

QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

PUBLIC-PRIVATE PARTNERSHIP IN QATAR.

BY

EMAN ABDELRAHMAN ALKHODARI

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## COMMITTEE PAGE

The members of the Committee approve the thesis of  
Eman Abdelrahman Alkhodari defended on 07/05/2020.

---

Belaid Aouni  
Committee Member

---

Mustafa Abdulkarim  
Thesis/Dissertation Supervisor

---

Emad Awadallah  
Committee Member

---

Josette Caruana  
Committee Member

---

Adel Elgharbawy  
Committee Member

Approved:

---

Dr. Adam Mohamed Fadlalla, Dean, College of Business and Economics

## ABSTRACT

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Public-Private Partnership in Qatar.

Supervisor of Thesis: Mustafa, E, Abdulkarim.

This study investigates within the context of public-private partnership (PPP), the relationship between performance (PM), critical success factors (CSFs), value for money (VFM) and corporate governance (CG) in Qatar. The study distributed an online survey to 60 employees involved in PPP projects in the private and the public sectors. Survey data was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), ordinary least squares regression (OLS) and factor analysis.

The results revealed a significant relationship between CG and Performance. The findings led to accepting hypothesis 1 and 4. The findings rejected hypothesis 2 and 3 wherein the critical success factors and value for money have no mediating role between corporate governance and performance. The study examined whether the above measures of CSFs, VFM and CG are significantly loaded on their respective constructs. To this effect, it was found that all the construct items load on the constructs they were designed to measure.

The study advances our knowledge in the area of PPP where it has a complex relationship between key players, of which, to best of the researchers' knowledge, has not yet been explored. This is especially the case when employing PLS-SEM technique to examine the above-mentioned mediation effect. Managers/owners should focus on the CFS factors highlighted by the study and consider that CG would highly improve PPP performance. Policymakers should be more concerned about regulations related to PPPs.

In other words, decision-makers and policymakers should ensure that CSFs, and VFM suits CG requirements, which could lead to better performance of PPPs.

Key words: PPP, Corporate Governance, Critical Success Factors, Value for Money, Structural Equation Model

## DEDICATION

*First and foremost, I am thankful to Allah who gave me faith and power to achieve this accomplishment.*

*Then, I dedicate my work to my parents, my husband, my children, my family, and my friends.*

*Thank you all for supporting me and helping in paving my path to success.*

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## Chapter 1: Introduction

### 1.1 An Overview

Countries all over the world are seeking ways to manage and finance the public assets and services like roads and airports. The government used to be the only party that offers such services, which is the old known way. Nowadays, the lack of government resources and the continuous increase of obligations opened the ways for a new method to emerge, which is called Public Private Partnership -PPP- (Tomja, 2017). PPP can be defined as a long-term contractual arrangement between a public and a private sector. The aim of applying this method is to share resources and risks in order to develop a public facility (Jefferies, 2006). It became a popular choice for policymakers who are looking for implementing public projects. It also enables governments to develop private sector sources of finance besides the benefits of skills and management that the private sector has. The international public sector accounting standards board approved IPSAS 32 about service concession arrangements as a way to support governments to build infrastructure through those arrangements as they enhance transparency and accountability of public sector entities. Until now, there is no international guidance on how to deal with transactions in such cases, so the need for laws and standards is a must (IPSASB, 2011).

After the recent success of PPP in many countries, it was important to focus on the considerations that are critical to the success of the PPP projects' implementation (Ismail, 2012). Since the late 1990s, different areas of PPP have been investigated by researchers worldwide, such as risk management and procurement. However, the last decades testified much attention to the success factors area of the PPP. The critical success factors -CSF- are necessary key areas of activities that must be present in order to succeed and achieve the attained goal (Osei-Kyei and Chan, 2015). Lechler and Dvir (2010), believe that one of

the factors that affect the project's success is having an effective project governance structure. To go deeper, given the nature of the projects, each one needs a unique governance structure (Malach-Pines, Dvir, and Sadeh, 2009).

In one sense, the new infrastructure is always polemic, and the public interest needs to be protected, so the tight governance is needed to protect the public interest (Hodge and Greve, 2018). Corporate governance as a critical success factor was investigated by many of the previous researchers in the area. The concept of corporate governance is about having structure and process in place to control and monitor the organization. In a broad view, it is how the organization is managed and the ways in which it deals with the different stakeholders (Edward and Clough, 2005).

Given the importance of PPP for both governments and private sector, it is also crucial to understand the relationship between the two sectors to find the critical factors that lead to success, considering the focus on governance. Qatar has impressively recorded interesting rates in the economic growth during the last few years. QNV 2030 focused on many aspects that need to be developed, which included infrastructure. Infrastructure is one the core objectives that is involved in the application of the strategies. Besides that, PPP was involved in the development plan because it is a mean for constructing the infrastructure. Qatar was able to link the two terms; -PPP and infrastructure- in the power sector. The first independent power and water project was launched in 2001 in RasLaffan on a PPP basis. Projects in other sectors was launched include Water and waste management, transportation, and education projects (Qatar Financial Center Authority, 2012). Finally, The PPP law in Qatar is at the final stages of approval and it is expected to clearly define the rights, obligations, and accountabilities of all the affected parties

involved in a PPP business venture (The Peninsula Qatar, 2019). Thus, the investigation in this paper will be held in the Qatari environment.

This chapter proceeds as follows: section 1.2 presents the background of the study; it briefly explains the PPP and the critical factors needed for success. Then section 1.3 describes the objectives of the study; the section is followed by the research questions, that appear in section 1.4. the research methods are explained in section 1.5, followed by the contributions of the research. The chapter concludes with a description of the thesis's organization.

## **1.2 Background**

Public private partnership (service concession arrangement) is defined as an agreement between the government and a private sector partner. Where the private sector partner uses particular asset to supply a public service on behalf of the government for specified period of time and is paid for the services over the period of the arrangement (PPPIRC, 2015). This arrangement allows public sector to use private sector technology to provide better public services, encourage competition in the local economy, share the risks, and supplement the limited public sector capabilities to meet the growth and demanded help to deliver projects on time and within budget (Rajaram, Minh Le, Kaiser, Kim and Frank, 2014).

Two types of PPP were given, the first type is “Build-Operate-Transfer” arrangement. Where the operator constructs the infrastructure to be used to deliver a public service. The second type is “Rehabilitate-Operate-Transfer” arrangement. Which means that the private sector upgrades the existing infrastructure and maintains and operates the upgraded infrastructure. However, there are other different spectrum of PPP models that

have been implemented like design build finance operate DBFO, build transfer operate BTO, design build operate maintain DBOM, build own operate transfer BOOT, operate and maintain O and M, design and build D and B, build lease transfer BLT, and design construct manage finance DCMF (Aggestam-Pontoppidan and Andernack, 2016).

From accounting perspective, Heald and Georgiou (2011) illustrate “risk and reward” and “control” approaches. It is a criterion to determine the balance sheet treatment; they show which party in the PPP has the majority of risk and reward and which party controls the assets. They found that the risk and reward approach did not lead to consistent treatment of PPP projects in the financial statements. Also, the switch to the control approach that has many difficulties and no detailed analysis was done, but it is more objective and less exposed to manipulation.

Under UK GAAP, risk and reward rule is used and the ownership of assets is based on it. Therefore, having the higher risk means owning the assets and recording it in the balance sheet. The problem with this rule, is that the other party -who is not taking the risk- will not record anything. Another issue with this rule is the risk. As the determination of the “major risk” differ for the public party and the private party of the PPP. Thus, the complexity in accounting will show up when each party deal with the “risk and reward” and “major risk” in different ways according to the rule in UK GAAP (Aggestam-Pontoppidan and Andernack, 2016).

Elaborating further in the risk aspect, Wibowo and Alfen, (2015) found that having sensible and manageable risk sharing was among the top critical factors in their study, which was already confirmed by multiple studies conducted in multiple national contexts. Besides that, they had other critical factors such as having political support and having



defined mechanisms for PPP needs. Additionally, as the public sector design and finance the operations for the private sector, having clear risk sharing agreement and support will protect both involved parties in order to achieve the goal, which is a successful project. In addition to that, one of the top critical success factors was the corporate governance, which will be discussed in detail in the coming sections. It was vital to focus on the corporate governance in this study as Shaoul, Stafford, and Stapleton (2012), mentioned a gap in the public sector governance, and the interface between the two sectors.

### **1.3 Objectives of the Study**

The overall objective of this study is to identify the critical success factors of the public private partnership projects with a focus on the governance perspective in Qatar. Following the 2007-2008 global financial crises, governments around the world sought for adopting public private partnership policies to benefit from the private sector's expertise. Moreover, there was a growing global support for PPPs to focus on the need for a huge scale-up in the infrastructure investment in developing countries (Leigland, 2018). As a result, researchers attempted to focus on this area. The publications gave insights to both practitioners and future researchers to understand the topic better. The previous research worked on topics like risk management and procurement. Later on, another area received attention that is PPP success factors which has a great importance to future researchers due to the growing PPP markets (Osei-Kyei and Chan, 2015).

The topic is important because it will help both public entities and private companies in avoiding unsuccessful projects. Also, it will highlight the areas which projects rely on to be successful. The output of this paper will also be an addition to the

decisions and policymakers as it will give some insights about the factors affecting PPP projects so that they can put these factors in their agenda. All these efforts made pour into implementing Qatar National Vision 2030 that serves as a roadmap for the future to balance the development in the economic, social, human, and environmental resources for the coming decades (General Secretariat For Development Planning, 2008). That was the most critical motivation for this study besides the need for understanding the nature of local projects as the market is booming and there is a lack of research in Qatar about this topic.

Hodge, Greve and Boardman (2017), mentioned that priority directions for future research can be set. The research issues that deserve high attention include governing PPP and PPP in the developing countries. Osei-Kyei and Chan (2015), underlined the trend of increasing research on CSF for PPPs that would encourage the governments to embrace and implement policies that succeeded in other places. They were able to study the same topic of this paper in some middle eastern countries like Lebanon, Egypt, and UAE but nothing was done in Qatar. In addition to that, the ease of access to resources encouraged the selection of Qatar for this study.

#### **1.4 Research Questions**

Public private partnership became a popular strategy around the world for the purpose of delivering infrastructure projects. It is considered to be an important and innovative part of the current public infrastructure agenda. Many aspects of the PPP have seen research like economic, social, and political aspects. However, little research was conducted on how PPP assists in governing, and PPP in general in the developing countries. Hodge and Greve (2018), also suggested for the future research to investigate

the governments' efforts in governing their PPP deals. Edwards and Clough (2005) pointed that corporate governance is used in both public and private sectors with some differences and similarities. However, at the end, both will monitor the performance of the entity and will make sure to comply with legal requirements standards. Caperchione, Demirag, and Grossi (2017), suggested that interested researchers would go deeply into examining governments efforts in determining policies and reforms in the area of PPP. Governments' framework could provide insights regarding the mechanisms of implementing policies related to PPP.

This paper will add to the previous literature some new results on the critical success factors in a developing country like Qatar and will shed more light on the corporate governance as a critical factor. Also, it will enrich the PPP area by measuring the knowledge of the employees about the PPP treatments and laws specially after the launch of the PPP law in Qatar. Briefly, this study will investigate the following main questions:

1. What are the ranked critical success factors for public private partnership projects?
2. What is the impact of corporate governance on project performance?
3. What is the accounting and legal framework status in Qatar in the PPP environment?

### **1.5 Research Methods**

The research methodology used to achieve the research objectives are: analyzing the previous studies that are related to this research in order to find gaps and limitations for future research. Plus using a questionnaire that will be distributed to employees from both public and private sectors who are involved in PPP projects to help answering the research

questions. The sample comprises 60 survey distributed for 20 organizations in Qatar. The survey was validated by academics and practitioners. Then, the results were analyzed using IBM SPSS and SmartPLS.

### **1.6 Contribution of Study**

The study adds to the previous literature of PPP by using the methodological techniques like content analysis and interviews. It was conducted relying on both primary and secondary data sources. First, the secondary data was collected from analyzing previous research papers, articles, and reports. Recent publications and academic journals were preferred when gathering information, plus that world bank reports were selected among others. Opara and Rouse (2019), used a qualitative case study methodology by using archival and field-based interviews to collect and analyze data. They reviewed PPP contracts and publicly available documents by the government in Canada.

This paper used the questionnaire method to collect primary data from multiple stakeholders who are involved in PPP projects, including employees with accounting background in order to shed the light on the accounting role in the PPP. In addition to that, gathering data from employees with engineering background helps in investigating the practical side of the projects specially the critical success factors related to the technical issues.

As the PPP contains different stakeholders, the network theory is appropriate for the theoretical framework. Hodge and Greve (2017) advocate that the use of network theory supports the performance related issues specially in the PPP context. This study examines the relationship between the different variables using this theory. In addition to that, the relationship between some variables was not examined before, which makes it

a contribution to this paper. Almarri and Boussabaine (2017), wrote that researchers applied CSF to expand the understanding of the PPP performance, but only little investigated the link between the CSF and performance. This led to a deeper contribution, which is the mediator impact of critical success factors and value for money. As the hypothesis investigate the relationships between corporate governance and performance by examining the mediation impact in this relation. Biygautane, Hodge, and Gerber, (2018), used secondary data in their paper to show the governance related issues that are challenges for the PPP projects. In contrast, this paper focuses on the corporate governance aspect and its impact with a primary data source which is a survey distributed to employees engaged in the PPP projects from different sectors and different backgrounds.

### **1.7 Thesis Organization**

This study consists of six chapters. The first one is the introduction to the topic that gives general idea about the PPP and what will be done in the rest of the chapters. Chapter two is the literature review that discuss what has been investigated in the area plus the gaps found in the previous studies. Then, the third chapter addresses the theoretical framework and the related theories in the area. It concludes with the hypothesis development. Chapter four discusses the methodology and the details of data collection. The fifth chapter explains the analysis and discussion of the findings. Finally, the sixth chapter summarizes the whole research besides limitations and future research direction.

## Chapter 2: Literature Review

### *2.1 Introduction*

Many previous studies addressed the public-private partnership from different perspectives and put up diversified questions. This paper will rely on what has been discussed about PPP regarding specific areas, and it will add more details as the knowledge needs to be cumulative. Chapter 2 is essential in the research because it gives a comprehensive background knowledge about what previous researchers wrote about PPP, accounting topics, critical success factors, and corporate governance.

Prior studies investigated the different types of PPP and the different definitions around the world. Some other studies were interested in discussing the accounting issues related to the PPP like the international standards and classifications. Over time, researchers were attracted to more details about PPP like rating the critical factors that affect the success of the projects. In addition, corporate governance was one of the major factors affecting the PPP projects; that is why some researchers devoted their time to cover this factor. Finally, understanding such details requires deep reading and investigation to find out gaps and to answer research questions.

Literature review helps in placing this paper in the right position. As a result, the literature review will be based on the analysis of the previous work as the order of the topics mentioned above. In addition, the studies will be classified based on the development degree of the country -developed, developing, and underdeveloped-. This classification will help in analysis and results. As well as this method could help in creating arguments regarding the results of the studies conducted in the same development level.

