Summer 8-2020

Governance Impact on Public-Private Partnerships for Member Countries of the World Bank Group

Kouliga Koala
Old Dominion University, kkoal001@odu.edu

GOVERNANCE IMPACT ON PUBLIC-PRIVATE PARTNERSHIPS FOR MEMBER COUNTRIES OF THE WORLD BANK GROUP

by

Kouliga Koala
B.A. May 2012, Canisius College
M.A. May 2016, Minnesota State University, Mankato

A Dissertation Submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

PUBLIC ADMINISTRATION AND POLICY

OLD DOMINION UNIVERSITY
August 2020

Approved by

Meagan M. Jordan (Chair)

Joshua M. Steinfeld (Member)

John R. Lombard (Member)

Norou Diawara (Member)

ABSTRACT

GOVERNANCE IMPACT ON PUBLIC-PRIVATE PARTNERSHIPS FOR MEMBER COUNTRIES OF THE WORLD BANK GROUP

Kouliga Koala
Old Dominion University, 2020
Chair: Dr. Meagan M. Jordan

Member countries of the World Bank Group (WBG) increasingly turn to public-private partnerships (PPPs) to finance their transportation infrastructure projects due to the financial burden of undertaking big projects on their own. The World Bank coordinates the PPPs between investors and recipient countries. PPPs are expected to produce positive outcomes that respond to policy objectives. However, the outcomes and benefits of PPPs not only depend on several factors, but more importantly on how those factors interact with one another to yield the expected outcomes. This dissertation has identified good governance, PPP governance, and PPP outcome as the key concepts in the examination of the value that PPPs bring to countries that receive transportation PPP contracts. Using secondary data, the study explores the relationships between the three major concepts and assesses the possible mediating role of the internationally recognized PPP practices on the relationship between good governance and PPP outcome. The relationships are also examined for groups of countries based on their income level. The dissertation uses the overarching theory of good governance to explore these relationships. The dissertation analyzes the relationships using multivariate regression in the generalized structural equation modeling (GSEM) in the STATA package. Most of the hypotheses set in the study were supported. Recommendations are made to the World Bank and member countries to conduct effective transportation PPP contracts. The contribution to theory and practice is discussed. A framework for examining the relationships is provided.

This dissertation is dedicated to the proposition that God helps those who help themselves, a favorite saying of my mother, the symbol of strength till the end and a believer in God's support for all the fighters of the good cause. My late father left me with blessing words that keep me going every day. I thank my wife and my son for being there with me throughout the process.

ACKNOWLEDGEMENTS

I thank my dissertation Chair, Dr. Jordan and all the committee members for their guidance and patience throughout the manuscript process. I extend many thanks to faculty and students who offered encouragements and their contribution in various ways to the dissertation.

GLOSSARY, ABBREVIATIONS, AND ACRONYMS

PPPs: Public-private partnerships

PPP governance: The governance of PPPs comprises the stages of the PPP process including the preparation stage, the procurement stage, and the contract management stage.

PPP governance main categories: The main categories include PPP preparation, PPP procurement, and PPP contract management.

PPP preparation subcategories: The practices at the preparation stage

PPP procurement subcategories: The practices at the procurement stage

PPP contract management subcategories: The practices at the contract management stage

Country governance: Good governance at the country level

PPP outcome: The outcomes of the transportation PPP projects

TABLE OF CONTENTS

Page

LIST OF TABLES ..... **x**

LIST OF FIGURES ..... **xii**

Chapter

I. INTRODUCTION **1**
Purpose 1
Governance Indicator Data 6
Research Questions 7
Dissertation Preview 10

II. LITERATURE REVIEW **11**
Governance, Good Governance, and Definitions 11
Public-Private Partnerships: Merits and Challenges 15
State of Public-Private Partnerships in Developed Economies 22
State of Public-Private Partnerships in Developing Economies 23
The Stages of PPP Process 25
Preparation of PPPs and Influence on PPP Outcomes 27
Procurement of PPPs and Influence on PPP Outcomes 31
PPP Contract Management and Influence on PPP Outcomes 34
Governance Theory and its Relation to PPP Governance and PPP Outcome 37
Voice and Accountability: Influence on PPP Governance and Outcome 38
Political Stability: Influence on PPP Governance and Outcome 40
Government Effectiveness: Influence on PPP Governance and Outcome 42
Regulatory Quality: Influence on PPP Governance and Outcome 44
Rule of Law: Influence on PPP Governance and Outcome 46
Control of Corruption: Influence on PPP Governance and Outcome 47

III. METHODOLOGY **51**
Concepts, Indicators, and Measures 51

Endogenous Variable 53
The Endogenous Mediator Variable 57
Exogenous Variable 64
Control Variables 65
Data Collection 71
Sample 71
Procedures 75
Missing Data 77
Data Transformation 77
Limitation of Data 77
Methods of Analysis 78
Mediation Analysis 78
Multivariate Regression 82
Data Summary 85
Measurement Validity 89

IV. RESULTS AND ANALYSIS 94
Analysis: Country Governance on PPP Outcome 94
Analysis: Country Governance on PPP Governance 99
Country Governance on the Subcategories of PPP Preparation 100
Country Governance on the Subcategories of PPP Procurement 103
Country Governance on the Subcategories of PPP Contract Management 105
Analysis: PPP Governance on PPP Outcome 107
Stages of PPP Governance on PPP Outcome 108
Subcategories of PPP Preparation on PPP Outcome 109
Subcategories of PPP Procurement on PPP Outcome 112
Subcategories of PPP Contract Management on PPP Outcome 116
Summary of Results 119
Analysis: The Mediating Role of PPP Governance 123
Analysis: Results by Income Level 126
Low Income Countries 132
Lower-Middle Income Countries 134
Upper-Middle Income Countries 135

Low, Lower-Middle and Upper-Middle Income Countries 137
Sub-Saharan African Countries 138

V. DISCUSSION AND CONCLUSION 140
Concluding Points: Country Governance and PPP outcome 140
Concluding Points: Country Governance and PPP Governance 144
Concluding Points: PPP Governance and PPP Outcome 148
Concluding Points: The Mediating Role of PPP Governance 152
Concluding Points: Income Level Discussion 159
Low Income Countries 159
Lower-Middle Income Countries 161
Upper-Middle Income Countries 162
Low, Lower-Middle, and Upper-Middle Income Countries 164
Sub-Saharan African Countries 165
Recommendations 166
Contribution 170
To Practice 170
To Theory 171
Limitations 172
Generalizability 173
Future Studies and Publication 174

