) and Design - Build - Maintain (DBM).

Table 4: The Desirability of PPP Contracts in Syria

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COMPARISON BETWEEN SYRIA AND OTHER COUNTRIES IN TERMS OF TOP FIVE PPP CSFs

Ismail and Ajija (2013) compared between Malaysia and three other countries for the Top five CSFs for PPP Implementation (Ismail and Ajija, 2013). In the present study, Syria was added to this comparison. Table 5 below shows the top five CSFs for Syria compared to four other countries (United Kingdom, Australia, Hong Kong and Malaysia).

Generally, Table 5 shows many differences in the ranking of the top five CSFs for PPP projects in the studied countries. It shows that Syria and the other four countries share one factor, which is "Appropriate risk allocation and risk sharing". This factor was ranked second in The UK, Australia and Malaysia. However in Syria and Hong Kong it was ranked fifth.

Table 5: Top Five CSFs for Syria and Other Countries

The factor "Favorable legal framework" was on the top of CSFs in Syria and Hong Kong. While it is in the third place in Malaysia. Similarly, "Stable macro- economic environment" was ranked fourth in Syria and Hong Kong. "Good governance" was ranked third in Syria while it was ranked first in Malaysia and fourth in Australia.

We notice that Syria and Hong Kong share three factors (Favourable legal framework, Stable macro- economic environment and Appropriate risk allocation and risk sharing) with the same ranking (first, fourth and fifth) respectively.

In contrast, the factor "Political support" was ranked second in Syria, but it was ranked lower by the respondents in United Kingdom, Australia, Hong Kong and Malaysia.

The factors "Strong and good private consortium" and "Commitment and responsibility of public and private sectors" were in the top five ranking for The UK, Australia and Hong Kong. However, in Syria these factors were ranked thirteenth and fourteenth respectively.

CURRENT PRACTICE OF PPP IMPLEMENTATION IN SYRIA

In fact, the main problem facing PPP projects in Syria is the lack of legislations governing the rights and obligations of various parties. This was expressed by most of the respondents. Another problem was highlighted; weakness in the administrative and legal competencies of the public sector and the immaturity of the partnership experience of the private sector. Respondents also highlighted the lack of experienced private and public consulting organizations in Syria specializing in financial, technical and legal aspects related to PPP projects.

It is clear that there is an urgent need to develop a legal, cultural and regulatory PPP develop and support sound policies for PPP projects in Syria to determine the desired objectives and target sectors, with the aim of establishing a suitable environment that encourages both public and private sectors to engage in participatory projects. There is also a need for transition from a planned economy to a social market economy, which helps to increase the contribution of the Private Sector, which will in turn influence the popularity of these projects.

In order to analyze the current practice of the PPP projects in Syria and to analyze all the comments and the observations made by the respondents in the third section in the survey, the Ishikawa method was used (Aji, 2012). This method is useful analysis tool that provides a systematic way of looking at effects and their respective causes through a diagram representation. This diagram is based on a simple idea, similar in its stages, to the fish bone. Each arrow reflects the source of defect or deviation from the specifications in the quality of the production process, whether it is a major cause or a sub cause, it helps determine the target areas, to help collect more data for further study, and increase knowledge of the process that will help everyone learn and understand more about the factors that affect work, and how they are related to each other (Aji, 2012).

The Ishikawa method was used through the following basic steps:

1. The comments and the observations made by the questionnaire respondents regarding the current PPP practice in Syria have been collected.
2. The problem to be analyzed has been identified; the obstructions of the PPP projects in Syria.

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3. The key causes for these obstructions have been classified into in four categories (The Public Sector, The Private Sector, Administration Environment, and The Investment Environment).
4. Using the Ishikawa diagram representation, for each key cause more specific causes/factors (sub-branches) have been identified through asking a series of why? questions to establish a cause-and-effect relationship. This helped to uncover the root causes of a problem based on the respondent's answers.

Figure 3: Ishikawa Diagram for Current practice of PPP projects in Syria

As shown in Figure 3, the main problems are related to; limited sources of funding and poor experiences in both public and private sectors, the confusion between the concept of privatization & partnership that lead to a lot of misunderstanding and loss of opportunities, the absence of a regulatory authority and a clear PPP low, weak judiciary system and the multiplicity of authorities & complex procedures.