## ***2.2 Public-Private Partnership***

There is still no widely recognized definition for the public-private or accounting framework, but each country had its own definition. (Liu et al., 2015). For example, in Korea PPP is considered as a project to build and operate infrastructure such as roads, ports, and schools. Those facilities are run by the government's fund with tapping the creativity and efficiency of the private sector. While in South Africa it is a commercial transaction between the government and the private sector in which the second party performs an institutional function for a specific period of time. The private party gets a benefit for that function from the government.

In the United Kingdom, PPP is defined as arrangements of joint working between public and private sectors. The most used type in the UK for the PPP is the private finance initiative, which means the public sector contracts to get services -derived from investment in assets- from the private party based on long-term agreements. Finally, in Australia its related to the provision of infrastructure, and any services that contain private investment or financing that worth more than AUD 10 million is not related to the general procurement of the services.

Korea, UK, and Australia are developed countries, however they had three different definitions for the PPP. Terms like "project" and "agreement" were used to express the relation between the two sectors. While Australia expressed the PPP based on the delivery of the project that worth a specific amount of money or more. Then, South Africa as a developing country used the term "commercial transaction" to clarify the PPP (OECD, 2012).

In real life, there is a need to think about PPP as a phenomenon not only a project delivery. The term that best describes the PPP is the “agreement” because the first step of establishing a PPP project is by having an agreement between two parties, then comes the commercial issues. It is noticed regarding the definition that even the developed countries didn't settle on view (Hodge and Greve, 2017).

For the purpose of this research, PPP is defined as an agreement where public sector joins a long term contractual agreement with private sector entity for the construction or management of public sector facilities (Biygautane, 2017). This definition was used because it involves plethora of models and types like BOOT, BOO, and DBFO. However, the level of private sector involvement is the decisive part between the models.

As the PPP flourish in the developed countries, the World Bank is pursuing to promote the PPP in the developing countries (Hodge and Greve, 2017). The PPP phenomenon was acknowledged in Qatar in the government documents only in 2008 which is very recent. QNV 2030 mentioned in details a long term objective that says the state shall guarantee a balanced cooperation between private and public activity...etc. Qatar stepped toward PPP for the first time in Ras Laffan IWPP -independent water and power project- on 25 years contract followed by other project for power and water. In addition, more than \$140 billion were estimated for mega-infrastructure projects like rail networks, FIFA 2022 stadiums, hotels, and roads (Biygautane, 2017).

This new method of delivering projects is still in the growth stage in Qatar, therefore it's expected to have delays and cost overrun compared with leading countries in PPP like the UK. Also, the lack of research regarding this topic in Qatar makes things more



complicated as the involved employees may not have enough knowledge about the topic theoretically and practically.

### ***2.2.1 Value for Money***

The performance of PPP around the world is contested, and remains the main issue of debates. It is able to deliver increased efficiencies, that can be measured by value for money -VFM- compared against conventional project equivalent -public sector comparator- (Opara, Elloumi, Okafor and Warsame, 2017). However, some conditions should be put in mind to guarantee the success of the project. First, number of capacities required from the government in terms of skills, legal framework, and institutional structure. There should be a system for assessing the value for money using a comparator and transparent guidelines. Plus that, some attention should be paid to the classification and measurement of the risk. And who ever work on that should have the knowledge about accounting and budgeting practices.

The second condition is that the government should evaluate whether the project represent value for money or not. This step can be done by the comparator, its all about comparing the net present cost of bids with the most efficient form of delivery according to a procured public sector reference project (OECD, 2012).

According to Torchia, Calabro, and Morner (2015), there are some determinants of VFM: risk transfer, nature of contract, competition, performance measurement, and private party's managerial skills. The authors built their conclusion based on systematic review of articles published in 1990 to 2011. Ismail (2012), investigated the factors that enhance the VFM in PPP using a questionnaire survey in Malaysia. It was found that competitive tender and private sector technical innovation were among the top factors. The author added

limitations in determining whether the project demonstrates VFM or not: poor information quality, determination of best choice, risk transfer problems, and lack of comparability between PSC and PPP option. On the other hand, some factors were identified that enhance the achievement of VFM, like: competitive tender, private sector technical innovation, project efficiency, and performance-based payment mechanism.

Generally, the value for money can be defined as what the government considers as an ideal combination of quantity, quality, feature, and price expected over the whole lifetime of the project. In order to make sure that the project is delivering value for money, sufficient and proper risk should be transferred. The risk must be carried by the party that can manage it better (OECD, 2012). The study of Burke and Demirag (2017), used interviews to discuss the risk issue, and said that to obtain VFM, risk should be allocated to the party that manage it better. That raised an important question which is: how risk is allocated, transferred, and managed.

Hodge and Greve (2017), explored the notion of PPP success criteria and proposed a new conceptual model. However, at the same time they criticized criteria like “on time”, “on budget”, or “value for money” as all weak to measure the efficiency. Instead, efficiency can be measured in terms of unit cost for example. As the PPP is a sophisticated network, value for money should not be the only criteria to judge on PPP, as VFM itself should be treated as major issue under the PPP.

### ***2.2.2 PPP Performance***

Working on such projects needs some criteria to decide whether the work is performed efficiently and effectively or not. Consequently, Liu et al. (2015), focused on the PPP performance measurements. The study confirms that performance measurement

plays an important role in the business success and performance prism has a strong ability to capture special features of the PPP. Performance measurement is basically quantifying and reporting effectiveness and efficiency of performed actions. In the relation between the public and the private sector regarding the PPP projects, the payments and the performance will depend on the successful delivery of the project.

Lop, Ismail, and Isa (2017), used interviews to identify the importance of KPIs in measuring performance. Five ways were discussed that measure the performance: balance scorecard, quality based excellence model, performance PRISM, key performance indicators, and Malcom baldrige for performance excellence. Although, KPI is considered as the most commonly used and useful tool, its still not meeting the criteria . Liu et al., (2015), argued that in order to pick the best way to measure the performance, the general area of PPP performance measurement must be understood first. Paraschi, Georgopoulos, and Kaldis (2019), agreed also with that opinion as the key performance areas should be mapped first. The authors proposed a version of the European Foundation of Quality Management that intend to develop a holistic excellence model merging the major airport key performance areas to explain the mechanisms of their interactions. They found that employees, leadership, and operational results are the critical success factors to success.

In that area, Liu, Love, Smith, Matthews, and Sing (2016), wrote that the organization's and the project's goals should be met and should be put in mind while measuring. They added that KPI was criticised for being overseeing the project rather than the company performance. Therefore, having an integrated performance measurement system -PMS- deemed to be more suitable for the Australian PPP. The results were built based on interviews with key stakeholders, and it was revealed that performance

measurements focused more on ex ante and ex post evaluations that are aligned to time, cost, and quality. Vajdic, Wundsch, and Temeljotov-Salaj (2013), were seeking to investigate the KPIs based on the analysis of CSF to monitor the PPP projects. Brainstorming technique was applied to a group of experts to generate the results. The study suggested that evaluation of projects performance should be assessed based on the opinion of the different stakeholders. Also, the accurate analysis of performance can be attained after the KPIs are determined. Liu et al. (2016), agreed with that and found that the performance Prism showed a strong ability to capture the discrete feature of PPP. The performance of PPP can be measured under the performance Prism by: stakeholder satisfaction, PPP strategies, PPP processes, PPP capabilities, and stakeholder contributions.

Muhammad and Johar (2017), used structural equation modeling approach to develop a conceptual framework that evaluate the success of PPP projects. Indicators of a successful project were identified: greater value for money, adequate financial return for the private party, cost saving, less construction time, high level of quality, and stakeholders' satisfaction. Almost the same indicators were mentioned in the study of Lop, Ismail, and Isa (2017), except for the quality indicator.

Although the analysis of success varies according to sector and project class, there is no clear method for measuring the success using KPIs. In the study of Villalba-Romero and Liyanage (2016), the authors used four case studies to assess the success of the projects like KPIs, performance measures, and qualitative data. The data was analysed by manual Qualitative Comparative Analysis approach. According to the study, the success of a project can be measured by three perspectives: project management, stakeholder, and contract management. Accordingly, the overall success can be determined by bringing all

of the perspectives together. Gao (2015), concluded that both developing and developed countries showed that most performance-oriented reforms achieved mixed results. However, for the performance to be improved, goals should be clear, specific, and time sensitive. The author mentioned that BSC has been extensively used in public sector organizations because its measures are related to different perspectives. Performance in PPP environment should be focused on from the different stakeholders not only the final result of the project.

### ***2.3 Accounting Issues in PPP***

As discussed earlier, the PPP is an agreement between two parties -the government and the private sector-. Those parties have different structure, nature, and accounting policies that's why it's expected to have complexities in the accounting field. One of the important impact of accounting on government is derived from its classificatory function. This impact has increased with the move of some countries from government accounting on a cash basis to accruals accounting. As the United Kingdom pioneered the private finance for the public infrastructure, Heald and Georgiou (2011), explained in details some accounting criteria in some areas of financial reporting regarding the treatment of the balance sheet for PPP. They talked about risk and reward and asset control. In addition, the UK experience with PPP accounting was examined under the UK GAAP.

Under the UK GAAP, the ownership of assets is determined based on the risk and reward rule. That means that the party that bears more risk will record the assets in its balance sheet and it will be considered as the owner of that asset. A potential problem with this rule is that only one party will record the asset and the other will not. Accordingly, the future obligations of the party that has not recorded the asset will be understated. Also that

rule affects the determination of the risk. Opara, Elloumi, Okafor, and Warsame (2017), aimed to contribute to the accounting literature on PPP by understanding the effect of institutional environment on project outcome. The study mentioned that PPP needs new paradigm that put in mind the complexity of risk sharing mechanisms. The risks that could be affected are market risk, revenue risk, construction risk, political risk, ...etc. Therefore, the effectiveness of each risk will depend on the type of the project. For instance, the government might consider its major risk as the environmental risk, while the private entity might consider the constructions risk as the major one. The study found that political environment, business environment, and organizational capacity affect the output of the projects.

The operator usually use a special purpose vehicle (SPV) or special purpose entity (SPE) to deal with the project. Burke and Demirag (2017), mentoned that transferring risk to SPV helped in improving the design and having efficient work practices. The SPE accounts could show the infrastructure as a tangible asset and it will be depreciated during its useful life. Later on, debtor accounting appeared and recognized the assets as a financial asset not a tangible asset avoiding the depreciation expense. Because of the transitions in the accounting treatment of PPP, the assets were not disclosed on either parties' balance sheet. That situation led to a conflict between the UK national reporting requirements and the UK GAAP, as its required by the UK national reporting that entities disclose assets on its balance sheet. Broadbent and Laughlin (2003), noted that the risk transfer at the predecision stage gives a positive advantage.

While the UK GAAP had some conflicts with PPP, even the IFRS -international financial reporting standards- did not have a specific standard to deal with it. But, later on,

IFRIC 12 was introduced to deal with PPP for the operator accounts. IFRIC 12 states that to consider an arrangement as a service concession, it must fulfill two conditions: the first one is that the grantor controls what services the operator must provide with infrastructure, to whom, and at what price. The second condition is that the grantor controls via ownership, beneficial entitlement or any significant residual interest in the infrastructure at the end of arrangement. After the conditions are met, the operator must follow IFRIC 12 to recognize, measure, and disclose the PPP. The main issue with this standard is that the terms 'control' and 'regulate' are used as alternatives which could be misleading. The term 'regulate' is much broader under the government that's why issues will happen. For instance, when the government regulates the electricity costs of the private entity, does that mean the government is controlling the private entity? If so, then the government can record the private entity as its asset in the balance sheet which is not possible.

The concept of control has changed throughout the years which made it a vague concept. For example, if 100% of ownership was known as control, then 75% or lower percentage of ownership was included as control too. So, there is no certain explanation of the control. (Heald and Georgiou, 2011).

There is no relationship found between 'risk' and 'reward' concept and control concept. If we assume that company A controls a subsidiary 51% but bears 3% of the total risk, then it can be concluded that the company has control on its subsidiary with little risk. So, based on UK GAAP and other standards that use risk and reward concept, the company A does not own its subsidiary. But, according to IFRS company A owns its subsidiary. The international public sector accounting standards -IPSAS- issued a standard that is almost similar to IFRIC 12 to deal with PPP in the public sectors' accounts. IPSAS 32 basically

deals with such arrangements with the same conditions of IFRIC 12. It should be highlighted that another problem appeared between IPSAS and UK national reporting requirements regarding the accounting policy of PPP. In few words, the issue is about the time of recognition of the asset, and the removal of the word significant from the conditions provided by IPSAS 32. However, the time of recognition issue was resolved but the omission of word ‘significance’ from the definition would change the meaning. Opara, Elloumi, Okafor, and Warsame (2017), cited that there are no enough adequate accounting standards for PPP that’s why there is a need for new paradigm that deals with this level of complexity (Heald and Georgiou, 2011).

Accounting treatments under IFRS and IPSAS is a critical part of this paper as it enriches the link between the accounting and the public-private partnership. The knowledge of such issues is an important part of the study as Opara, Elloumi, Okafor, and Warsame (2017), argued that the costing of such models needs technical expertise of accountants. That’s why the few coming pages will explain the PPP from an accounting point of view. Assuming that country X is adopting IFRS for the private sector entities and IPSAS for the public sector entities, then the accounting treatment for PPP would be the following:

IFRS:

- Followed by private entities (operator)
- Uses IFRIC 12
- Recognition: the operator will recognize assets to extent the amount to be recovered from the grantor, that in the case of receivables not the tangible assets. Regarding the intangible assets, the operator can recognize them as a



license to operate on the given infrastructure. Furthermore, the operator accounts for revenue of the project plus the costs related to the constructions. One important case should be focused on which is if the grantor gave any assets to the operator, then the operator recognizes them under property, plant, and equipment.

- Measurement: measured at fair value.

IPSAS:

- Followed by public entities (grantor)
- Uses IPSAS 32
- Recognition: the grantor recognizes the liability as a future obligation to make payments to the operator (financial liability model). As well the grantor records the liability as obligation to make the infrastructure available to use (grant of right to operator model). The grantor also accounts for expenses to be made to the operator, and records it as performance obligation.
- Measurement: measured at cost.

Both standards are imposing the same disclosure requirements which include: first, a description of the service concession arrangement. Second, clarify the significant terms of the arrangement that may affect the amount, timing, and certainty of future cash. Finally, disclose information about the nature and extent of rights to use specified assets, obligations to provide or rights to expect delivery of services, obligations to acquire or build PPE, obligations to deliver or rights to receive specified assets specially at the end of concession period and termination options, and other rights and obligations (PwC, 2018; Ifac, 2013; iasplus, n.d.).

One advantage of PPP addressed by Schwartz, Corbacho, and Funke (2008), is that governments benefit from private financing to enhance the infrastructure investment without adding instantly to the borrowing and debt. While Leigland (2018), disagreed with that opinion because PPP does not provide low expenses or less debts, its all about accounting allowing projects costs to be moved off the government's books. The author attempted to summarize the critiques of PPP in low-income countries so that the negative side is shown. For instance, in 2009 when the UK changed its accountig rules some projects looked less attractive which concludes that the public sector comparator failed to accurately forecast the PPP project cost.