REFERENCES 176

VITA 188

LIST OF TABLES

Table Page

Table 1: Outcome of Public-Private Partnership Projects 20

Table 2: Practices of the Preparation Stage 30

Table 3: Practices of the Procurement Stage 33

Table 4: Practices of the Management Stage 36

Table 5: Sources, Factors, and Outcome 49

Table 6: Frequencies of the Endogenous Variables 56

Table 7: PPP Appraisal Scores for 10 Countries Over Three Years 61

Table 8: Frequency of Binary Variables 63

Table 9: List of Variable, Measures, and Sources 67

Table 10: PPP Governance Subcategories 69

Table 11: Country Income Classification 74

Table 12: Models for Testing Hypotheses 84

Table 13: Data Summary 86

Table 14: Test of Normality Results 88

Table 15: Correlation Matrix for the Exogenous Variables 91

Table 16: Results of Model 1-Country Governance on PPP Outcome 96

Table 17: Results of Model 2b-Country Governance on PPP Preparation Subcategories 102

Table 18: Results of Model 2c-Country Governance on PPP Procurement 104

Table 19: Results of Model 2d-Country Governance on PPP Contract Management 106

Table 20: Results of Model 3a-Stages of PPP Governance on PPP Outcome 109

Table 21: Results of Model 3b-Subcategories of PPP Preparation on PPP Outcome 111

Table 22: Results of Model 3c-Subcategories of PPP Procurement on PPP Outcome 115

Table 23: Results of Model 3d-Subcategories of PPP Contract Management on PPP Outcome 118

Table 24: Supported Hypotheses for Models 1, 2, & 3 122

Table 25: Summary of Mediation Results 124

Table 26: Models for Testing Hypotheses by Income Level 131

LIST OF FIGURES

Figure Page

Figure 1: General Mediation Framework 9

Figure 2: Model of Governance 15

Figure 3: Influence of PPP Governance on PPP Outcome 37

Figure 4: Influence of Country Governance on PPP Governance and Outcome 38

Figure 5: Concepts, Indicators, and Measures 52

Figure 6: Significant Results: Country Governance on PPP Outcome 142

Figure 7: Significant Results: Country Governance on PPP Governance 147

Figure 8: Significant Results: PPP Governance on PPP Outcome 151

Figure 9: Significant Mediation Relationships 155

Figure 10: Framework for Understanding Public-Private Partnerships 158

CHAPTER I

INTRODUCTION

Purpose

Public-private partnerships (PPPs) are perceived as an effective tool to support governments' efforts in major infrastructure development (Flinders, 2005; Bojović, 2006; Brinkerhoff and Brinkerhoff, 2011). Central to this dissertation is the understanding of three major concepts with regards to the study of transportation PPPs in the context of the World Bank Group: country governance, PPP governance, and PPP outcome. The purpose of the dissertation is to study the relationships between the three concepts and examine whether PPP governance mediates the relationship between country governance and PPP outcome. The relationships are further examined by income level groups respective of the classification of countries by income level. To conceptually ground this research, a PPP is defined as a form of cooperation between public and private parties in the planning, construction, and exploitation of infrastructural facilities in which the parties share or reallocate risks, costs, benefits, resources, and responsibilities (Koppenjan, 2005). Good governance refers to the strengths of the institutions in a country with regards to government actions and concerns for accountability, political stability, effectiveness, the rule of law, and corruption. PPP governance refers to the application of practices at the different stages of PPP contracts to maximize the likelihood of successful PPP project outcomes. PPP outcome refers to how well PPP projects are executed with regards to the established objectives, tasks, and responsibilities.

PPPs are contracts, agreements, or arrangements between governments and the private sector for the construction of roads, highways, bridges, schools, and major facilities (Koppenjan, 2005; Bojović, 2006). Entering a partnership means that governments and private sector

contractors share responsibility for the design, building, financing, maintenance, and operation of the projects (Custos and Reitz, 2010; Greve and Hodge, 2013) on the principle of value for money (VFM). The potential of VFM allows governments to achieve public infrastructure development and relieves governments from budget and financial burden (Custos and Reitz, 2010; Siemiatycki and Farooqi, 2012; Siemiatycki, 2013; Soomro and Zhang, 2013; Forrer, Kee, and Boyer, 2014; Soomro and Zhang, 2016). Partnerships are based on agreements and arrangements on the various aspects of a PPP project. For, example, in transportation PPPs, the private sector expects to recover the cost of investments through the institution of tolls and payments (Custos and Reitz, 2010; Queiroz, Vajdic, and Mladenovic, 2013). Theoretically, the use of partnerships in public service provision was advanced by the birth of ideas leading to the new public management (NPM) movement in the 1990s (Osborne and Gaebler, 1993; Broadbent and Laughlin, 2003). Governments in developed economies as well as in less developed economies and international financial institutions then viewed PPPs as an alternative to government financing.

Practically, while individual countries engage in PPPs at the national level, the World Bank coordinates the public-private initiatives between stakeholders at the international level. As a financial institution with expertise in financing and investment, the World Bank coordinates and mediates the partnerships between donors and recipient countries. The World Bank is a cooperative of 189 member-countries that connects private investments to the needs of developing countries (The World Bank, 2018d). It provides financial and technical assistance in the form of loans and grants and innovative knowledge sharing to developing countries. Over the past few years, the assistance to PPP projects has substantially increased. The report of the *Private Participation in Infrastructure (PPI)* showed that private investments through the World

Bank in energy, transport, information and communication technologies (ICT) backbone, and water infrastructure in low- and middle-income countries in 2018 reached US$43.5 billion for the financing of 164 projects (The World Bank; 2019a). Transportation which includes airports, ports, railways, and roads, accounted for 57 percent of total investments (The World Bank; 2019). The larger investment in transportation showed the eagerness of developing economies to improve their transportation capacity by embracing the PPP approach led by the World Bank. It is important to note that some countries received larger investments than others. For example, the BRICS which include Brazil, Russia, India, China and South Africa received the bigger piece of the cake in the 2018's assistance.