Therefore, some essential factors should be worked on to start resolving these issues and to continue improving the partnership environment that should encourage companies to invest in Syria. This can be accomplished by the development of government plans, by providing feasible studies for the most important projects needed in Syria. Moreover, there is an urgent need for transition from a planned economy to a social market economy, by providing training to human resources in both sectors to gain more knowledge and experience and to clarify the concept of the partnership for both sides. Such actions will benefit the country as a whole by supporting the partnership culture and the trust between all parties. As mentioned earlier, there is also a need to develop a clear PPP low by improving the regulatory standards and increasing the level of penalties against corruption.

FUTURE RESEARCH WORKS

In order to develop a suitable framework for selecting the optimum PPP contract based on the respondents' perception of the effect of each factor of the CSFs on the three shortlisted PPP contracts; two more questionnaires are being designed for this purpose. The developed model will consist of two matrices that contain constant values based on statistical analysis of the second questionnaire findings. The last part of this research will include testing the proposed practical model on a real life case study; The Logistic Platform in the Industrial City of Hassia (Homs – Syria).

CONCLUSION AND REECOMMENDATIONS

This study has identified twenty two critical success factors that influence public and private partnership projects in the Syrian construction industry. Nineteen of these factors were initially identified based on a comprehensive review of previous similar studies using a questionnaire survey to uncover their importance level in Syria.

This questionnaire also sought to discover any additional factors that characterize the Syrian construction industry. As a result, three additional factors have been identified; Readiness level of the concerned sector/ Nature of the service, Cost of (fuel, electricity, water, etc.) and Availability of work requirements.

Analyzing the current practice of PPP implementation in Syria highlighted many obstacles facing partnering contracts as illustrated using an Ishikawa diagram. The main problems facing PPP projects in Syria are lack of legislations, weakness in the administrative and legal competencies of the public sector, the immaturity of the partnership experience in the private sector and lack of experienced private and public consulting organizations in Syria specializing in financial, technical and legal aspects of PPP projects.

It is clear based on the findings of the conducted questionnaire that there is an urgent need in Syria to develop a legal, cultural and regulatory PPP environment. There is also a need for transition from a planned economy to a social market economy, which can help to increase the contribution of the private sector in developing the Syrian economy. In the second phase of the present research, the influence of the key identified CSFs is being analyzed aiming at developing a new practical framework to help decision makers in the process of selecting the optimum PPP contact for a particular project.

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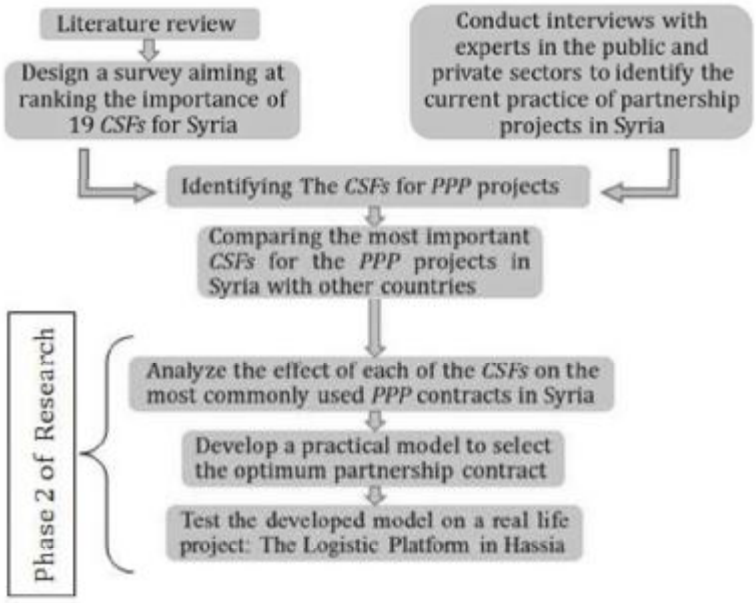

Figure 1: Research Methodology

Table 1: List of Critical Success Factors (Hardcastle et al., 2005)