Opara, Elloumi, Okafor, and Warsame (2017), took up an issue that there are some concerns about the debt level and the risk of unrestricted borrowing posed to the government, that might lead to impose limits on public borrowings. One important point that needs to be highlited, is that some previous studies suggest that PPP projects in developing countries have higher preparation costs than other developed countries. The need for complex bidding process could be a reason, besides that value for money analysis should be done to compare with the traditional procurement.

Hodges and Mellet (2002), examined the private finance initiative from accounting perspective. The entity concept and its impact on the public accounting reports was explored from hospital trusts. The study provided evidence regarding the contradictions of the financial reporting in the UK. The authors added that assets and borrowings of PFI would not appear in the balance sheet of the public entity, as the contract was drafted in advance to show that. Regardless of how the books look like, the disclousre of such details must be clear and transparent. Musawa, Ismail, and Ahmad (2017), aimed to understand

the perception of PPP experts regarding the disclosure of information. A questionnaire survey was used in the study besides the content analysis. It was derived from the previous studies that the extent and quality of the voluntary disclosures were low which is contradicting with the author's results. In addition, results of previous study where some assets and financial obligations were not reported. That also happened in private entities when five annual reports of different firms were analysed to assess the disclosure policies and reporting systems, the analysis showed that the reports were not transparent enough with no meaningful information on the risk and reward of the PFI scheme. The budget documents should include objectives and summary of the PPP projects with details like: the future service payments receipts, details of contract provisions that give rise to contingent payments, and how the project affects the reported balance and public debts (Schwartz, Corbacho, and Funke, 2008).

Department of the Environment and Local Government (2000), raised a major issue of PPP treatment in the balance sheet. The access to the private finance and the need to reduce the public sector debt were the main drivers to develop the private finance initiative in the UK. While in Ireland the decision to proceed with PPP project will be based on an assessment of economic benefit and value for money rather than on the balance sheet treatment.

Chatterjee, Mir, Eddie, and Wise (2017), investigated the factors affecting the infrastructure reporting in New Zealand. Both survey and interview were used to reach the results. A dissemination gap was found besides a criticism to some governments as the valuation of the infrastructure assets was inconsistent. Hodges and Mellett (2012), added that many of recognition and measurement issues are complex. An important point that was

mentioned in the guidance note is that even in the developed countries there are differences in the PPP levels. As some transitions to resources in the public sector are less advanced in Ireland than UK.

Another issue pointed was related to the impact of the accounting treatment on the actual performance versus the budgetary targets. For instance, expenditures on projects at a central authority is recorded against capital and current expenditure budgets. Anomalies will arise where the accounting treatment for payment differs from the expenditure budget that funded the payment. Schwartz, Corbacho, and Funke (2008), agreed with this opinion and added that there is a lack of consistent budget planning approach and an attempt to resort to PPP in order to evade the budget constraints of the economy. OECD (2012), suggested that the budgeting and accounting systems of the government should provide transparent and true record of PPP activities.

#### ***2.4 Critical Success Factors***

Following the 2007-2008 financial crises, there has been an increasing interest in the public-private partnership in both developed and developing countries. In this regard, researchers across the globe attempted to investigate this topic. Osei-Kyei and Chan (2015), were interested to enable practitioners and researchers to gain more insight into the related concepts of PPP. Different areas were explored like risk management, financial viabilities, and procurement. For the last decades, one of the major areas that received much attention is the PPP success factors. Since 1990's the research studies focused on this area which indicated the interest of involved people in PPP regarding the best ways of delivering projects. There is no doubt that this area will attract researchers as the PPP market keeps growing.

A number of researchers employed the concept of critical success factors -CSF- to boost the implementation of PPP and to understand the best ways of reaching the desired outcomes of the projects. Some previous papers studied the CSF in the feasibility stage of the project while others focused on the design stage. Despite the wide coverage of the topic, it is still intricate to identify the most important CSF for a country, a sector, a stage.

Osei-Kyei and Chan (2015), build their study based on reviewing the previous work on critical success factors for PPP projects from 1990 to 2013, and they had their own results on 2015. They found that 'appropriate risk allocation and sharing' was the top factor repeated in the previous studies. The rest of the factors are: strong private consortium, political support, public/community support, transparent procurement. This research gathered the results of various papers from different countries. One interesting note is that the number of researches in the developed and the developing countries were almost the same except for UK and Australia. It can be concluded that both countries are leaders in the area. Countries like New Zealand and Egypt had the same amount of papers and researchers in the PPP area, even though they are representing different levels.

Wibowo and Alfen (2015), investigated the government-led critical success factors in PPP within the Indonesian context. They identified the factors from small and medium levels. Some factors were grouped together and others were separated. In total, there were six categories: legal and regulatory provisions, policy framework, public sector capacity, project preparation, planning, procurement, and contractual arrangement. While Almarri and Boussabaine (2017), focused on the factors that affected the value for money of the projects. Value for money means delivering the public service with best cost and benefits, also it is an indicator used by the public sector to evaluate the PPP compared with the

procurement option. The author used a survey to collect the data from participants in UK and UAE. In this research the comparison was between a leading developed country and developing one. The result showed that respondents from both countries selected ‘commitment of public and private parties’ as the most important factor. And the rest of the factors in order were: appropriate risk allocation, committed and competent public agency, transparent procurement process, and strong private consortium.

As the UK is a leading country in the PPP research, Li, Akintoye, Edwards, and Hardcastle (2005), had similarities in the results with the research of Almarri and Boussabaine (2017). They found that strong private consortium, appropriate risk allocation, and available financial market are the top factors in the UK. It looks that after 2005 the private intervention in the public infrastructure improved, as the “available financial market” were not one of the factors in Almarri and Boussabaine (2017) paper.

Cheung, Chan, and Kajewski (2012), investigated the PPP based on three countries from different levels which are: UK, Australia, and Hong Kong. They analysed the perceptions of the respondents on the importance of the factors. The survey used in the study showed that amongst the top 5 factors ranked by Hong Kong respondents, three factors were selected also by the Australians and the British. The factors are: Commitment and responsibility of public and private sectors, Strong and good private consortium, and Appropriate risk allocation and risk sharing. It was concluded that certain common factors between the countries, irrespective of the geographical locations. The results agrees with Almarri and Boussabaine (2017), that was done in UK and UAE. Both UAE and Hong Kong are developing countries but they had similar results with developed ones like UK

and Australia. That added, despite the geographical location and country level, the PPP projects needed almost the same critical areas that need most of the attention.

Cheung, Chan, Chan, Lam, and Ke (2012), studied the CSF in Hong Kong and China and had slightly different results than Cheung, Chan, and Kajewski (2012), although both studies were done in the same year and same geographic area. The factors in order are: favorable legal framework, appropriate risk allocation and risk sharing, Commitment and responsibility of public and private sectors. Wibowo and Alfen (2015), in the Indonesian context also agreed on having the favorable legal framework among the top factors.

Węgrzyn (2016), tried to enhance the understanding of CSF by the different stakeholders groups on the different stages of the project life cycle. The results showed higher response rate by the public sector than the private sector. The appropriate risk allocation and sharing is among the top factors in most of the studies. It was the first selected factor in this paper too. The rest of the factors are: commitment of the public and the private sectors, Shared authority between the public and private sector, realistic cost/benefit assessment. The study was conducted in Poland which is a developed country in Europe, however some factors in the results were not the same as UK which share the same level and geographic location. For instance, the strong consortium and the cost/benefit assessment.

Ullah, Ayub, Siddiqui, and Thaheem (2016), reviewed the literature on CSF between 2005 and 2015, China was among the top countries in contributing toward PPP research. It shows that developing countries are working hard to improve the PPP experience. The trends are changing too, as its becoming popular in the underdeveloped countries as well. In this paper the factors were divided based on zones corresponding to

their relevance in decision-making. The risk related factors and revenue streams fell into the critical zone in the matrix. Jamali (2004), concluded that in general, trust, openness, and fairness are the basics for PPP to success. Table 2.4.1 summarizes the results of the previous studies regarding CSF.

Table 2.4.1 CSF Findings

Author	Publication year	Critical Success Factors Findings
Osei-Kyei and Chan	2015	<ol style="list-style-type: none"> <li>1- Appropriate risk allocation and sharing</li> <li>2- Strong private consortium</li> <li>3- Political support</li> <li>4- Public/community support</li> <li>5- Transparent procurement</li> </ol>
Wibowo and Alfen	2015	<ol style="list-style-type: none"> <li>1- Legal and regulatory provisions</li> <li>2- Policy framework</li> <li>3- Public sector capacity</li> <li>4- Project preparation, planning, procurement, and contractual arrangement</li> </ol>
Almarri and Boussabaine	2017	<ol style="list-style-type: none"> <li>1- Commitment of public and private parties</li> <li>2- Appropriate risk allocation</li> <li>3- Committed and competent public agency</li> <li>4- Transparent procurement process</li> <li>5- Strong private consortium</li> </ol>
Li, Akintoye, Edwards, and Hardcastle	2005	<ol style="list-style-type: none"> <li>1- Strong private consortium</li> <li>2- Appropriate risk allocation</li> <li>3- Available financial market</li> </ol>
Cheung, Chan, and Kajewski	2012	<ol style="list-style-type: none"> <li>1- Commitment and responsibility of public and private sectors</li> <li>2- Strong and good private consortium</li> <li>3- Appropriate risk allocation and risk sharing</li> </ol>
Cheung, Chan, Chan, Lam, and Ke	2012	<ol style="list-style-type: none"> <li>1- Favorable legal framework</li> <li>2- Appropriate risk allocation and risk sharing</li> <li>3- Commitment and responsibility of public and private sectors</li> </ol>



Author	Publication year	Critical Success Factors Findings
Węgrzyn	2016	1- Appropriate risk allocation and sharing 2- Commitment of the public and the private sectors 3- Shared authority between the public and private sector 4- Realistic cost/benefit assessment

### ***2.5 Corporate Governance***

Hyndman and McDonnell (2009), wrote in the meaning of governance that it came from a latin word ‘gubernare’ which means direct, rule, or guide. The latin word was also derived from a Greek term ‘kybernan’ which means to steer or pilot a ship. Using such definition draws a picture of the institution as ship, and the governance is the steering that guide the ship toward the destination. While Edwards and Clough (2005), used the OECD definition in their paper that describes it as a full set of relationships among management, board, shareholders, and stakeholders. It sets the structure for the objectives and how to achieve them. In addition, determining performance monitoring. To widen the understanding of this topic, Hyndman and McDonnell (2009), divided the governance into two forms: internal and external. The internal governance would include board of trustees, internal committees, and internal audit facilities. The external governance would include accounting rules, reporting requirements, government regulations, and external auditors.

Shaoul, Stafford, and Stapleton (2012), mentioned in their paper that its noticed that accounting and finance research in the governance area focus on the listed companies, sidelining the public sector and the interface between the private and the public sectors. That is why it is important to talk about governance in the public sector to fill this gap.

Edwards and Clough (2005), believe that the concept of corporate governance is used in both sectors -public and private- with some similarities and differences. There are some core corporate governance principles that can be applied for both sectors like: accountability, transparency, integrity, leadership, focus on performance, and recognition of shareholders/stakeholders rights. On the other hand, there are many differences that can be summarized in table 2.5.1:

Table 2.5.1 Corporate governance Differences in Public and Private sectors

Differences	Public sector	Private sector
Mandate	-Welfare maximization -Community interest	-Profit maximization -Corporate interest only
Goals	Often vague to satisfy different stakeholders	Generally clear
Performance	Special performance indicators	Standardised financial ratios
Efficiency	Effectiveness is more important	Technical efficiency is basic requirement
Revenue	-Tax -Natural monopolies	-Sales
Risk	Internal	External
Policy	Core activity	Secondary activity
Power	-Strong -Capacity to change its own rules	-Related to economic strength -Checked by government
Stakeholder legally defined	Voters	Shareholders, who are free to own or dispose shares
Other stakeholders	Same set but weighing of communities much heavier	Employees, creditors, suppliers
System boundaries	-Poorly defined -Complex system	Well defined
Governance	-Agency heads -Ministers -Parliament	Directors and managers
Accountability	Wide, open, fluid	Defined by standards
Legal constraints	Can change legislation	Compulsory

According to Shehata (2015), the corporate governance code in Qatar began being drafted in 2006, however the code for the listed companies was not issued until 2009. It was formulated by Qatar Financial Markets Authority and it follows a comply/explain basis. Effective corporate governance framework (2006), mentioned that comply/explain basis allows flexibility which help in conducting the business in the best interest of shareholders. The Qatari code comprises 31 articles divided into ten sections. It is based on seven guiding principles: commitment to good corporate governance, commitment to proper company management, separation of power between chairman and CEO, identification of conflicts, transparent remuneration procedures, audit guidelines, and commitment to shareholders' rights.

Biygautane, Hodge, and Gerber (2018), examined the PPP in Qatar in light of drop in oil prices. The study discussed some governance issues that affected the PPP. it was mentioned that Qatar is among the highest-ranking states in the middle east in “control of corruption” in the public sector. While the public procurement system has issues with transparency measures. That contradicts with the “Administrative Control and Transparency Authority” -the Emiri Decree No. (75)- that aims for achieving the highest indicators of integrity and transparency in the country, through many comptences (administrative control and transparency authority, n.d.). Edwards and Clough (2005), seperated between governance and management. Governance is how the organization is managed, while management is managing the day-to-day operations of the business.

During the day-to-day operations, conflicts may take place between the different stakeholders. Accounting has a basic role to ensure good corporate governance. For instance, in case of agency problem in the shareholder/owners level, payments maybe

streamlined based on the study on salaries at board and management level. Plus that, appropriate disclosure could reduce the gap between them (Shil, 2008). The author covered issues in corporate governance, and how accounting can be practiced to prevent the corruption. While Shaoul, Stafford, and Stapleton (2012), noted that it is important for organizations to entrench values and norms in their corporate culture, but it is not clear how the conflicts of values between partners can be resolved. In this case, accounting can reduce the conflict from the financial point. Effective corporate governance framework highlighted a point that says having effective market for corporate control is a mechanism to address and check the agency conflict (Waring, 2006).

Shil (2008), added from the regulatory level, accounting can help in non-compliance issue by acting as a compliance expert to suggest ways for the management and the board in order to comply with the various requirements. Leigland (2018), mentioned an example of African countries that had legal and regulatory elements to guide the private participation in the power sector. The paper focused on having a clear policy statement and supporting legislation.

Hood and Heald (2006), argues that governments should have accounting regimes to distinguish the different kinds of activities in order to identify who pays and who benefits. Jamali (2004), confirmed that governments of the developing countries need to build their legal and regulatory capacity to enhance the participation in PPP. The study was build based on a case study in the lebanese context. It shed the lights on improving the effectiveness of PPP projects in the developing countries. Wang, Liu, Xiong, and Song (2019), stated that law gives confidence to private sector and reduce the risk of engaging in PPP projects. The study investigated the effect of governance and risk on private

investment. Results showed that less risk and higher level of governance attracts more private investment.