With growing investments in PPPs, standards and internationally recognized practices were developed to guide recipient countries in the PPP process. Donors and the World Bank expect certain conditions and standards to be met by recipient countries those conditions are viewed as prerequisites for effective management and for the recovery of investment cost in the transportation infrastructure. Part of the World Bank's responsibilities is to set standards and define practices from the preparation to the closing of PPP contracts. The enforcement of standards and practices is viewed as the ability of governments and their agencies to adhere to the principles of transparency, accountability and participation, fairness, and orientation towards the public interest (Brinkerhoff and Brinkerhoff, 2011; Torchia and Calabrò, 2018) when PPPs are prepared, procured, and managed. Governments are expected to show that the conditions and standards are met or that prescribed steps are taken to create such conditions. For example, effective PPP governance enhances the risk assessment, which in turn diminishes the likelihood of negative political behaviors (Johnston and Gudergan, 2007). In other words, countries are expected to adopt governance with regards to the stages and practices of PPPs. Such governance

is referred to as PPP governance. PPP governance encompasses three stages in the PPP lifecycle: the preparation stage, the procurement stage, and the management stage (Hueskes, Verhoest, and Block, 2017). There are good practices associated with each of the three stages of the PPP process. Thus, PPP governance is the government capacity to properly implement internationally recognized PPP good practices (The World Bank, 2018a) by creating and empowering agencies to assume the responsibilities. Therefore, the examination of the effect of PPP governance on PPP outcome is of utmost importance in this dissertation.

More studied than PPP governance is good governance which became the necessary condition for giving assistance to countries in need. Countries that request the assistance of the World Bank are required to show some commitments to good governance. The probability of risks and losses are minimized when good governance factors are met. It is believed that countries with good governance are more likely to facilitate the participation of the private sector in the PPP process. This also means that market principles are considered and integrated in the decision-making and planning process of those countries. The World Bank in the 1990s defined good governance as "…the manner in which power is exercised in the management of a county's economic and social resources for development" (IBRD, 1992). The approach of national government to the use of economic and social resources becomes the measure of conditions that the World Bank and its financial stakeholders consider when making decisions on the PPP contracts (IBRD, 1992; IBRD, 1994). The most frequently used indicators of good governance include voice and accountability, rule of law, control of corruption, political stability and lack terrorism, government effectiveness, and regulatory quality.

Good governance is necessary for PPPs because strong democratic institutions create the necessary conditions for partnerships (Agnafors, 2013; Casady, Eriksson, Levitt, and Scott,

2019). Countries with strong institutions tend to be more effective in PPP projects because of their ability to create the conditions that facilitate the private sector growth (Cheung, Chan, and Kajewski, 2012; Matos, Dewulf, and Mahalingam, 2012; Percoco, 2014; Reynaers, 2014; Panayides, Parola and Lam, 2015; Pusok, 2016; Osei-Kyei and Chan, 2017; The World Bank, 2018b). These countries are more effective in PPP projects because their institutional structure allows them to make reforms or create specialized units to govern the entire PPP process (Unit, 2011) and therefore lead to better outcome of the PPP investment projects (Anonymous, 2000; Anonymous, 2015; Galilea and Medda, 2009; Sultana, 2012; Agnafors, 2013; Osei-Kyei and Chan, 2017; Keping, 2018). Because of the strong focus on good governance as a prerequisite for investments, this dissertation examines its influence on the outcome of transportation PPP projects.

In this study, PPP outcome refers to how effectively the objectives of the PPP projects are achieved, how effectively the World Bank assumes its share of responsibilities throughout the contract lifecycle, and how effectively the borrowing country governments and their implementing agencies perform or comply with practices (Greve and Hodge, 2013; IEG, 2019).

In short, this dissertation focuses on transportation PPP contracts awarded by the World Bank to its member countries. The purpose is to examine the relationships between country governance factors and the outcome of transportation PPP projects outcome. In doing so, the dissertation seeks to address the role of PPP governance in the relationships. Comprehensively, the dissertation explores the relationship between country governance, PPP governance, and PPP outcome. The study of the relationships is important because it adds a new dimension to the literature on PPPs. More specifically, the dissertation examines the relationship between PPP outcome and the standards or practices that the World Bank encourages its member countries to

adhere to. It also examines the relationship between country governance and PPP governance. Using new data, the dissertation examines the relationships between good governance, PPP governance and PPP outcome. By using more reliable data, this dissertation establishes more reliable relationships.

Governance Indicator Data

The World Bank values measurable results and tracks governance and project outcome scores to evaluate the success, failures, and lessons learned (The World Bank, 2018b). This tracking includes collecting information from government compliance to good practices scores. Independent groups collect data on the World Bank's operations. This dissertation uses data from the *Procuring Infrastructure Public-Private Partnerships Report 2018* jointly produced by the World Bank's Infrastructure, PPPs and Guarantees (IPG) Group, and the Global Indicators Group at the World Bank (The World Bank, 2018a). The report was designed both to help governments improve their PPP regulatory quality based on internationally recognized good practices for procuring PPPs and informing the policy debate and decision making (The World Bank, 2018a). The report contains scores of PPP stages, scores of good practices at each stage, and gross national income (GNI) scores for each country. No previous studies used the database because no concise data on PPP governance existed until 2017.

The dissertation also uses data from *Private Participation in Infrastructure (PPI)* reported by the Independent Evaluation Group (IEG, 2019a). The report contains outcome ratings in sectors such as agriculture and rural development, global information or communications technology, energy and mining, financial and private sector development, transport, health, nutrition and population, social protection, environment, water, and financial and private sector development. As stated earlier, the study focuses only on the outcome of

transportation projects. The PPI data were widely used in previous studies (see Kirkpatrick et al., 2006; Durakoğlu, 2011; Estache and Iimi, 2011; Chou, Tserng, Lin, and Yeh, 2012; Chen, Wang, and Fang, 2014; Pérez-D'Oleo, Castro, Herraiz and Carpintero, 2015; Moszoro, Araya, Ruiz Nunez, and Schwartz, 2015; Baker, 2016; Somma and Rubino, 2016).

Another source used in the dissertation is the Worldwide Governance Indicators (WGI). The database contains estimates of six governance indicators including voice and accountability, political stability, government effectiveness, control of corruption, rule of law, and regulatory quality (Kaufmann, Kraay, and Mastruzzi, 2010). The WGI database was used in several studies (See Pérez-D'Oleo et al., 2015; Wang, Liu, Xiong, and Song; 2019). The score of democracy (political liberties and civil rights scores) from Freedom House (Freedom House, 2018) are used.