Critical Success Factors	Source
Strong private consortium	Jefferies et al. (2002) Tiong (1996) Birnie (1999)
Appropriate risk allocation and risk sharing	Qiao et al. (2001) Grant (1996) Arthur Andersen and Enterprise LSE (2000)
Competitive procurement process	Jefferies et al. (2002) Kopp (1997) Gentry and Fernandez (1997) Arthur Andersen and Enterprise LSE (2000)
Commitment /responsibility of public private sector	Stonehouse et al. (1996) Kanter (1999) NAO (200 lb)
Through and realistic cost /benefit assessment	Qiao et al. (2001) Brodie (1995) Hambros (1999)
Project technical feasibility	Qiao et al. (2001) Tiong (1996) Zantke and Mangels (1999)
Transparency in the procurement process	Jefferies et al. (2002) Kopp (1997) Gentry and Fernandez (1997) Arthur Andersen and Enterprise LSE (2000)
Good governance	Qiao et al. (2001) Frilet (1997) Badshah (1998)
Favorable legal framework	Bennett (1998) Boyfield (1992)

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Table 1: List of Critical Success Factors (Hardcastle et al., 2005)

Critical Success Factors	Source
Available financial market	Stein (1995) Jones et al. (1996) Qiao et al. (2001) Jefferies et al. (2002) McCarthy and Tiong (1991) Akintoye et al. (200 lb)
Political support	Qiao et al. (2001) Zhang et al. (1998)
Multi-benefit objectives	Grant (1996) Stonehouse et al. (1996)
Government involvement by providing guarantees	Kanter (1999) Qiao et al. (2001) Zhang et al. (1998)
Sound economic policy	EIB (2000)
Stable macro-economic environment	Qiao et al. (2001) Dailami and Klein (1997)
Well organized public agency	Boyfield (1992) Stein (1995) Jones et al. (1996) Finnerty (1996)
Shared authority between public and private sectors	Stonehouse et al. (1996) Kanter (1999)
Social support	Frilet (1997)
Technology transfer	Qiao et al. (2001)

Table 2: CSFs in order of their importance in Syria

Critical Success Factors	Importance Index for overall (out of 5)	Rank		
		Overall	Public Sector	Private & Other
Favorable legal framework	4.15	1	1	4
Political support	4.15	2	6	1
Good governance	4.12	3	2	3
Stable macro-economic environment	4.12	4	3	5
Appropriate risk allocation and risk sharing	3.94	5	11	2
Sound economic policy	3.91	6	8	8
Project technical feasibility	3.88	7	10	7
Through and realistic cost/benefit assessment	3.88	8	14	6
Well organized public agency	3.85	9	5	10
Transparency in the procurement process	3.85	10	4	12
Government involvement by providing guarantees	3.79	11	12	9
Available financial market	3.76	12	9	11
Strong private consortium	3.74	13	7	14

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Table 2: CSFs in order of their importance in Syria				
Critical Success Factors	**Importance Index for overall (out of 5)**	**Rank**		
		Overall	**Public Sector**	**Private & Other**
Commitment/responsibility of public private sector	3.65	14	13	13
Shared authority between public and private sectors	3.41	15	16	15
Technology transfer	3.38	16	17	16
Competitive procurement process	3.35	17	15	17
Multi-benefit objectives	3.21	18	19	18
Social support	3.15	19	18	19

Table 3: Sources of Possible Additional CSFs	
Additional Factors	**Source**
Value for money	(United Nations Development Programme, 2011)
Tax Breaks	(United Nations Development Programme, 2011)
The ability to solve Problems	(Nhele et al., 2011)
Experience	(Nhele et al., 2011)
The creditworthiness of the General Contracting	(United Nations Development Programme, 2011)
Trust and Respect	(Nhele et al., 2011)
Partner selection	(Nhele et al., 2011)
Commitment to implement judicial rulings	(Ministry of Local Administration, 2011)
Negotiation	(Nhele et al., 2011)
Time commitment	(Ministry of Local Administration, 2011)
The ability to bear the cost of the project	(United Nations Development Programme, 2011)
Commitment at all levels	(Ministry of Local Administration, 2011)
Team building and training	(Nhele et al., 2011)
Track record of the concerned country	(United Nations Development Programme, 2011)
Provide low-interest loans from local banks	(Ministry of Local Administration, 2011)
Availability of work requirements	(Ministry of Local Administration, 2011)
Cost of fuel, electricity, water, etc.	(Ministry of Local Administration, 2011)
Readiness level of the concerned sector/ Nature of the service	(United Nations Development Programme, 2011)