Sabry (2015), argues that law has a rule that would lead to more successful PPP projects, as the study aimed to explore the factors that help PPP provide better output. An evidence was found that good governance helps PPP in performing well.

Khalid, Alam, and Said (2016), assessed the governance in the public sector in Malaysia using questionnaire survey and found some significant factors in the measurement of the good governance practices. The first factor is the strategic alliance which is important in reducing the incidence of misconduct. Hee (2004), agreed with that fact and added that the lack of strategic alliance leads to low effectiveness. Another factor was listed is the risk management. Having good governance ensures the execution of ethical values, codes, and responsibilities under a clear risk management framework. OECD (2012), summarized the risks for both parties of the PPP. The external risk is presented in table 2.5.2, while table 2.5.3 presents project specific risk.

Table 2.5.1. External Risk

Types of risks	Private sector	Public sector
Macroeconomic	<ul style="list-style-type: none"> <li>▪ Interest rate risk</li> <li>▪ Liquidity risk</li> </ul>	<ul style="list-style-type: none"> <li>▪ Interest rate risk</li> <li>▪ Agregate demand</li> </ul>
Commercial	<ul style="list-style-type: none"> <li>▪ Demand risk</li> </ul>	<ul style="list-style-type: none"> <li>▪ Force majeure</li> </ul>
Legal and political	<ul style="list-style-type: none"> <li>▪ Different investment preferences of alternating governments</li> </ul>	

Table 2.5.2. Project Specific Risk

Types of risks	Private sector	Public sector
Project risk	<ul style="list-style-type: none"> <li>▪ Design and construction risk</li> <li>▪ Security risk</li> <li>▪ Credit risk of the constructing and operating</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sovereign risk</li> <li>▪ Demand risk</li> </ul>
Legal and political		<ul style="list-style-type: none"> <li>▪ Different investment preferences of alternating governments</li> </ul>

Khalid, Alam, and Said (2016), emphasized on the role of auditors in the monitoring system which is a critical factor of the corporate governance. According to Deloitte (n.d.), audit firms support the public sector by developing ppp governance framework, besides advising the private sector entities regarding bidding, debt raising, and contract negotiating. Shaoul, Stafford, and Stapleton (2012), cited that in the public sector, sub-committees like audit committee should oversee the annual accounts, accounting policies, and internal control system. In addition, Hodge and Greve (2017), stressed on the role of auditors in evaluating the PPP experience more strictly in the recent times. Finally, Sabry (2015), found that institutions with good governance help PPP in performing well.

Edwards and Clough (2005), listed some governance factors that appear to be important for the performance in the PPP context: there should be clear roles and responsibilities, operative codes, governance mechanisms in place, flow of information, effective meeting procedures, and regular evaluation of board performance. Those factors are targeting the private sector more than the public.

Many authors in the previous literature investigated the corporate governance as a factor affecting the PPP projects, while others linked the governance with the accounting in the PPP context. The nature of PPP is complicated and each topic that is related to it should be treated and looked at in the same way. All topics are crossed in the PPP that's why the network theory was used in this study as it best illustrate the relationship between the actors in the PPP projects.

## ***2.6 Summary***

Chapter two investigated the literature review on the topics that are the base of this research. It investigated recent finding on PPP related issues in accounting, critical success factors, performance, value for money, and corporate governance. The gaps were highlighted and the findings of the previous studies were summarized. The next chapter will focus on the theoretical framework of the this study.

## Chapter 3: Theoretical Framework

### ***3.1 Introduction***

In chapter two, the main issues were discussed based on what was gathered from the previous studies. Research agendas called for papers about PPP in the developing countries to enrich the literature. Specific areas in the PPP were explained in the previous chapter that are believed to be gaps in the prior studies. And one of the contested issues is the performance of the PPP projects. Therefore, this chapter will explain the relationship between the performance and the other factors affecting it. As well as it will help in developing the hypotheses. The framework will be designed based on the theory to illustrate the relationship in a clear way. Later, the hypothesis will be testing the association between corporate governance, critical success factors, and value for money with the performance of the project.

### ***3.2 Theories of PPP***

The theoretical framework helps in explaining and understanding a specific issue in a research. The public-private partnership has been approached in the literature via different theoretical frameworks that include agency theory, stewardship theory, institutional theory, and network theory which is the most appropriate one for this study.

#### ***3.2.1 Agency Theory***

Derakhshan, Turner, and Mancini (2019), mentioned that the agency theory has been used in the project management context to explain the relationship between owner and manager. The control and monitor of the manager's behaviour is based on trust and control. Shaoul, Stafford, and Stapleton (2012), wrote that agency theory focuses on monitoring corporate governance in listed companies, however little attention was paid in



subsidiary, associate or joint venture companies. The agency theory proposes a conflict of interest between members of the organization, in which owners are characterised as weak relative to managers. Hyndman and McDonnell (2009), added that the tension arises due to the conflicting views of the proper role of the board. From the agency theory perspective, the proper role is to monitor management to make sure they are achieving the objectives of the organization not their own objectives. Burke and Demirag (2017), criticised the agency theory in the PPP as it just examines the principle-agent relationship and not the interrelationships between the stakeholder groups.

### ***3.2.2 Stakeholder Theory***

Sidelining the agency theory, Burke and Demirag (2017), selected the stakeholder theory to explore the risk transfer and stakeholder relationships in the public private partnership. The stakeholder is defined as any group or individual who can affect on or be affected by the achievement of the objectives. Satisfying the needs of stakeholders will be difficult, unless all of their interests are considered.

Derakhshan, Turner, and Mancini (2019), added that in the stakeholder theory, the focus is more on the stakeholders outside the organization and the importance of their position in the organizational setting. The authors also categorized the theories adopted toward the stakeholder: first, the theories that manage internal stakeholder which are agency, stewardship, and resource dependence. Second, the theories that govern the relations among internal and external stakeholders which are transaction cost economies, resource dependence, and stakeholder. Hyndman and McDonnell (2009), stated that stewardship theory assumes that managers will always act in the best interest of their organizations, suggesting that the board should partner management to improve the

performance. Derakhshan, Turner, and Mancini (2019), wrote that this theory is considering the relationships between two internal stakeholders which is not suitable for PPP environment. Ostrower and Stone (2006), argued that those models are inadequate in explaining and understanding such relationships.

### ***3.2.3 Transaction Cost Economics***

Other studies discussed the transaction cost economics -TCE- theory in the PPP area. Koschatzky (2017), argued that, according to the transaction cost approach, PPP is one form of coordination in the research and development field. One disadvantage of this theory is that limited resource endowments with regard to financing research and development would exclude the firms from this interaction. Derakhshan, Turner, and Mancini (2019), added that this theory focuses on the relation between buyer and seller and describes the contractor and supplier selection process. Besides that, it considers the costs involved in transacting services and how organizations outsource to minimize costs. TCE theory helps in aligning the needs of projects and contractors in specific governance structure.

### ***3.2.4 Institutional Theory***

Finally, Opara and Rouse (2019), considered the institutional theory as the most appropriate framework for their study. The authors stated that this theory integrates elements of the political/institutional environment and social contexts, in which those policies are constructed, interpreted, and implemented as PPP is socially constructed. The main idea in the institutional theory is based on the relationship between organizational structure and social context. However, its not suitable for this study as the environment in Qatar is still not flexible regarding accepting the societal pressure on organizations. In

addition, the PPP is still immature specially its relationship with the corporate governance. In the institutional environment the goal of the organizations is not only economical, but also establishing legitimacy in the operational environment. That situation is not the case for the Qatari organizations as the law organizes relationships in the PPP.

### ***3.2.5 Network Theory***

This study believes that the network theory is the most appropriate theory that explains the research issues of public-private partnership. Hodge and Greve (2017), mentioned that focusing on measuring the performance through a theory-based evaluation could be done by performance domain, and one of them is the network theory. Klijn and Koppenjan (2000), believe that actors in the network have different perceptions, and based on those perceptions the strategies are set. Consequently, the outcomes are interactions of strategies of the different actors. However, the strategies are influenced by perceptions, power, and resources in the network, in addition to the rules of the network.

English and Skellern (2005), mentioned some features of the network model in their study, which can be concluded in: responding to unmet needs in social policy area, influenced by institutional context, unique view of problems and solutions, outcomes results from negotiation and forms of network management, ideal social outcome achieved through interaction between actors, and services arranged according to unique characteristics of clients; suited to individually negotiated solutions. Chowdhury, Chen, and Tiong (2011), defined the network theory as the study of how the social structure of relationships around a person, group, or organization influences beliefs or behaviours. The authors explored the structural properties of the network generated by PPP agreements. In such agreements, the private sector has on its side investors and lenders. While on the

public sector side there are public authorities creating and implementing PPP policies. It is believed that the legal and the financial structure of the PPP is best positioned to network analysis. Furthermore, the theory provides a powerful tool for the representation of the complex PPP structure.

### ***3.3 Theoretical framework***

According to Klijn and Koppenjan (2000), actors in the network have different perceptions, and based on those perceptions the strategies are set. The first actor in the public-private partnership is the public sector. And the network theory deals with the perceptions of the different actors separately, internal and external actors of the organization. Having corporate governance in a public sector environment deals with many issues and people. Having corporate governance needs interaction between a large group of employees within the organization from different levels to make sure that the strategic goals are clearly defined and understood. One of the features of the network theory is that the ideal outcome is achieved by the interaction among the actors. The first internal interaction that will be organized through this theory, is the relationships between the employees within the public sector entity in order to achieve the corporate governance.

Then, having good governance will provide better value for money assessment as the transparent guidelines followed by the government comparator will ensure the selection of the ideal choice that provide performance efficiency, which can be considered as the mediating process. The arrows in figure 3.3.1 Show the direction of the influence that starts from the corporate governance and goes to three directions. The second arrow goes to the critical success factors as having corporate governance with clear objectives and adequate planning will improve the identification and implementation of the critical

factors. The network theory will help directing the third arrow that goes from the corporate governance to the performance as the satisfaction of the stakeholders is an indicator of achieving the required performance. the same framework is applied for the private sector, as having good governance will help identifying the critical factors like creating strong consortiums.

Also, having governance will ensure that employees have the right skills to be selected by the public sector comparator in order to achieve the value for money. At the same time, both critical factors and value for money has indirect relations with the performance as mediator variables. After having the corporate governance in place, the ranked critical factors will be identified, and the ideal value for money choice will be selected, consequently, the demanded performance among the stakeholders will be met. Nitzl, Roldan, and Cepeda (2016), stated that many researchers focus on the direct relationships between variables ignoring the mediating -indirect- effect. Consequently, the interpretation of the results can be biased. On the other hand, some researchers use outdated methods to test the mediating effect which lead to inaccurate results. The mediating variable acts as a function of the independent variable, and helps in explaining the influence of the independent variable on the dependent variable (Sekaran and Bougie, 2016).

The framework of this study in figure 3.3.1 was developed by the researcher to fit the context of this research.

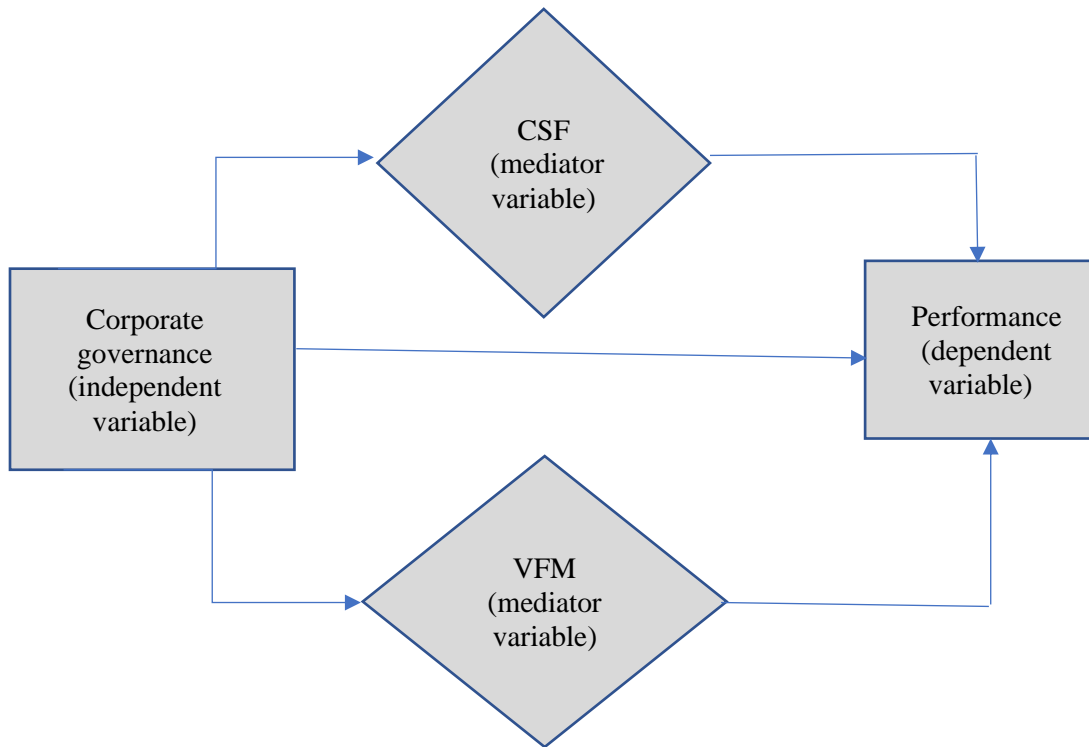


Figure 3.3.1. Mediator Process of Corporate Governance and PPP Performance

### ***3.4 Hypothesis development***

#### ***3.4.1 Corporate Governance and Performance***

Benítez-Ávila, Hartmann, Dewulf, and Henseler (2018), found that to maintain commitment between the public and the private sectors, understanding the governance aspect is critical. The governance elements in the study will explain the PPP performance as result of mediation process. So, the governance is positively associated with the project performance. Moreover, ul Musawir, Serra, Zwikael, and Ali (2017), argued that the mechanisms through which governance improves the project success are still not explored, however, they mentioned that good governance has the strongest relation with all of the dimensions of the project success. Accordingly, the authors decided to test the relationship.

Sirisomboonsuk, Gu, Cao, and Burns (2017), demonstrated the importance of the alignment between IT governance and project governance in enhancing project performance. Too and Weaver (2014), explained the relation between the two elements in a more complicated way. The performance of the project needs some key elements to improve it, and one of these elements is the project and program support which are measures of effective governance system. Sabry (2015), added that good governance institutions help PPP in performing well.

Stafford and Stapleton (2016), used the financial reporting as a governance mechanism that enables the boards to assess the performance. And for that mechanism to work effectively, performance must be monitored and measured. Markonah, Sudiro, Surachman, and Rahayu (2019), mentioned that corporate governance has a significant impact on achieving better corporate performance.

H1: There is a relationship between corporate governance and performance.

### ***3.4.2 Mediating Role of Critical Success Factors***

As discussed earlier, corporate governance has an impact on the firm performance. However, the impact is not direct on the performance. Vajdic, Wundsch, and Temeljotov-Salaj (2013), said that number of PPP projects has been performing below the expectations, for this reason number of researchers investigated the critical factors that can lead to projects success or failure. Węgrzyn (2016), considered the increased interest in the PPP performance, which encouraged the researchers to focus on project management issues like critical success factors of the PPP.