Research Questions

The research questions are based on two main takeaways from the extant literature. First, the dissertation re-examines the influence of governance on PPP outcome because such relationship was mischaracterized in the previous studies. For example, studies by Bota-Avram (2014), D'Oleo et al. (2015), Sabry (2015), and Osei-Kyei and Chan (2017) found that good governance indicators had a positive effect on the level of investment in PPP projects and investment growth. While the studies found significant results, they referred to outcome as the level or the number of PPP investments that countries received. Second, the extant literature does not address PPP governance. Very few studies evaluated the relevance of PPP governance to the success of PPP contracts. The lack of effective PPP governance was the reason for the report on the capacity of countries on the PPP practices (The World Bank, 2018a). Thus, this dissertation not only addresses the mischaracterized relationship between country governance and PPP outcome, but also examines the relationship between PPP governance and PPP outcome. The

dissertation claims that there exist some relationships between country governance, PPP governance, PPP outcome. The overarching question is: Are there any relationships between country governance, PPP governance, and PPP outcome? The relationships are expected to be positive and statistically significant. Five main research questions are examined in the dissertation:

Research question 1: Is there any relationship between country governance and the PPP outcome in that country? The PPP outcome data used in the extant literature are not reliable for examining such relationship because the number of projects was used as outcomes. Contrary to the number of projects, the dissertation used outcome data that measure different aspects or factors of PPP projects.

Research question 2: Is there any relationship between country governance and PPP governance in that country? This relationship has not been explored in the literature. This dissertation expects a positive relationship as one would expect effective country governance to lead to effective governance of PPP projects.

Research question 3: Is there any relationship between PPP governance and PPP outcome in that same country? The relationship between PPP governance with PPP outcome is unexplored because of the lack of studies on PPP governance.

Research question 4: Does PPP governance mediate the relationship between country governance and PPP governance? The exploration of the first three questions will allow determining the mediating role of PPP governance.

Research question 5: What differences or similarities exist for countries based on income-level considering the four previous research questions?

This dissertation involves a mediation analysis and is the first to use PPP governance in that context (See Figure 1). That is, given X the exogenous variable, M the mediator, and Y the endogenous variable; X in this study refers to country governance, M refers to PPP governance, and Y refers to outcome (Kenny, 2018). In the mediation analysis (Baron and Kenny, 1986), the effect of the exogenous variable (X) directly on the endogenous variable (Y) becomes significantly smaller in size relative to the effective size of the mediator on the endogenous variable (Iacobucci, 2008).

Figure 1: General Mediation Framework

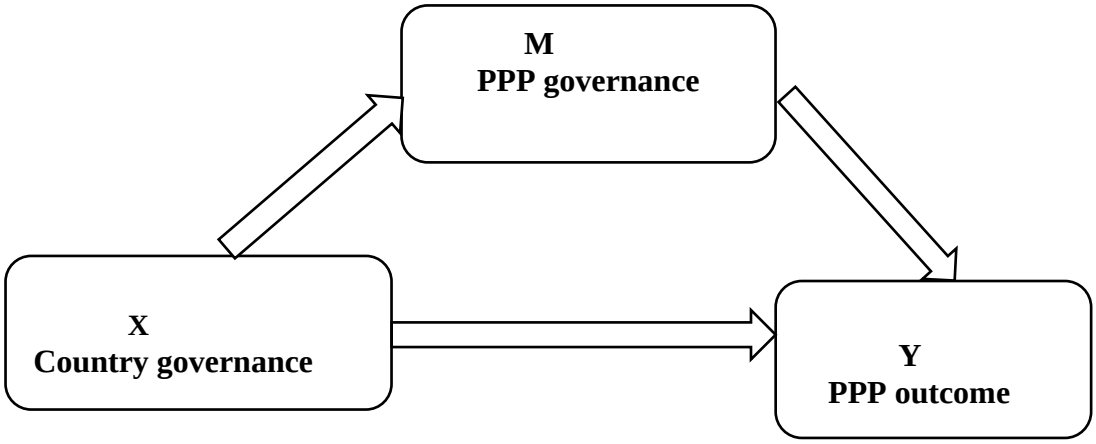


Figure 1 is set up to show the relationships to be explored. It is an adaptation from the mediation studies (see Baron and Kenny, 1986; Iacobucci, 2008; and Kenny, 2018). It shows the four main relationships that this dissertation examines. First, it examines the relationship between country governance and PPP outcome. Second, it examines the relationship between country governance and PPP governance. Third, it examines the effects of PPP governance on

PPP outcome. Fourth, it examines the mediating role of PPP governance on the relationship between country governance and PPP outcome. The four main relationships are explored for each of the income level groups.

Dissertation Preview

The remainder of the dissertation presents the literature review pertaining to the three main concepts including good governance, PPP governance, and PPP outcome. The dissertation breaks down the factors relevant to each of the three major concepts. The methods section which follows the literature review describes the process used in the mediation analysis as well as the multivariate regression used along with generalized structural equation modeling (GSEM). The methods section also provides insights on data and the hypotheses that arise from the research questions. In the third chapter, the dissertation presents the results and evaluates their statistical and substantive significance. In the final chapter, the dissertation discusses the conclusion and implication of the findings, provides recommendations, and explains the theoretical and practical contributions.

CHAPTER II

LITERATURE REVIEW

Chapter II is a review of the literature from three major perspectives. First, it presents a review of good governance theory and its implications on developed and developing countries. Second, the three stages of PPP process including the preparation, the procurement, and the contract management are reviewed along with their impact on PPP outcomes. Third and lastly, the six indicators of good governance are reviewed along with their impact on PPP outcome.

Governance, Good Governance, and Definitions

Governance, according to the Institute on Governance, is the way "…society or groups within it organize to make decisions." In other words, it is about how traditions, institutions, and processes determine the exercise of power, how citizens are given a voice, and how decisions take into account the public interest (Institute on Governance; Lynn Jr, Heinrich, and Hill (2001)). For Lynn Jr, Heinrich, and Hill (2001), governance is "the means for achieving direction, control and coordination of wholly or partially autonomous individuals or organizational units on behalf of interests to which they jointly contribute" (p. 6). When it comes to the relationship between the World Bank and recipient countries, the relationship can be described as hierarchical from the perspective of governance. Governance is conceived at the global and national levels whereby it is defined and contextualized. Politics then influences the rules, regulations, and processes that define governance, which in turn determine the management strategies used to achieve policy objectives (see Figure 2). From management emerges the primary work, the outputs and results such as availability, quality, and cost of public goods or services (see Figure 2). Last, the political assessment determines the motivation and political support to achieving results.