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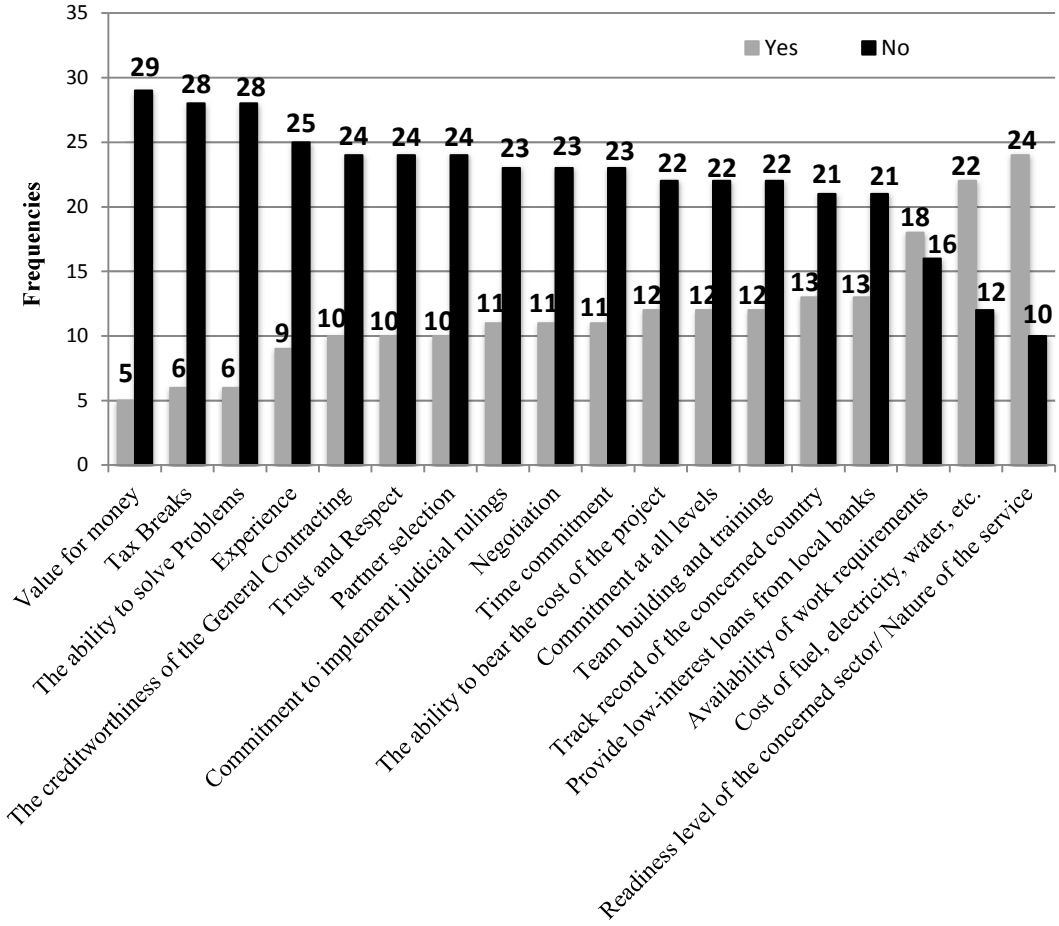

Figure 2: The Frequencies of the Suggested Additional CSFs

Table 4: The Desirability of PPP Contracts in Syria	
PPP Contracts	**Rank**
BOT	1
OMM	2
DBM	3
Developer Finance	4
DBO	5
DBFOMT	6
DBOM	7
DBFOM	8
Turnkey	9

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Table 4: The Desirability of PPP Contracts in Syria	
PPP Contracts	**Rank**
O&M	10
BDO	11
BTO	12
BBO	13
BOO	14
LDO	15
DB	16
Lease / Purchase	17
Sale / Leaseback	18

Table 5: Top Five CSFs in Syria and Other Countries					
No	**Top Five CSFs in Syria**	**Top Five CSFs in Other Countries**			
		UK	**Australia**	**Hong Kong**	**Malaysia**
1	— Favourable legal framework	■ Strong and good private consortium	♦ Commitment and responsibility of public and private sectors	— Favourable legal framework	♠ Good governance
2	Political support	❖ Appropriate risk allocation and risk sharing	❖ Appropriate risk allocation and risk sharing	♦ Commitment and responsibility of public and private sectors	❖ Appropriate risk allocation and risk sharing
3	♠ Good governance	○ Available financial market	■ Strong and good private consortium	■ Strong and good private consortium	— Favourable legal framework
4	● Stable macro-economic environment	♦ Commitment and responsibility of public and private sectors	♠ Good governance	● Stable macro-economic condition	Sound economic policy
5	❖ Appropriate risk allocation and risk sharing	Thorough and realistic assessment of the costs and benefits	Project technical feasibility	❖ Appropriate risk allocation and risk sharing	○ Available financial market