Besides that Muhammad and Johar (2017), stated that the critical success factors are key areas, if they were satisfied, then the success of the of the project/organization

performance will be ensured. Almarri and Boussabaine (2017), wrote that researchers used CSF to expand the understanding of the PPP performance. While Opara, Elloumi, Okafor and Warsame (2017), mentioned that there are only few studies that considered the impact of the institutional context on the PPP performance. The institution refers to the presence of legal framework. Jooste, Levitt, and Scott (2011), discussed the institution issue in PPP in their paper too to investigate the impact on the implementation of the projects. In this study, its believed that the critical success factors have a mediating impact between the corporate governance and performance. For instance, one measure of corporate governance was “project selection is based on clearly defined strategic goals and creeds”. And one of the critical factors is the “commitment of public and private sectors”.

If the organization guaranteed that the selection of the project is clearly defined, then it will be committed to the other party to deliver the project based on the defined goals and creeds. Therefore, the performance will be build on commitment and clear goals. In real life, organizations can define projects in a perfect way, but without commitment, it could deliver projects below expectations.

H2: The critical success factors have mediating role between corporate governance and performance.

### ***3.4.3 Mediating role of Value for Money***

The relationship between corporate governance and value for money was not investigated in a direct way in the previous literature. This study will explore the mediating impact of VFM as an indirect relation. Ismail (2012), mentioned that value for money assessment techniques for PPP suffer from the lack of transparency; and transparency is a critical component of corporate governance. It can be concluded that if there is lack of



transparency, there will be poor corporate governance and weak value for money assessment.

Biygautane, Hodge, and Gerber (2018), agreed on the idea that transparency in the governance of projects, is critical for achieving value for money. Furthermore, Hood, Fraser, and McGarvey (2006), advocate that opinion and argued that any lack of transparency in the public sector, reinforces the notion that the quality levels and the value for money is problematic. In addition, Torchia, Calabro, and Morner (2015), reported that some authors found that the ideal assess of VFM is not carried out. One of the reasons is the selection of the private partner was based on the financial contribution to PPP not the skills of the private partner for example. While Khalid, Alam, Said, (2016), measured the corporate governance in the public sector by some indicators like “Project selection is based on clearly defined strategic goals and creeds”. It can be said, if the public sector failed to assess the VFM due to only focusing on the financial contribution neglecting the strategic goals and creeds, that indicate poor governance.

Hodge and Greve (2017), discussed also the pefromance area by linking value for money, governance, and on-time/on-budget delivery. However, the authors did not mention further details about the relationship. In public-private partnership, the general indicator of efficiency is the value for money -VFM-. Some reports suggested the practical difficulties in estimating VFM, synchronous with the ongoing contested performance records (Opara, Elloumi, Okafor and Warsame, 2017). As well as Akintoye et al. (2003), argued that the success in PPP can be characterized by offering VFM, and the achievement of the best value will highlight the performance. Almarri and Boussabaine (2017), added that one of the objectives of PPP is achieving VFM which ensures that the required

performance is delivered. Lop, Ismail, and Isa (2016), stated that the VFM is critically dependent on performance monitoring to provide improvements. Also Liu et al. (2015), found that the performance evaluation is associated with VFM in PPP projects in a complicated process.

For the purpose of the mediating process, it was mentioned above that the VFM assessment suffers from lack of transparency. Then, if we don't have an idea about the assessment, we can't be sure that "competitive tender" took place. And we can't judge on the output of this deal. A question could arise regarding this scenario: what if a better choice was ignored, and how can we make sure that this selection is the best among the rest. All of that pour into the performance at the end of the project. Hence, from the beginning if there is transparency -which is an important principle of corporate governance- then there will be better VFM, consequently, there will be better performance.

H3: The value for money has mediating role between corporate governance and performance.

#### ***3.4.4 Corporate Governance and Critical Success Factors***

Critical success factors are areas that are critical for the success of a project. A study by (Cheung et al., 2012), used the five-point Likert scale to rank the factors, and if a value is above 3, that would indicate that the factor is important. The results showed that "good governance" scored 3.6 in Hong Kong, which can be considered a critical factor. While Węgrzyn (2016), showed in the results that good governance was the eighth selected factor out of 18 which is not that critical. Almarri and Boussabaine (2017), advocated that the good governance is a very important factor to ensure the satisfaction of the stakeholders. Li, Akintoye, Edwards, and Hardcastle (2005), presented an extended literature review to

obtain factors present in the UK. The authors found that good governance is among the CSF indicators. One of the important results obtained by Ismail (2013), the results showed that good governance was ranked first as an essential factor to ensure the success of PPP projects. It is crucial to have good governance, as claimed by the United Nations Economic Commission for Europe, for the reason that inefficiency in governance has led to the failure in the implementation of PPP in several countries.

H4: The corporate governance is among the top critical success factors.

### ***3.5 Summary***

This chapter covered the theoretical perspective of PPP and the theories used in the previous literature. It was discussed in details how the network theory fit with the context of this study. Then, a conceptual framework was developed to illustrate the mediator process of corporate governance and performance. Finally, the hypothesis were established to investigate the relationships between the variables. The next chapter will discuss the research method employed and the details of data collection.

## Chapter 4: Methodology

### ***4.1 Introduction***

This chapter will address some key points like the adopted methodology, research design, and sampling. First, the methodology will describe the methods used to answer the research questions. This research is quantitative with cross-sectional design. The method was used because the quantitative method deals better with the large number of samples as the primary data was collected by a survey. Although the method was suitable, but it has been criticised for limiting the outcomes of the researches. For instance, when the survey is built, some questions might be close-ended so that the respondent will have limited option. That's why the results are not always generalised in this method. Then, the details of sampling, validity and reliability, and structural equation model.

### ***4.2 Sample***

Sampling is the process of selecting the appropriate number of right elements from the population (Sekaran and Bougie, 2016). This study was conducted in Qatar to explore the public-private partnership topic. A survey was distributed to 20 organizations from public and private sectors that are involved in the PPP. Snowball sampling was incorporated in which 3 main organizations, 2 in public sector and 1 in private sector, were contacted and asked to identify other organizations that could serve the purpose of the study. First, the organizations were contacted by telephone to confirm their participation in a PPP project. Then, an official email was sent to the organizations. Some organizations preferred to deliver the email to the human resources department and others preferred the public relations department, while some private companies preferred to send the survey to the director. Next, it was mentioned in the consent section at the beginning of the survey

the targeted employees. As the study is talking about some financial aspects, accountants and auditors were targeted. As well as, there are some project management aspects, thus, engineers and project managers were targeted too. A total of 187 questionnaire were distributed by the email using SurveyMonkey cloud-based software. The IP addresses of the participants were hidden, which is a choice in the SurveyMonkey to increase the confidentiality. The number of the returned surveys was 107, but 47 were excluded as they were not completed. Therefore, the usable response were 60 survey. In the second week of distribution, the organizations were reminded by email and telephone to fill the survey.

As the survey is targeting different sectors, and only one version was prepared, each sector will answer the questions that belong to them leaving some questions that belong to the other sector. That's why no single survey will have answers to all of the questions. Collecting the data from a primary source is a strength in this study as other researchers build their results based on secondary source of data like Wang, Liu, Xiong, and Song (2019); Biygautane, Hodge, and Gerber (2018).

### ***4.3 Survey Design***

The survey consists of six sections and 27 questions that approximately will need 25 minutes to complete. The first few pages of the survey were the consent form that clearly defines the purpose of the research, the targeted participants, the confidentiality, the withdrawal, the investigator's contact information, and the approval number of Qatar University Institutional Review Board. Instructions for filling the survey were given too besides definitions of some abbreviations used in the survey.

The first section measures the critical success factors and asks the participant to rank them based on their importance. Likert scale was used to measure the importance of

each factor. Five-point scale was used: 1=least important, 2=less important, 3=neutral, 4=important, and 5=very important. Open ended and yes/no questions were used also. The factors were gathered from previous studies like Osei-Kyei and Chan (2015); Cheung, Chan, and Kajewski (2012).

Section two measures the accounting issues in PPP and the knowledge of the employees regarding the accounting treatments. The questions included open ended questions, yes/no, multiple choice, and ranking. The ranking question measures the value for money asking the respondent to rank the factors. The VFM factors were used in the study of Ismail (2012). At the beginning of this section, the participants were notified that they should have financial background to be able to answer the questions to save their time. As some of the respondents are engineers, they might not have any idea about the accounting issues in PPP.

Section three consists of two parts, as it is talking about corporate governance, and this study distinguishes between the public sector and the private sector in terms of corporate governance. Consequently, public sector employees were asked to answer the first part only -questions 13-, while private sector employees were asked to go to questions 14 directly. The questions consist of multiple choice, yes/no, and likert scale. This scale measures the opinion of the participants regarding the corporate governance but in this section the scale had 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree. The questions were used by Khalid, Alam, and Said (2016); Edward and Clough, (2005).

Section four measured the opinion of the participants regarding the legal framework. This question will measure the knowledge of employees regarding the laws in

Qatar related to the PPP. The PPP law is approved but not yet implemented until this moment. However, every organization had regulations that govern the business. The questions were prepared by the researcher and revised by the supervisor.

Section five measures the performance of the PPP projects using likert scale too. The measurement went beyond the financial ratios as mentioned in the literature. many researchers used such measure like Liu et al. (2016); Muhammad and Johar (2017).

The last section is the demographics, it asked about some information about the participant, organization, and projects. Tables 4.3.1, shows that the majority of the participants were engineers and accountants, the rest were distributed among the other job functions. Moreover, the majority of the participants had experience between 6 to 10 years. Only few participants had experience above 16 years. Finally, 49 participants were male, while 11 of the participants were female. 4.2, and 4.3 will illustrate the participant profile and the firm profile of the study.

Table 3.3.1 Participant Profile

Job function	Frequency	Experience	Frequency	Gender	Frequency
Executive board director	2	11-15years	11	Female	11
Accountant	13	5 years or less	19	Male	49
Auditor	6	6-10 years	23		
Director	3	Above 16 years	7		
Engineer	23				
Other	7				
Project manager	6				

While table 4.3.2 described the firms profile. It shows that most of the participants were from private organizations. Whereas, the rest were from governmental and non-governmental organizations.

Table 4.3.2 Firm Profile

Type of organization	Frequency
Non-governmental organization	12
Governmental/Public organization	14
Private organization	34

Finally, table 4.3.3 showed that most of the participants shared their experience regarding completed projects they worked on. While the rest were in the middle of the project, and only 9 participants were in new projects.

Table 4.3.3 Project Stage

Project stage	Frequency
Completed	27
Middle stage	24
Started	9

#### ***4.4 Validity and Reliability***

The survey was built based on gathering measures of the variables from previous studies. And most of the studies that were published in admired journals have already done the validity and reliability tests. In addition, content validity was done by sending the



survey to 2 academicians and 2 practitioners. After receiving the feedback, the survey was modified accordingly.

According to Sekaran and Bougie (2016), reliability is testing for consistency and stability, in other words how well the items measures the concept. Cronbach’s alpha is a reliability coefficient that explains how well the items are correlated to one another. The reliability test was done in the study using SPSS and the results are shown in table 4.4.1.

Table 4.4.1 Reliability Test

	Cronbach's Alpha	N of Items
Total	0.940	82
CSF	0.781	13
VFM	0.793	12
CG public	0.988	24
CG private	0.986	19
Legal	0.839	9
Performance	0.765	5

According to DeVellis (1991), the respectable alpha coefficient is between 0.70-0.79, the very good alpha coefficient is between 0.80-0.89, and the excellent alpha coefficient is above 0.89. The Cronbach’s alpha for the CSF is 0.78 which falls in the respectable area and this tool has respectable reliability.

VFM has Cronbach’s alpha that equals to 0.79 which falls in the respectable area also. The CG in the public sector and in the private sector have the same Cronbach’s alpha value that equals to 0.98 which means both have excellent reliability. The legal framework has a Cronbach’s alpha that equals to 0.83, which reflects a very good reliability of this tool. The last section refers to performance. The Cronbach’s alpha value is 0.76 which falls

in the respectable range. In general, all the sections had acceptable values which means that the items in each section are closely related.

Another test was done which is the non-response rate. It shows the bias in the responses as there are early and late respondents, then the stability of the measures across time will be shown. Table 4.4.2 shows there is no significant difference between the scores of the early and late respondents except for the CSF and CG for private sector. One reason for such values is that the late respondents were reminded by the email to fill the survey in the second week of distribution, and again they were reminded by telephone in the third week.

Table 4.4.2 Non-Response Rate

	Response		Mean	Std. Deviation	Std. Error Mean	t	df	Sig.
	time	N						
CSF	Early	34	4.24	.419	.072	2.442	58	<u>.018</u>
	Late	26	3.99	.371	.073			
VFM	Early	34	3.70	.689	.118	1.934	58	.058
	Late	26	3.40	.472	.093			
CG public	Early	34	2.64	1.072	.184	.825	58	.413
	Late	26	2.41	1.058	.208			
CG private	Early	34	2.92	1.002	.172	4.090	58	<u>.000</u>
	Late	26	1.79	1.143	.224			
Performance	Early	34	3.59	.611	.105	-.408	58	.685
	Late	26	3.65	.443	.087			
Legal	Early	34	3.70	.577	.099	.991	58	.326
	Late	26	3.55	.579	.113			

#### ***4.5 Summary***

This chapter summarized the methodology used in the study, starting with the sample and the details of the participants. Then, the design of the survey was discussed in detail in addition to the explanation of each section in the survey. Finally, the validity and the reliability of the survey was reviewed. The next chapter will explain the findings of the study based on the collected data.

## Chapter 5: Data Analysis and Results

### *5.1 Introduction*

This chapter will focus on the statistical tests employed to get to the results of the survey. First, the descriptive statistics will provide an overall understanding of the sample. Then, the regression analysis and Pearson's correlation will be used to identify the direction of the correlation between the dependent and the independent variables. Correlation matrix will also be used to check for the presence of multicollinearity problem. In addition to that, the mediation impact will be tested in order to accept or reject the hypothesis. The IBM SPSS software was used to conduct the statistical analysis in accordance with some of the previous studies like ul Musawir, Serra, Zwikael, and Ali (2017); Ismail (2012).

### *5.2 Descriptive Statistics*

As the Likert scale was used for the variables, in the SPSS the nominal values were given numbers like strongly disagree=1, disagree=2, neutral=3, agree=4, and strongly agree=5. Table 5.2.1 explains the descriptive statistics of the different variables. Each variable in the table will be discussed in detail in the coming sections.