At the country level, good governance is determined by the economic, social, political, and institutional conditions in that country. Kaufmann et al. (2010) defined governance as the tradition and institutions by which authority in a country is exercised. They reveal three instances that fall under this definition. First, they view governance as the process by which governments are selected, monitored, and replaced (Kaufmann et al., 2010). Second, governance is the capacity of the government to effectively formulate and implement sound policies (Kaufmann et al., 2010). Governance also includes the creation, execution, and implementation of activities backed by the shared goals of citizens and organizations, which may or may not have formal authority or policing power (Rosenau, 1992). Byman (2018) defines good governance as an effective way of formulating and implementing state policies, including law and order and programs designed to encourage popular welfare. As such, good governance at its core includes the exercise of the rule of law, popular participation, and government accountability involving both the state and civil society. Third, governance refers to the respect of citizens and the state for the institutions that govern the economic and social interactions among them (Kaufmann et al., 2010). Countries with systems that meet the definition are thought to exercise good governance. Those countries are not only capable of maximizing their outcomes, but they are more dynamic in coping with economic and financial crises (Gamberger and Smuc, 2013).

The good governance concept is built around effectiveness and efficiency, accountability and transparency, equity, rule of law, and voice legitimacy, performance, fairness, and direction (Graham et al., 2003). The players at the national level include the government, the private sector, civil society, and media (Graham et al., 2003). The IRBD (1992) defines governance as the way power is exercised in the management of a county's economic and social resources towards development. The World Bank 1992's report identifies four major components of

governance including the public sector management, accountability, legal framework for development, and transparency and information (IRBD, 1994). In the newer report of 1994, the World Bank added participatory approaches to policy, program, and project design and implementation to its definition of governance. The Ex-UN Secretary-General Koffi Annan referred to good governance as the respect for human rights and the rule of law, strengthening democratization, and promoting transparency and capability in public administration.

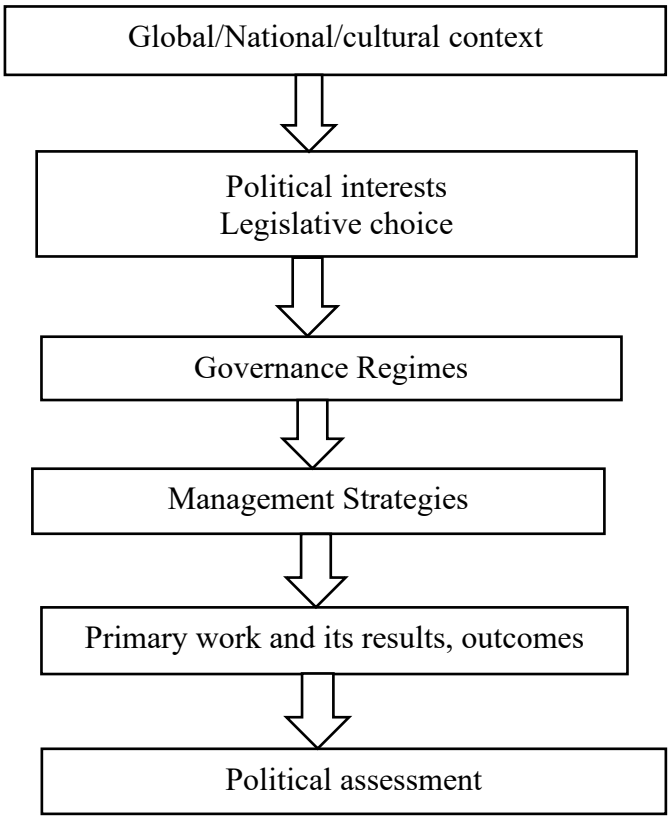
Keping (2018) defined good governance as the public administration process that maximizes public interest. Good governance in that sense is a type of collaborative management of public life performed by the state and the citizens. It is a new relationship between political state and civil society. Keping (2018) argued that good governance theory should be composed of legitimacy, transparency, accountability, rule of law, responsiveness, and effectiveness. Adrian and Mabel (2016) argued that good governance means the presence of the rule of law and market efficiency. The rule of law, of which depend peace and order, is the bedrock to achieving economic growth as it improves trade and investment activities. Agnafors (2013) argued that an acceptable definition of the quality of governance or good governance must be consistent with the demands of a public ethos, the virtues of good decision making and reason giving, the rule of law, efficiency, stability, and a principle of beneficence. For Rothstein (2014), the quality of governance should be the opposite of corruption, which is impartiality. The lack of impartiality means poor governance or favoritism in the system.

The good governance theory implies that a governance system can be poor. Poor governance occurs when government officials fail to make a clear separation between what is public and what is private but tend to divert public resources for private gain (IRBD, 1994). In other words, corruption and bribery are examples of poor governance. Poor governance also occurs when a

government fails to establish a predictable framework of law and government behavior conducive to development (IRBD, 1994). Poor governance is linked to civil wars, corruption and a lack of economic development (Byman, 2018). There is also poor governance when the government arbitrarily applies the rules and laws by abusing the powers. Excessive rules, regulations, and licensing requirements are poor governance policies that can impede the functioning of markets and encourage rent-seeking. When the priorities are inconsistent with development, this indicates that there is a misallocation of resources. The use of extremely narrow and non-transparent decision-making process is also an indicator of poor governance (IRBD, 1994).

Good governance theory stipulates that a country's development rests on how well the institutional and legal framework allows for fair and transparent processes of decision making conducive to effectiveness and efficiency in government operations. The relevance of good governance becomes clear for PPPs which are being favored as a mechanism for infrastructure development. In other words, the institutional environment considerably influences PPP processes and project outcomes (Matos et al., 2012). Considering PPPs, governance is good when a country government can make social, economic, and financial changes to integrate and promote PPP initiatives. Institutional processes must be considerate of principles of private investments into the government-led projects. The relationship between good governance and PPPs are susceptible of influence in the hierarchical model of governance in Figure 2.

Figure 2: Model of Governance



Source: A Complex Model of Governance--Lynn Jr, Heinrich, and Hill (2001).

The model in Figure 2 shows that there is a hierarchical approach to governance. This is conceivable in the present study where the global context or the World Bank decisions on PPPs surpasses those of national governments. The politics of those national governments and the subsequent decision-making process such as rules, strategies, and outcomes are influenced by the World Bank's decisions.