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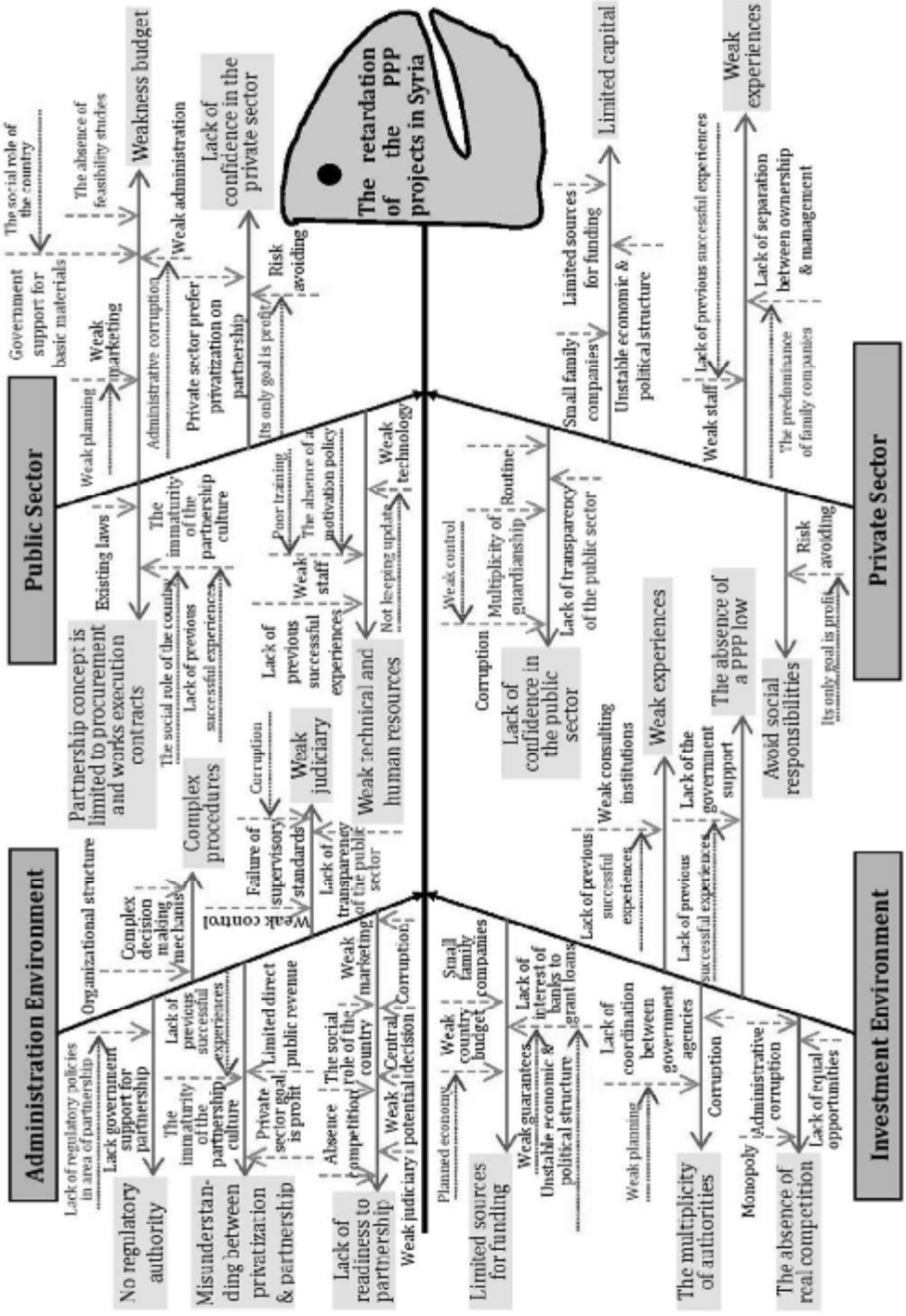

Figure 3: Ishikawa Diagram for Current Practice of the PPP Projects in Syria

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