Table 5.2.1 Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
CG Public	60	2.54	1.063	1	5
CG Private	60	2.43	1.199	1	5
Performance	60	3.61	.541	1	4
CSF	60	4.13	.416	3	5
VFM	60	3.57	.619	3	5
Legal	60	3.63	.577	2	5

### ***5.2.1 Corporate Governance***

The independent variable in the study is the corporate governance, based on table 5.2.1 the overall mean 2.5 which is almost 3 that indicates on average, employees had neutral opinion, leaning more towards disagree regarding the measurements of the corporate governance. Biygautane, Hodge, and Gerber (2018), explained in their study that weak governance, legal, and regulatory capacities are challenges facing Qatar in attracting infrastructure PPPs private finance. The authors described the governance in Qatar as 'weak', however in this study the corporate governance in the public and the private sectors had almost the same results and it cant be said that its weak or good.

### ***5.2.2 Performance***

The performance measurment had an average of 3.6. On average, participants agreed that PPP performed well in terms of performance and the measurments had similar average. The results agree with Liu, Love, Smith, Sing, and Matthews (2018), as they found that the stakeholder-oriented, cost, and quality measures are better suited to evaluate performance. While the results are different with Ismail (2012), as the delivery cost had mean of 1.8 and 2.0 ranked the tenth and the eleventh.

### ***5.2.3 Accounting and legal framework***

In order to answer the third research question, descriptive statistic will be used to find the frequencies of the different answers. First, the accounting issues will be discussed then the legal framework. Section two in the survey asked about the accounting related issues in PPP. The results in tables 5.2.3.1 showed that 33.3% of the participants found that PPP performed better than the traditional procurment in terms of time and cost. While 15% had no enough data to decide. As the PPP is still new in Qatar its expected that the employees don't have enough expirience in the field. Only few participants found it the

same 13.3% which is a low percent. In addition, 5% found the PPP performing worse than the traditional procurement. The rest, which is 33.3% had no idea about the comparison maybe they did not work on the traditional procurement so they couldn't decide. In general, it can be said that PPP somehow is performing better and this percentage could increase if the employees were asked again after most of the PPP projects are done. Hodge and Greve (2017), found that a number of PPP experiences in terms of success and failure can be seen around the world. And evaluations of PPP have delivered contradictory evidences as to their effectiveness.

Table 4.2.3.1 PPP versus Traditional Procurement

	Frequency	Percent	Valid Percent	Cumulative Percent
Better	20	33.3	33.3	33.3
The same	8	13.3	13.3	46.7
Worse	3	5.0	5.0	51.7
No enough data	9	15.0	15.0	66.7
I have no idea	20	33.3	33.3	100.0
Total	60	100.0	100.0	

Heald and Georgiou (2011), explain “risk and reward” and “control” approaches as a criterion to determine the balance sheet treatment. They show which party in the PPP has most of the risk and reward and which party controls the assets. In this study, based on Appendix B, 18.3% of the respondents selected the choice that assets appear on books of the party who has control over the assets. And 6.7% of the respondents believe that assets are on the books of the party who bears majority of the risk. The rest of the choices were: 11.7% are applying IPSAS 32, 13.3% are applying IFRIC 12, 3.3% are applying GAAP,

36.7% had another criterion, and 10% had no idea about the used criteria. Referring to appendix C, the results show also that 48.3% had accounting mechanisms in place that deal with liabilities and costs of PPP. on the other hand, 15% had no mechanisms in place, and 36% had no idea whether the entity has or not.

Most of the organizations involved in the PPP projects in the sample are disclosing information related to PPP in the financial statements which is around 38.3% of the sample. And 20% are disclosing budget documentation and reporting. While only 8.3% are disclosing financial statistics. Hodges and Mellet (2002); Musawa, Ismail, and Ahmad (2017); (Schwartz, Corbacho, and Funke, 2008), mentioned that many of the organizations didn't report the details of the accounting information related to the PPP projects.

Staying in the accounting and reporting field, 51.7% belived that PPP should be audited by the internal audit department, and 48.3% disagreed with that. Its important to mention that out of the total respondents, only employees with financial background were asked to answer section two which is about accounting and financial issues. Besides that, 40.3% believed that internal auditors should be part of the PPP team, while 49.3% found that no need to have the internal auditors there. Shaoul, Stafford, and Stapleton (2012), wrote that sub-committees like audit committee should oversee the annual accounts, accounting policies, and internal control system. In addition, Hodge and Greve (2017), underlined the role of auditors in evaluating the PPP experience in the recent times.

(Public-Private Partnerships Laws / Concession Laws, 2020), wrote that PPP laws can be used to close gaps in the laws of a host country may need to allow for successful infrastructure PPP projects. The Qatari PPP law draft is already approved and should be issued by the end of this year. By average, respondents were satisfied with the current legal

framework as the average was between 3.2 and 3.8 which is almost 'agree'. However, statement number 7 and 8 were excluded because the law is still not issued.

#### **5.2.4 Critical Success Factors**

In order to answer research question one, relative importance index will be used in accordance with Cheung, Chan, and Kajewski (2012); (Cheung et al., 2012).

RII can be calculated by this formula:

$$RII = \Sigma W / (A * N)$$

W= weighing given to each factor by the respondents (ranging from 1 to 5)

A= highest weight

N= total number of respondents

Table 5.2.4.1 illustrate the ranked critical success factors of this study. According to Akadiri (2011), RII values represent different importance levels: 0.9-1=strongly important, 0.89-0.75=very important, 0.74-0.60=important, 0.59-0.45=moderately important, 0.44-0.30=unimportant, 0.29-0.15=very unimportant, and 0.14-0=strongly unimportant. There were two factors that had the highest relative index which are commitment and responsibility of public and private sectors. Many studies found that commitment is a critical factor for the PPP to success like Jamali (2004); Opara, Elloumi, Okafor and Warsame (2017); Osei-Kyei and Chan, (2015); Węgrzyn (2016). Commitment of public sector includes solving any issues during the project execution to attain the required output, besides monitoring performance and payment. On the other hand, the private sector should be committed to the project requirements and payment limit. In fact, some of the previous papers merged the commitment and responsibility in one factor and it was among the top critical factors like in the studies of (Cheung et al., 2012); Almarri and Boussabaine (2017); Cheung, Chan, and Kajewski



(2012). Its important for both the public and private sectors to bring their skills and commit their best resources to achieve a good relationship during the excution of the project.

The second factor in this study is ‘good governance’. Some previous results found this factor at the end of the ranked factors like Osei-Kyei and Chan (2015); Węgrzyn (2016). While it was the second factor in the study of (Cheung et al., 2012), and Almarri and Boussabaine (2017), considered it as a very important factor in their study. Even if the statistical tests showed that there is no relation between governance and performance, in theory it is still important to have a strong corporate governance to achieve the attained performance. Having clear contract document was in the third place. This result is contradicting with most of the previous studies, except Wibowo and Alfen (2015), that had ‘contractual arrangement’ among the top selected factors. The contract in the PPP governs rights and responsibilities for both sectors, plus that each party must be committed to this contract as it cant be cancelled easily.

The fourth factor in this study was ‘satisfaction with the delivered project’ which was not among the top factors in the study of Osei-Kyei and Chan (2015); Jefferies (2006). It looks that the participants in Qatar are worried about the delivery of the projects more than any participants in the previous studies. The results of the project should be among the top critical factors because if the project was not delivered as agreed upon, disputation will occur when it’s hard to change what has been done.

Table 5.2.4.1 CSF RII

	Rank	Importance level	Relative index
Commitment of public and private sectors	1	Very important	.886
Responsibility of public and private sectors	1	Very important	.886
Strong private consortium	11	Very important	.754
Appropriate risk allocation and sharing	7	Very important	.830
Government involvement and support	5	Very important	.844
Project identification and technical feasibility	12	Very important	.750
Competitive procurement process	10	Very important	.784
Transparent procurement process	6	Very important	.840
Clear contract document	3	Very important	.854
Good governance	2	Very important	.860
Favorable legal framework	8	Very important	.820
Satisfaction with the delivered project	4	Very important	.846
Cost/benefit assessment	9	Very important	.790

### 5.2.5 Value For Money

The relative importance index was used also to rank the important factors of the value for money in table 5.2.5.1. The results are slightly different than the results of Ismail (2012), as the ‘competitive tender’ was the first factor, while in this study it’s the third. And ‘early project delivery’ is the first, however it was not among the top ten factors in the previous studies. While ‘improved and additional facilities to the public sector’ was the

second factor in this study, it wasn't among the top factors in the previous studies. Efficiency of risk allocation was the second factor in this study, and the third in the previous ones. private sector technical innovation was the fourth factor in this study, and the second in the previous ones.

Table 5.2.5.1 VFM RII

	Rank	Importance level	Relative index
Competitive tender	3	Important	.736
Efficiency of risk allocation	2	Important	.744
Long term nature of contract	10	Important	.656
Improved and additional facilities to the public sector	2	Important	.744
Private sector management skills	7	Important	.700
Private sector technical innovation	4	Important	.730
Optimal use of assets/facility and project efficiency	5	Important	.726
Early project delivery	1	Very important	.770
Low project life cycle cost	8	Important	.690
Off public sector balance sheet treatment	6	Important	.706
Reduction in disputes and claims	9	Important	.684
Bidding cost	9	Important	.684

### 5.3 Pearson Correlation Analysis

In this study, two models will be used in the correlation, regression, and structural equation modeling.

Model 1:

$$Performance = \beta_0 + \beta_1 CSF + \beta_2 VFM + \beta_3 AvgCGPbPv$$

CSF = Critical Success Factors, VFM = Value for Money, AvgCGPbPv = average Corporate Governance for both sectors.

And model 2:

$$Performance = \beta_0 + \beta_1 CSF + \beta_2 VFM + \beta_3 AvgCGPb + \beta_4 AvgCGPv$$

CSF = Critical Success Factors, VFM = Value for Money, AvgCGPb = average Corporate Governance for Public sector, AvgCGPv = average Corporate Governance for Private sector.

Model 1 and 2 show that there is no significant correlation as illustrated in tables 5.3.1 and 5.3.2, respectively. Multicollinearity problem arises when two independent variables affect each other, which is tested using correlation matrix. The matrix showed that this problem does not exist since none of the independent variables have a correlation value above 60% (Field, 2000).

Table 5.3.1 Pearson Correlation Analysis model 1

	CSF	VFM	CG total	performance
CSF	1			
VFM	.183	1		
CG total	.225	.311*	1	
performance	.149	.067	-.192	1

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 5.3.2 Pearson Correlation Analysis model 2

	CSF	VFM	performance	CG public	CG private
CSF	1				
VFM	.183	1			
performance	.149	.067	1		
CG public	.062	.343**	-.052	1	
CG private	.237	.041	-.204	-.174	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

#### ***5.4 Regression Analysis***

The hierarchical multiple regression analysis will be done for the two models. At the same time the mediation impact will be tested using this regression. The results are shown in table 5.4.1. According to Baron and Kenny (1986), there are conditions that must be met in order to test for mediator impact. First, there should be a significant relation between the independent variable and the mediator -path a-. Second, there should be a significant relation between the mediator and the dependent variable -path b-. Finally, after

controlling path a and b, the relation between the dependent and the independent variables is no longer significant.

Table 5.4.1 Hierarchical Multiple Regression model 1 and 2

Variables	Model 1			Model 2		
	Beta	T	Sig	Beta	T	Sig
(constant)		3.691	.001		3.637	.001
CSF	.196	1.489	.142	.208	1.554	.126
VFM	.112	.836	.407	.090	.650	.519
CG total	-.284	-2.102	.040			
CG Public				-.145	-1.039	.303
CG Private				-.282	-2.099	.040
R Square	.095			.102		
Adjusted R Square	.047			.037		

The R square value was 0.095 which suggest that the model variable can explain around 10% of the variance of the dependent variable. The findings support hypotheses 1 that there is relationship between CG and performance.

The significance level for model 1 and 2 is 0.04 which is an acceptable value to indicate a relationship between the corporate governance and performance. However, the mediation condition for the CSF and VFM is not met, and it can be said that CSF and VFM have no mediation impact on performance.

As the conditions of Baron and Kenny (1986) are not met, then the value for money and critical success factors have no mediator impact between the corporate governance and performance. And the network theory helped in dealing with this relation between the

different parties of the PPP. However, more advanced tests will be done to examine this relation. In this stage, the results regarding this issue in the literature review is mixed compared with this study. Edward and Clough (2005), had proof from previous studies that empirical research failed to find a clear link between corporate governance and firm performance. While Sonnenfeld (2002), argued that the highest performing companies have extremely continuous boards that regard dissent as an obligation, and no subject is undiscussable. In other words, the corporate governance should not be seen only as structure of work, but also managing the social system is crucial too. Markonah, Sudiro, Surachman, and Rahayu (2019), had another opinion regarding the relationship, they mentioned that corporate governance has a significant impact on achieving better corporate performance. Also, Sabry (2015), added that good governance help PPP in performing well.

In this case, hypothesis 1 will be accepted by the regression due to having relation between the dependent and the independent variable, but there is no mediating impact of the two mediators which led to rejecting hypothesis 2 and 3. The results regarding the relation between performance and corporate governance were contradictory. There many reasons for this result: the complexity of the PPP nature could be a reason as the statistical method couldn't capture the full image. Also, the difficulty of measuring the interaction between the governance variables could be another reason. One important point that should be highlighted is the variation in performance measurements used. Some studies use financial measures like return on assets as a measure of performance. However, this measurement is not enough in the PPP environment. It's important to know that there is no prescription for all organizations and one size doesn't fit all. Another critical note is that



there are external and internal factors affecting the organizations like the history of PPP. Developed countries initiated PPP since 1990's, while a developing country like Qatar started the first PPP project in 2008. Having experience in a field help practitioners and researchers to investigate issues arising to support decision makers and policy makers.

### ***5.5 Rotated Component Matrix***

The rotated component matrix helps determining what the components represent. Li, Akintoye, and Holt, (2017), used this method in their study and noted that rotation does not affect the goodness of fit of a factor solution. In table 5.5.1 the components are corporate governance in public sector, corporate governance in private sector, value for money, critical success factors, and performance. The first component represents the corporate governance in the public sector, and its correlated with all variables which are its measures, which means they are representing the component well. The rest of the components are represented in Appendix D.

Table 5.5.1 Rotated Component Matrix

	Component				
	1	2	3	4	5
Project selection is based on clearly defined strategic goals and creeds	<b>.693</b>	-.166	-.024	.290	.072
In the process of PPP, the company regards the behavioral norms as correct fundamental values	<b>.715</b>	-.318	.155	.218	.050
The authority/organization demands project members to behave in line with company 'norms'	<b>.901</b>	-.131	.055	.080	-.022
The authority/organization encourages project managers to develop autonomy within the scope of the company's authority and rules	<b>.819</b>	-.176	.002	.170	.017
After top management has defined the project, it can only be modified with feedback	<b>.741</b>	.121	.066	-.129	.006
The authority/organization has an explicit regulatory framework and regulations on expected standards of behavior	<b>.849</b>	-.210	.054	-.087	-.031

### ***5.6 Factor Analysis***

The measures of the variables should be significantly loaded on their respective construct. It can be seen in table 5.6.1 below, all the construct load on the constructs they were designed to measure. Therefore, the content validity was confirmed, for example, this study used a cutoff value for loadings at 0.6 as significant. Thus, if any item has a loading higher than 0.6, then it will be having significant loadings.