Public-Private Partnerships: Merits and Challenges

The rationale for entering a PPP and procuring large infrastructure projects is VFM (Siemiatycki and Farooqi, 2012; Vining and Boardman, 2008). The United Nations Secretariat

defines VFM as the "optimization of whole-life costs and quality needed to meet the user's requirements, while taking into consideration potential risk factors and resources available" (Doing Business with the United Nations, 2015; p. 2). In general, the rationale is that governments can achieve economy, efficiency, and effectiveness in their spending (NAO, 2017). By economy, governments seek to minimize the cost of resources used in projects. Efficiency means that the governments can achieve the objectives given a certain level of spending. By effectiveness, the government assesses whether it is spending wisely according to expected outcomes and actual outcomes (NAO, 2017). The rationale for PPPs is based on the idea that the criteria of economy, efficiency, and effectiveness can be best achieved if the public and private sector collaborate. Vining and Boardman (2008) states that the appropriate test of a successful PPP project is whether the project has lower total costs, including production costs and all the transaction costs and externalities associated with the project.

Given the rationale for VFM, PPPs have been defined in various ways to capture all the aspects that would potentially lead to VFM. PPPs have been defined by the World Bank as a "long-term agreement between the contracting authority and the private partner, for providing a public asset or service, in which the private partner bears significant risk and management responsibility, and remuneration is linked to performance" (The World Bank, 2017; p. 2). Koppenjan (2005) defined PPPs as "a form of structured cooperation between public and private partners in the planning or construction and exploitation of infrastructural facilities in which they share or reallocate risks, costs, benefits, resources, and responsibilities" (p. 4). PPPs have been defined as arrangements between governments and private sector entities for the purpose of providing public infrastructure, community facilities, and related services (Bojović, 2006); or any arrangement between the government and the private sector in which partially or

traditionally public activities are performed by the private sector (Bansal, 2003). PPPs can lead to management reform, problem conversion, moral regeneration, risk shifting, and power sharing (McQuaid, 2000; Scharle, 2002) to achieve VFM.

These definitions have some implications for the rationale behind PPPs. First, in the context of the World Bank, it implies that developing countries that do not have the financial resources, the expertise, the capital, and the technological know-how will have access to them through the private sector involvement. It further invokes the responsibilities and role of the financial institutions including the World Bank in accompanying those countries. Jandhyala (2016) argues that the involvement of multilateral development banks (MDBs) can lower PPP project risks. They can do so through operational assistance to ensure well-reviewed project contracts and by encouraging a greater level of supervision of a project implementation. Policy dialogue is another channel to positively influence negotiations and help resolve project disputes between client governments and their private sector partners. The participation of MDBs lowers project risks and reduces the probability of cancelling projects. Jandhyala's (2016) study of 2,117 infrastructure PPP projects in 45 developing countries from 1995 to 2009 shows that the odds of project distress when MDBs participate is 50% lower than for projects without their participation. Lee et al (2018) found that the involvement of MDBs can significantly increase the success of projects in developing Asia. MDBs can play an important role in reducing funding gaps for infrastructure and can facilitate regional cooperation for the provision of public goods among neighboring countries. Nose (2014) argued that the involvement of international financial institutions could significantly reduce the breach of contract risk as governments try to avoid losing the reputation with the international community. In other words, yielding satisfactory performance becomes an outcome measure of PPP projects. IEG (2019) measures the World

Bank's performance as "the extent to which the services provided by the Bank ensured quality at entry of the project and supported effective implementation through appropriate supervision towards the achievement of development outcomes" (IEG, 2019; p.17).

In terms of performance, the borrower country is also expected to be on top of the whole PPP process (Lee et al, 2018). IEG (2019) measured the borrower country performance as the extent to which the borrower, including the government and implementing agency or agencies, ensured quality of preparation and implementation, and complied with covenants and agreements towards the achievement of development outcomes (See Table 1). The performance of country government is key to PPP success. For example, the World Bank (2007) found that the efficiency of a PPP unit was highly correlated with the success of a country's PPP program. That is because specialized units and separation of roles and responsibilities are put in place to ensure the respect of the principles of transparency, efficiency, economy, and competition (PNDES, 2016). Lee et al. (2018) confirmed that the presence of at least one PPP unit and direct government subsidies and indirect support through guarantees can help PPP projects become more viable. Governments can bear some project risks by providing capital and revenue subsidies or in-kind contributions, such as land; favorable government policies to investment; or incentives, such as loan guarantees for sub-sovereign and non-sovereign borrowing (Lee et al., 2018).

Second, the risk, cost, and resources associated with major infrastructure projects are shared by the public and private partners. The sharing can be problematic and conflictual. McQuaid (2000) and Axelrod (1984) argued that partnerships imply solving conflicts and interests of the public and private partners involved. At the early stages, the relationship between the public and the private is complex as game theory always plays out in that relationship scenario. The best outcome for a partnership is to reach an agreement for cooperation. The

prisoner's dilemma theory (McQuaid, 2000) helps explain the relationship. While the parties do not have full confidence in their partners, parties become convinced that any type of confession or decision except cooperation by one of the parties can be costlier. The fear of loss creates the incentives for greater cooperation and abandoning self-interest behavior. With cooperation, conflicting goals and interests are managed through negotiations on risk shifting and power sharing (Linder, 1999).

Wang et al (2019) discussed the relevance of prospect theory in the stakeholders' decision to pursue or curtail investments. PPPs are a way for government to share or reallocate risks, costs, benefits, resources, and responsibilities (Koppenjan, 2005) and characterized by the sharing of investment, risk, responsibility, and reward between the partners. They induce strong incentives to invest in cost reductions (Hoppe et al., 2013) and reduce operating costs that benefit both sectors (Hart, 2003). Stakeholders expect gains to outweigh losses. More specifically, PPP outcomes are defined in terms of achieved objectives and the success of PPPs is based on clear and shared objectives (McQuaid, 2000; Brinkerhoff and Brinkerhoff, 2011). IEG (2019) defined achieved objectives as "…the extent to which the operation's major relevant objectives were achieved, or are expected to be achieved, efficiently" (IEG, 2019). The measure includes the relevance of the project's objectives and design, efficacy, and efficiency (IEG, 2019). Success is also conceived as the lack of cost overruns, the lack of time delays, the ex-post level of traffic, and generated revenues (Trujillo et al., 2018). The definition of PPP outcome is presented in Table 1.