Table 5.6.1 Factor Analysis

ITEM	CSF	PERF	PUB+PVTCG	VFM
CGPRIV.Q3r.10			<b>0.634</b>	
CGPRIV.Q3r.18			<b>0.620</b>	
CGPRIV.Q3r.19			<b>0.661</b>	
CGPRIV.Q3r.2			<b>0.773</b>	
CGPRIV.Q3r.4			<b>0.756</b>	
CGPRIV.Q3r.6			<b>0.648</b>	
CGPRIV.Q3r.8			<b>0.648</b>	
CGPUB.QP3.09			0.519	
CGPUB.QP3.11			0.496	
CGPUB.QP3.16			0.536	
CGPUB.QP3.18			0.510	
CGPUB.QP3.21			0.497	
CGPUB.QP3.24			<b>0.619</b>	
CSF.Q1.13	<b>0.672</b>			
CSF.Q1.6	0.402			
PERF.Q5.1		<b>0.729</b>		
PERF.Q5.3		0.528		
PERF.Q5.5		<b>0.809</b>		
VAL.Q2.601				0.506
VAL.Q2.603				0.571
VAL.Q2.604				<b>0.689</b>
VAL.Q2.610				0.345
VAL.Q2.611				<b>1.026</b>
VAL.Q2.612				<b>0.879</b>

The average variance extracted (AVE) for CSF, CG, Performance and VFM ranged from .380,.307, .488, and .500 respectively, indicating convergent validity is closed to yardstick that is .50 except for VFM which reach the cut off .5 for AVE. Composite reliabilities ranged from CSF, .454, performance, .735, CG .886 and VFM .843 and Performance .856 demonstrating reliability for all constructs except for CSF. For the internal consistency measures using Cronbach's alphas show that all variables revealed an acceptable level of reliability above recommended value > 0.7 except CSF (.425).

### 5.7 Structural Equation Modeling (SEM-PLS test)

Having seen the poor results, the relationship further tested under SEM. The purpose is to analyze the relationship between the dependent variable that is the performance and the independent variables that are CFS, CG and VFM. Based on figure 5.7.1, the R square value for the performance is 0.095 which is the same as Table 5.4.1 in the hierarchical multiple regression -model 1-. In addition to that, the beta values for the rest of the variables are shown on the arrow that goes from each independent variable to the dependent variable.

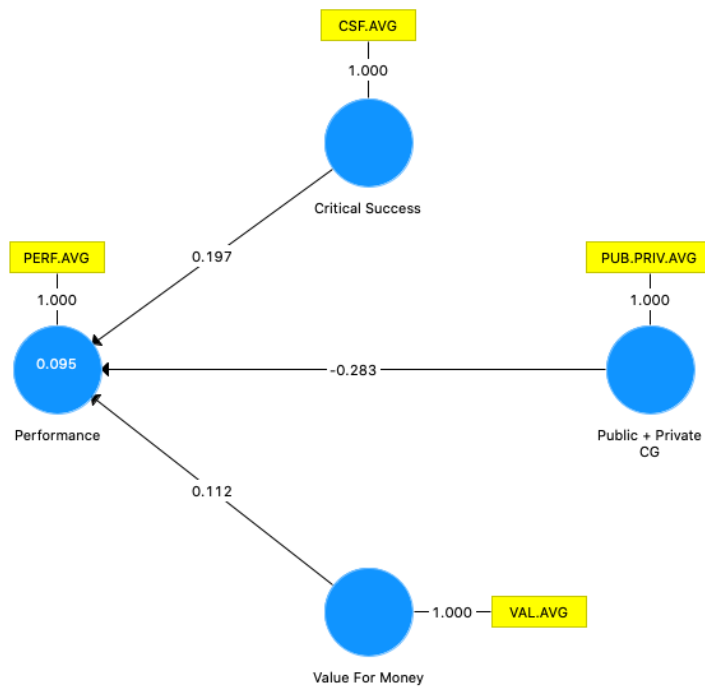


Figure 5.7.1 PLS-SEM without mediator

### 5.8 Mediation Analysis

This analysis aims to test the hypotheses. To test the model, SEM in this research incorporate independent and dependent variables. The tool used for such estimation is SmartPLS which is a free tool for student use. The model significantly predicts Performance with an R2 value of 0.594. The predictors of Value for Money (VFM) and Critical Success Factors (CSF) also significantly predict the variable with R2 values of 0.277 and 0.336 respectively.

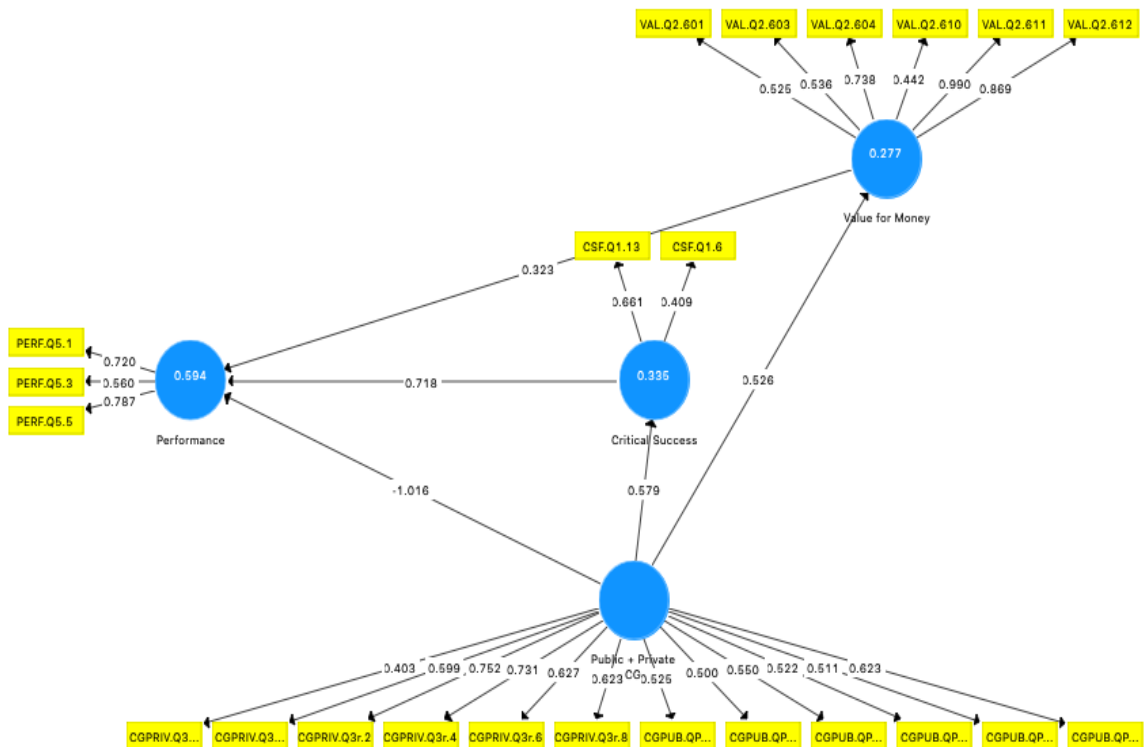


Figure 5.8.1 PLS-SEM

### 5.9 Consistent Bootstrapping

Bootstrapping technique was used to calculate the  $t$ -values for the model. According to this technique  $t=1.96$  is considered significant with a  $p$ -value  $< 0.05$ . Also, a  $t$ -value of 2.58 indicate a level of  $p$ -value  $< 0.01$ . In this case, we can see that that Public-Private CG is significantly related to Critical Success Factors (CSF) with a  $p$ -value of 0.036 and  $t$ -value of 2.100. The relationship between CSF and the Performance Measure (PM) was significant with a  $p$ -value of 0.071 and  $t$ -value of 1.807. The finding supprt H2 and found The critical success factors have mediating role between corporate governance and performance.

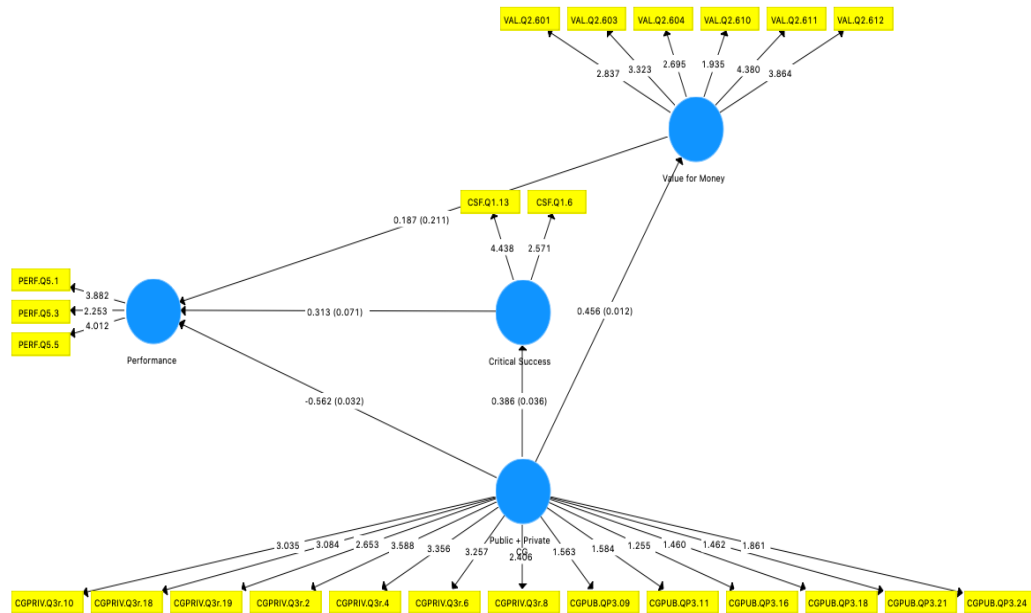


Figure 5.9.1 P-values of the model

## Chapter 6: Summary and Conclusion

This chapter provides a summary of the study including conclusions, limitations, and avenues for future research.

### *6.1 Summary*

This study investigated the relationship between public-private partnership, critical success factors, and corporate governance in Qatar. In addition to that, some accounting and performance related issues were discussed also. Investigating this area is critical in the Qatari environment as there is a lack of research about PPP in Qatar, besides that the mediating impact were not discussed before. A survey was used to collect primary data from employees involved in PPP projects. It was distributed online to 20 organizations from public and private sectors. It is believed that the most appropriate theory found to explain the complicated environment of the PPP is the network theory. It was used to formulate four hypotheses to test the relationship between the variables and the mediating impact. The IBM SPSS and SmartPLS were used to conduct the required statistical tests.

The results showed enough evidence to support hypothesis 1 & 4 and to reject the remaining 2. Therefore, it can be concluded that there is a relationship between corporate governance and performance. This aligns with previous studies suggesting the presence of a relationship between the two variables (Sabry, 2015). However, the relationship appeared to be negative. The reason for such relationship could be explained by the maturity of the PPP laws and regulations in addition to the knowledge of people in Qatar in this area. The laws and regulations are still not released, and people still lack enough knowledge in the area and the adequate implementation of PPP. This answers the second and third research questions. The second question was raised to understand the impact of corporate

governance on performance, which appeared to be negative. While the third question was related to the legal framework status in Qatar and the results concluded that there is no clear laws and regulations.

As for the fourth hypothesis, it was accepted due to finding corporate governance as one of the critical success factors. The results ranked the factors and found that corporate found that corporate governance occupies the second ranking, making it at the top. This result aligns with the findings of previous papers (Muhammad & Johar, 2017; Węgrzyn, 2016; Cheung et al., 2012). Even though the maturity of corporate governance in Qatar was low and showed a negative relationship with performance in the first hypothesis, corporate governance still played a major role in the success of projects. People in Qatar understand the importance of having corporate governance and understand the contribution it adds to the success of the project and to the improved performance. The results assist in answering the first research question which identifies the critical success factors by concluding that the corporate governance is one of the top. The remaining rankings were illustrated in figure 5.2.4.1.

Based on the mediating impact conditions, there should be a relation between the dependent and the independent variables in order to test for the mediating impact which is met. However, the rest of the conditions were not met that led to rejecting hypothesis 2 and 3. CSF and VFM do not have mediating impact between CG and performance.

The network theory assisted in understanding the relationships among the variables as the PPP environment is complicated. As well as, the PPP contains different stakeholders, and the network theory set the strategies based on the different perceptions of people in the network. Hodge and Greve (2017), advocate that the use of network theory supports the



performance issues in PPP. That was concluded in the results as there is a relationship between the CG and the performance.

The results of this research have contributions for research and practice. For research, it advances knowledge in the area of PPP where it has complex relationship between key players and to best of the researcher knowledge has not been explored specially by employing SEM. Ainuddin, Beamish, Hulland, and Rouse (2007) mentioned that the Use of PLS is suited to exploratory studies, where the measures are new and the relationships have not been tested before. Also, according to Julien and Ramangalahy (2003) PLS is known to be particularly advantageous in the initial development and assessment phase of theory building. Managers and owners should focus on the CFS factors highlighted by the study through the factor analysis and they should consider that CG would highly improve PPP performance. Policy makers should be more concerned about the regulation related to PPPs. decision makers and policy makers should ensure that CSF, VAM suits CG requirements which could lead to better performance of PPPs.

## ***6.2 Limitations***

Although the study provided contributions to the literature, some limitations exist. The first limitation is the sample size, it could be larger to represent better statistical results, only if the organizations were cooperative. The participation in the survey was voluntary and a few numbers of the contacted firms refused to participate. Also, a large number of the returned surveys were not complete, so they were eliminated. This constraint limits the generalization of the results. Another limitation is the measurement of the variables, for instance, the performance was not measured by financial ratios but only qualitative measures. Some previous studies that found relationships between performance and

governance used financial measures like ROI, but this study didn't use them as they are not enough.

To overcome the limitation from the sample size, the research utilized SEM-PLS. According to Birkinshaw, Morrison, and Hulland (1995) PLS is most appropriate when sample sizes are small, assumptions of multivariate normality and interval scaled data cannot be made, and when the researcher is primarily concerned with prediction of the dependent variable.

### ***6.3 Future Research***

Future research could use a mix of financial and qualitative measures to accurately represent the variables. So, it is suggested to use qualitative method in the future to investigate the topic. Also, a comparative study could be conducted to compare the PPP projects status before and after the issue of the Qatari PPP law. Given the limitation of the sample size, future research could increase the number of organizations participating in the study to gain more comprehensive image of the PPP in Qatar.

### ***6.4 Research Experience***

Conducting this study improved different skills. First, it helped me in understanding new statistical analysis methods like PLS. Also, I gained knowledge about creating questionnaires and analyzing data. Finally, each section in the research required extensive reading to understand it and to write it.

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Appendix A: The survey of the study

**Section 1: the critical success factors for the public private partnership**

1-Please select the most important factors that you think they are critical to the success of the PPP projects you worked on:

Factors	1 Least important	2 Less important	3 Neutral	4 Important	5 Very important
Commitment of public & private sectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Responsibility of public & private sectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strong private consortium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appropriate risk allocation and sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Government involvement and support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project identification and technical feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competitive procurement process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transparent procurement process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clear contract document	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good governance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Favorable legal framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Satisfaction with the delivered project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost/benefit assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*If your organization is implementing any other factors as a part of its risk management process, please specify: .....