Table 1: Outcome of Public-Private Partnership Projects

Outcomes	Indicators	Definition/measure	Authors/sources
Achieved objectives	Achieved objectives	The extent to which the operation's major relevant objectives were achieved, or are expected to be achieved, efficiently	IEG, 2019 ; McQuaid, 2000; and Brinkerhoff and Brinkerhoff, 2011
Bank performance	Quality of entry Quality of supervision Overall bank performance	The extent to which services provided by the Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision	IEG, 2019 ; Jandhyala, 2016 ; Lee et al, 2018 ; Nose, 2014
Borrower Performance	Government performance Implementing agency Overall borrower performance	The extent to which the borrower (including the government and implementing agency or agencies) ensured quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development outcomes	IEG, 2019 ; The World Bank, 2007

Third, partnership is a win-win scenario. Via partnership, governments alleviate the burden on the budget as they no longer carry the full cost of projects. Reyes-Tagle and Garbacik (2016) argued that PPPs can be an immediate remedy for fiscal constraints because of private sector financing. The benefits of PPP become more visible as the private sector brings in additional funding, more efficient management, and better public services (Lee et al, 2018) or governance, legitimacy and credibility, capacity building, and role model actions (Maktabi,

2014). Enough policies, regulations, frameworks, fiscal and non-fiscal support, communication, and government engagement that originate from PPPs hold partners accountable and minimize risks (Maktabi, 2014). Percoco (2014) examined the quality of institutions and private participation in transport infrastructure investment in developing countries using the Private Participation in Infrastructure database. Percoco (2014) found that that greater participation by private parties in PPP contracts is associated with better institutions in terms of lower corruption, civil freedom, and a better regulatory framework. Reynaers (2014) examined the impact of design-build-finance-maintain-operate (DBFMO) PPP projects on public values using PPI data. Reynaers (2014) found that accountability, responsiveness, transparency, and responsibility had increased. The private sector gains from the partnership as it recovers cost by collecting user fees and a priori agreed-upon payments.

Structurally, the success of PPPs depends on jointly determined goals, collaborative and consensus-based decision making, non-hierarchical and horizontal structures and processes trust-based relationships, synergistic interactions, and shared accountability for outcomes and results (Brinkerhoff & Brinkerhoff, 2011). The success of partnerships also depends on the clarity of objectives, the agreement on the operation of the partnership, resources, responsibility over day-to-day management, clear lines of communication and decision-making, clear exit routes, a supportive institutional infrastructure, and a suitable system of incentives (McQuaid, 2000). Koppenjan (2005) argued that well-formed partnerships, interaction in the planning phase, and joint market planning lead to successful project results. Bhattacharya (2002) found that resource dependency, commitment and common goals, good communication and cooperation between partners, and cultures play a role in the success of PPPs. Using case studies from Bangladesh, Nepal, Tanzania, and Uganda, Maktabi (2014) found that the role and involvement of the

government, robust communication streams, building a sense of ownership and trust between partners in the project, and sustainable funding systems appear critical to minimizing risks. Osei-Kyei and Chan (2016) argued that strong government commitment and will, constant public consultations on toll increments, selection of right private partner, clear contractual agreement, appropriate risk allocation, and agreement were key to positive PPP project outcomes. Countries vary in their level of development and institutional governance. This variation also implies that the success or outcomes of PPP will vary accordingly.

State of Public-Private Partnerships in Developed Economies

Developed countries have fewer difficulties than developing countries meeting the necessary conditions for PPPs success due to their predisposition to good governance institutions. Countries with high level of institutional sophistication including the United Kingdom, Australia, Spain, and Ireland have effective partnership relationships (Siemiatycki, 2013). In those countries, new innovative models are refined; more creative, flexible approaches are applied to the roles of public and private sector; more sophisticated risk models are used; and a greater focus on total lifecycle of project in rationale for PPPs is considered. Cheung et al. (2012) examined the success factors of PPPs in Hong-Kong, the United Kingdom, and Australia. They found that favorable legal framework, commitment and responsibility of public and private sectors, strong and good private consortium, stable macro-economic condition, and appropriate risk allocation and risk sharing were critical. Furthermore, private sector methods of operation and management are adopted by public sector institutions in response to greater competition (Siemiatycki, 2013). Governments look for innovative models to monetize assets while organizational skills are enhanced in government to support greater role of PPPs (Siemiatycki, 2013). In other words, those countries have strong PPP policy expertise, supportive civil society,

and PPP policy consensus (Siemiatycki, 2013). Unit's (2011) evaluated the environment for PPPs in Asia Pacific using PPI data. The findings showed that countries such as Australia, South Korea, India, United Kingdom have strong and effective central and local policies and institutions, detailed guidance-based PPPs framework, strong local PPP regulations, training and oversight, rapid growth, and prudent economic management. They also focus on cost-benefit analysis and VFM consideration. As a result, those countries that created a reliable environment attract investments and have high ranking scores in regulatory framework, institutional framework, investment climate, financial facilities, and subnational adjustment.

More importantly, they consider effective project preparation and risk assessment as preventive measures to dispute resolution. Latin America and the Caribbean (LAC) countries that improved in regulatory framework had improved their regulation and implementation of new PPP laws, enhanced the fairness of contracting processes, and strengthened the dispute resolution mechanisms (Unit, 2014). Those countries have also included mandatory cost-benefit and VFM analysis for the selection of PPP projects (Unit, 2014). The positive view of PPP in developed countries makes them a model for infrastructure development for developing countries. However, the challenges are complex for developing countries because of different internal conditions and unequal development status.

State of Public-Private Partnerships in Developing Economies

While PPPs have become a praised mechanism for infrastructure development in developed countries, their application in developing countries faces a myriad of challenges due to pre-existing institutional weaknesses. In developing countries that experience governance shortcomings, the ability of the partnership to produce desired outcomes is put at risk (Brinkerhoff & Brinkerhoff, 2011). Private participation is viewed as inappropriate for

developing countries because of weak technical capacities and imperfect information, inability or unwillingness to pay the cost-covering tariffs, higher subsidies, high capital cost and risks in developing countries, low and uncertain revenues, cherry picking favoring lucrative sectors, and misdirected regulatory capacities (Tan, 2011). Furthermore, high contracting costs due to opportunism, high construction complexity, high revenue uncertainty, and poor contract management can lead to failure in PPP projects in developing countries (Vining and Boardman, 2008). Lee et al. (2018) found that about 41.8% of transportation PPP projects between 1991 and 2015 in low-and middle-income Asian countries failed for similar reasons.