\*Do you think that identifying the critical success factors will improve the performance?

- Yes
- No

**Section 2: accounting issues in public private partnership**

\* Please note that you must have financial background in order to answer questions **2 to 11**, if that is not applicable to you go to question **12**.

2- Based on the general experience PPPs by the government, how do PPPs perform regarding time and cost compared with the traditional procurement?

- Better
- The same
- Worse
- No enough data to make the assessment

3- What criteria are used to decide whether an asset involved in a PPP project appears on the government books?

- IPSAS 32 (it establishes the accounting and reporting requirements for the grantor in the service concession arrangement)
  - IFRIC 12 (it gives guidance on the accounting by operators for PPP service concession arrangement)
  - GAAP
  - Assets appear on books of the party who beard major of the risk
  - Assets appear on books of the party who has control over the assets
- \* if you have other criteria please specify
- .....
- .....

4- Do you have accounting mechanisms that have been put in place that formally account for the contingent liabilities and costs generated by PPP projects?

- Yes
- No

5- What type of information do you disclose regarding the PPP projects?

- financial statistics
  - financial statements
  - budget documentation and reporting
-

6- Do you prepare “value for money analysis” for each PPP project?

- Yes
- No

If YES, what is the importance of value for money measures in PPP projects?

	<b>1 Least important</b>	<b>2 Less important</b>	<b>3 Neutral</b>	<b>4 Important</b>	<b>5 Very important</b>
Competitive tender	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Efficiency of risk allocation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long term nature of contract	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improved and additional facilities to the public sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private sector management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private sector technical innovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Optimal use of assets/facility and project efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Early project delivery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low project life cycle cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Off public sector balance sheet treatment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in disputes and claims	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bidding cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*Do you think that value for money is critical for achieving the required performance of the PPP project?

- Yes
- No

7-Is there an internal audit department in your establishment?

- Yes
- No

8- What is the number of employees in your department?

.....

9- Do you believe that PPP should be audited by internal audit department?

- Yes
- No

10- Do you think that the internal auditor should be part of PPP team?

- Yes
- No

11- In your opinion whom should the internal auditors in PPP report to?

.....

**Section 3: corporate governance in PPP**

\* question 12 is for public sector employees only.

Private sector employees please go to question 13.



12-To what extent you agree or disagree to the following statements:					
	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
Project selection is based on clearly defined strategic goals and creeds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the process of PPP, the company regards the behavioral norms as correct fundamental values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The authority/organization demands project members to behave in line with company 'norms'	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The authority/organization encourages project managers to develop autonomy within the scope of the company's authority and rules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After top management has defined the project, it can only be modified with feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>The authority/organization</u> has an explicit regulatory framework and regulations on expected standards of behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The authority/organization sets clear spans of PPP responsibility and ranges of authority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>The authority/organization</u> continually inspects and supervises project implementation and management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
The authority / organization determines rewards and sanctions for project members to reflect levels of project achievement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The authority/organization encourages different levels of staff to highlight any uncertainty relating to the project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The authority/organization encourages different levels of staff to supplement added value factors to the project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The authority/organization has stipulated the collective participation rules of decision activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department considers strategic and specific issue risk.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department monitors government priorities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department focuses mostly on the drivers of organizational success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department is up to date with international developments/ technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department ensures that succession planning is conducted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department appoints an internal auditor and monitors his/her thoroughness in his/her work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department is satisfied with the diligence of the audit/finance committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
My department ensures that audit reports are timely and clear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department spends enough time in meetings in which actions to audit findings are considered.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department maintains independence and challenges senior management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department ensures that internal control exists to minimize the risk of fraud.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My department insists on reference checks during employee recruitment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* What is the percentage of projects that did not meet its requirements?

- 20 percent or less
- 21 to 50 percent
- 51 to 70 percent
- More than 70 percent

\*Do you think that weak corporate governance could affect the performance of the project?

- Yes
- No

\*Do you think that corporate governance has a critical impact on preparing value for money?

- Yes
- No

\*question 13 for private sector employees only

13-To what extent you agree or disagree to the following statements:

	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
There is separation of the role of Chairman and CEO					
The board of the entity is independent: not a former employee or a major shareholder					
There is a balance of director skills and competencies					
The board size is not too big	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is audit committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is board committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is an effective board performance evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is transparent appointment process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are adequate communications with the investors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Directors are working as a team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is culture of trust	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is culture of open dissent between the employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
Employees have right skills & competencies					
Employees have characteristics and business knowledge					
There is information flow among partners.					
Project selection is based on clearly defined strategic goals and creeds					
In the process of PPP, the company regards the behavioral norms of correct fundamental values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The company continually inspects and supervises project implementation and management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are penalties for when project implementation behavior violates relevant regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* What is the percentage of projects that did not meet its requirements?

- 20 percent or less
- 21 to 50 percent
- 51 to 70 percent
- More than 70 percent

\*Do you think that weak corporate governance could affect the performance of the project?

- Yes
- No

\*Do you think that corporate governance has a critical impact on preparing value for money?

- Yes
- No

**Section 4: legal framework**

This section measures the satisfaction of the employees with the legal framework:

14-To what extent you agree or disagree to the following statements:					
	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
The legal framework provides clear guidance that I need	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The legal framework system provides precise information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The legal framework provides guidance on how to prepare output and reports in a useful format	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information provided by the legal framework is comprehensive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information provided by the legal framework is up to date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The legal framework is beneficial for the tasks of individuals engaged in PPP and improves PPP efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Qatari PPP law is implemented in my entity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The employees were aware about the Qatari PPP law when it was launched	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, there is satisfaction with the legal framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Section 5: performance measurement**

15-To what extent you agree or disagree to the following statements:					
Relative to our expectations and our relationship with the end users, PPP has led to:					
	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
Improved service/product quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost savings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On time delivery of outcomes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall stakeholder satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* Please explain the detail of your selection of performance measurement method:

.....  
.....

## Section 6: Demographics

- 16- What job function do you work in?
- Accountant
  - Auditor
  - Director
  - Engineer
  - Project manager
  - Non-executive board director
  - Other
- 17- What is your highest academic qualification?
- Diploma or lower
  - Bachelor
  - Master
  - Doctorate
- 18- What is your Professional certification: (please tick all that apply)
- None
  - Public/chartered accountancy (CA, CPA, ACCA...)
  - Internal auditing (CIA, CCSA...)
  - Management accounting (CMA, CIMA, CGA...)
  - Engineering (PMP, PgMP, GSAS, BIM, RMP, CCP)
  - Other
- 19- What are the years of your work experience?
- 5 years or less
  - 6-10 years
  - 11-15
  - Above 16 years
- 20- What is your gender?
- Male
  - Female

21-What is your age?

- Under 20
- 22-30
- 31-40
- 41-50
- Above 51

22-What is the type of the organization in which you work?

- Private organization
- Governmental/Public organization
- Non-governmental organization

23-What is the listing status of your organization?

- Listed organization
- Non-listed organization

24-What is the sector of your organization?

- Sport
- Hospitality
- Water
- Waste
- Transport
- Health
- Education
- Road
- Train
- Airport
- Port
- Power
- Other Service (please specify)

25-What is the total number of employees in your organization?

- 50 or less
- 51-100
- 101-200
- Above 200

26-Which of the following stage best describe the most recent project you are working/worked on?

- Started
- Middle stage
- Completed

27- How do you classify yourself/organization/authority?

- Owner of the project
- Operator of the project
- End user or beneficiaries
- others

Appendix B: Accounting Criteria responses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	IPSAS 32	7	11.7	11.7	11.7
	IFRIC 12	8	13.3	13.3	25.0
	GAAP	2	3.3	3.3	28.3
	bear major risk	4	6.7	6.7	35.0
	control assets	11	18.3	18.3	53.3
	others	22	36.7	36.7	90.0
	I have no idea	6	10.0	10.0	100.0
	Total	60	100.0	100.0	

## Appendix C: Accounting Mechanisms responses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	9	15.0	15.0	15.0
	Yes	29	48.3	48.3	63.3
	I have no idea	22	36.7	36.7	100.0
	Total	60	100.0	100.0	



## Appendix D: Rotated Component matrix results

Each group of bold numbers are representing a variable.

	Component				
	1	2	3	4	5
Competitive tender	.159	.065	<b>.833</b>	-.044	.028
Efficiency of risk allocation	.213	-.089	<b>.842</b>	.013	-.045
Long term nature of contract	.046	.216	<b>.536</b>	.352	.110
Improved and additional facilities to the public sector	.381	.059	<b>.797</b>	-.161	.070
Private sector management skills	.028	-.061	<b>.755</b>	.034	.053
Private sector technical innovation	.257	-.075	<b>.702</b>	.064	-.105
Optimal use of assets/facility and project efficiency	.048	.039	<b>.769</b>	.212	-.076
Early project delivery	.239	-.246	<b>.792</b>	-.003	.022
Low project life cycle cost	-.014	.011	<b>.639</b>	.102	.178
Off public sector balance sheet treatment	.269	-.083	<b>.688</b>	-.055	.063
Reduction in disputes and claims	.166	.376	<b>.557</b>	.075	-.081
Bidding cost	.216	.280	<b>.595</b>	.165	.121
Project selection is based on clearly defined strategic goals and creeds	<b>.693</b>	-.166	-.024	.290	.072
In the process of PPP, the company regards the behavioral norms as correct fundamental values	<b>.715</b>	-.318	.155	.218	.050
The authority/organization demands project members to behave in line with company 'norms'	<b>.901</b>	-.131	.055	.080	-.022
The authority/organization encourages project managers to develop autonomy within the scope of the company's authority and rules	<b>.819</b>	-.176	.002	.170	.017
After top management has defined the project, it can only be modified with feedback	<b>.741</b>	.121	.066	-.129	.006
The authority/organization has an explicit regulatory framework and regulations on expected standards of behavior	<b>.849</b>	-.210	.054	-.087	-.031

The authority/organization sets clear spans of PPP responsibility and ranges of authority	<b>.837</b>	-.090	.124	.039	.084
The authority/organization continually inspects and supervises project implementation and management	<b>.863</b>	-.094	.093	.103	.222
The authority / organization determines rewards and sanctions for project members to reflect levels of project achievement	<b>.893</b>	.055	.065	.078	-.093
The authority/organization encourages different levels of staff to highlight any uncertainty relating to the project	<b>.879</b>	-.017	.020	-.061	-.232
The authority/organization encourages different levels of staff to supplement added value factors to the project	<b>.866</b>	.084	.083	-.013	-.065
The authority/organization has stipulated the collective participation rules of decision activity	<b>.813</b>	-.021	.029	.167	.148
My department considers strategic and specific issue risk.	<b>.833</b>	-.185	.119	.114	-.091
My department monitors government priorities.	<b>.806</b>	-.208	.065	-.093	-.072
My department focuses mostly on the drivers of organizational success	<b>.800</b>	-.209	.142	.007	-.098
My department is up to date with international developments/ technology	<b>.811</b>	-.030	.261	-.049	-.087
My department ensures that succession planning is conducted	<b>.846</b>	-.125	.178	.010	-.096
My department appoints an internal auditor and monitors his/her thoroughness in his/her work.	<b>.868</b>	.054	.181	.007	.106
My department is satisfied with the diligence of the audit/finance committee	<b>.818</b>	.001	.070	-.068	.136
My department ensures that audit reports are timely and clear	<b>.778</b>	-.192	.192	-.087	.034
My department spends enough time in meetings in which actions to audit findings are considered.	<b>.863</b>	.038	.216	-.064	-.102
My department maintains independence and challenges senior management	<b>.856</b>	-.071	.108	-.058	.115

My department ensures that internal control exists to minimize the risk of fraud.	<b>.823</b>	-.015	.151	-.008	-.043
My department insists on reference checks during employee recruitment.	<b>.861</b>	.161	.131	.066	-.085
There is separation of the role of Chairman and CEO	-.127	<b>.836</b>	.002	.037	-.224
The board of the entity is independent: not a former employee or a major shareholder	.032	<b>.866</b>	.165	.112	-.073
There is a balance of director skills and competencies	-.199	<b>.780</b>	.019	.038	-.019
The board size is not too big	.031	<b>.866</b>	.073	.070	-.002
There is audit committee	-.076	<b>.871</b>	.026	-.001	.158
There is board committee	.025	<b>.867</b>	.024	-.002	-.069
There is an effective board performance evaluation	-.036	<b>.873</b>	-.072	.036	-.046
There is transparent appointment process	-.124	<b>.834</b>	-.012	.089	-.313
There are adequate communications with the investors	-.200	<b>.850</b>	-.009	.093	-.154
Directors are working as a team	-.028	<b>.923</b>	.017	.010	-.020
There is culture of trust	-.002	<b>.908</b>	-.091	.016	.025
There is culture of open dissent between the employees	-.053	<b>.871</b>	-.030	.105	-.067
Employees have right skills and competencies	-.254	<b>.771</b>	-.091	.089	-.106
Employees have characteristics and business knowledge	-.134	<b>.749</b>	-.020	.023	-.321
There is information flow among partners.	-.103	<b>.898</b>	-.049	-.019	-.002
Project selection is based on clearly defined strategic goals and creeds	-.209	<b>.786</b>	-.001	.035	.185
In the process of PPP, the company regards the behavioral norms of correct fundamental values	-.045	<b>.886</b>	.028	.069	.035
The company continually inspects and supervises project implementation and management	.030	<b>.839</b>	.051	.039	.100
There are penalties for when project implementation behavior violates relevant regulations	-.078	<b>.854</b>	.011	.012	-.166
Improved service/product quality	-.020	-.266	.055	.092	<b>.789</b>
Cost savings	.142	-.068	-.165	-.065	<b>.681</b>

Flexibility	-.324	-.021	.030	.079	<b>.593</b>
On time delivery of outcomes	.036	-.028	.205	.151	<b>.681</b>
Overall stakeholder satisfaction	-.143	-.287	.147	.229	<b>.671</b>
Commitment of public and private sectors	-.192	-.021	.237	<b>.546</b>	-.053
Responsibility of public and private sectors	.059	.022	.058	<b>.469</b>	.164
Strong private consortium	.141	.033	-.077	<b>.468</b>	.203
Appropriate risk allocation and sharing	-.011	.012	.077	<b>.273</b>	.126
Government involvement and support	.145	.152	.063	<b>.409</b>	.110
Project identification and technical feasibility	.066	.158	-.094	<b>.658</b>	.226
Competitive procurement process	.004	.049	-.069	<b>.542</b>	.094
Transparent procurement process	-.042	-.060	-.024	<b>.604</b>	-.082
Clear contract document	.042	.326	.098	<b>.602</b>	-.109
Good governance	.022	-.151	-.048	<b>.381</b>	-.290
Favorable legal framework	-.102	.095	.101	<b>.475</b>	-.183
Satisfaction with the delivered project	.058	.046	.135	<b>.233</b>	-.066
Cost/benefit assessment	.036	.452	.175	<b>.153</b>	.222

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

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