There are also challenges in the distribution of PPP awards and funding across countries and regions. Most PPPs are concentrated in a small number of developed countries and emerging markets (Siemiatycki, 2013) and executed by a small number of highly globalized construction contractors, engineering firms, financiers, accountancies, and consultants from developed countries (Siemiatycki, 2013). Of 34 countries that received investments in 2018 through the World Bank, China, Turkey, Vietnam, India, and Brazil accounted for 66 percent of the global total investments in infrastructure (The World Bank, 2019). The level of investments for LAC and South Asia Region (SAR) declined. The increase was 3% for Sub-Saharan African (SSA), with most of the investments awarded to South Africa (The World Bank, 2019). Galilea and Medda (2009) found that the location or region of the project influenced the success of PPPs.

The failure of PPP projects is often linked to the failure to abide by the principles and good practices of PPPs contracts. Sanni and Hashim (2014) showed that challenges for infrastructure development through PPP arrangements in South Africa included low competition, lack of policy direction among the political leaders, lack of clarity in the minds of the implementing agencies and the private sector in the delivery of PPP projects, no technical know-

how, lack of resources and authority, and use of ineffective procurement measures. Lee et al (2018) showed that failures in Asian countries were due to the lack of project preparation, competitive systematic project awarding method, poor governance, misaligned priorities, the underrepresentation of the public sector in decision making, and the lack of coordination and cooperation between partners. Unit (2014) found that Asia Pacific countries including Georgia, Indonesia, China, Armenia, Kyrgyz Republic, Mongolia, Tajikistan, Philippines, Papua New Guinea, Thailand, Pakistan, and Vietnam lacked clear central guidance on the roles and responsibilities and experience. Those countries had inadequate concession law, weak coordination, and oversight among agencies in charge of PPP regulations, limited transparency in procurement, uncertain conditions for investment or operating environment, institutional conflict and shortages, and weak bidding and resolution regulations. Unsurprisingly, they had lower ranking scores. Unit (2014) also noted that the dispute-resolution mechanisms remained the weakest component of the regulatory framework across LAC countries.

In short, the performance in PPP governance influences the success of PPP projects. PPP governance encompasses actions at different stages of the process as well as key practices at each stage. The next section explains PPP governance and hypothesizes its relationship with PPP outcome.

The Stages of PPP Process

The governance of PPP projects generally comprises the main stages of the PPP lifecycle including the identification phase, the preparation stage, the procurement stage, as well as contract management, the contract administration phase, and the transfer phase. Some scholars consider the identification phase and the preparation phase as a single phase. Other studies

separate the contract administration phase from the contract management phase. This dissertation considers three main stages: preparation, procurement, and management.

PPP governance includes steps taken by national governments to ensure that they act according to and implement the standard practices and principles at each stage that they agreed to. The practices address economic, environmental, and financial assessment and guide partners to ensure transparency and fairness in the procurement process as well as satisfactory dispute resolution and managing change during the implementation process. Lee et al (2018) cited the choice of the type of PPP including private participation level, contract, award method, government support or guarantee. They also noted that sponsor, government, private, and foreign funding are project level factors that can influence PPP project outcome. The significant success factors include government support, proper project planning, good coordination between parties, trust, good tendering system, proper information dissemination and communication system and high managerial capabilities (Abednego and Ogunlana, 2006). Those factors are being considered in countries and regions around the world. For example, Francophone West African countries took the initiatives to implement national development goals using PPPs. The countries have created PPP legislative, regulatory, and institutional framework to ensure universally accepted principles in public procurement are achieved, including freedom of access, equal treatment of bidders, competition, objectivity of procedures and transparency (PNDES, 2016). This includes the planning, design and preparation of bids, awards, assessment and negotiation of bids, and execution.

While the goal in this section is to address each stage, studies on PPP have combined and mixed stages and practices and drawn cross-stage conclusions. For example, from their review of PPP literature from 1996 to 2016, Bao et al. (2018) found that 92 of 282 publications in PPP

governance were indivisible topics. The studies simultaneously covered topics of the identification, preparation, procurement, and management phases.

Preparation of PPPs and Influence on PPP Outcomes

The practices at the preparation stage of PPPs requires risk, fiscal, economic, financial, and environmental, and market assessments (Siemonsma et al., 2012; El-Sawalhi and Mansour, 2014; Jacob et al., 2014; Kashi, 2015; Soomro and Zhang, 2015; Opawole and Jagboro, 2017; The World Bank, 2018a; Lee et al, 2018; Osei-Kyei and Chan, 2019). Bao et al. (2018) found that from 1996 to 2016, 63 of 282 publications on PPP dealt with the preparation phase. The studies highlighted the management structure including the PPP team formation, the constitution of the public, and early briefing. They also highlighted detailed PPP design including the concession period, government guarantee, financing structure, pricing, and contract design. Of the 282 publications on PPP, 35 dealt with the project identification. Those studies focused on risk allocation including risk identification and risk analysis. They also addressed project selection including feasibility, suitability, and attractiveness. Government capacity and compliance to those practices influence investment decisions and project outcome.

EIU's (2015) benchmarking of PPP projects for Asia and the Pacific showed that weak legal and regulatory frameworks, poorly prepared or structured projects, lack of capacity to carry projects out in the public and private sectors, and weak financial markets undermined PPP projects. Galilea and Medda (2009) found that a country's experience in PPP agreements in transport, its gross domestic product (GDP) growth, and the current account balance influenced the success of PPPs. El-Sawalhi and Mansour (2014) found that the critical success factors of PPP projects included stability of the political situation, clear and detailed contract, existence of a sound economic policy, reliable delivery of service, analysis and allocation of risks, suitable

legal framework, experienced private sector, profitability to the private sector, and accepted level of toll or tariff for a project. Wibowo and Alfen (2015) found that the top five greatest gaps in PPPs were as follows: (1) the lack of sufficient project integration with national and local planning processes, (2) the lack of clearly defined mechanisms to coordinate needs, (3) the lack of competent, independent, and efficient regulators, (4) the lack of adequate awareness of legal, technical, and financial aspects of the public sector (see also Parry and Hughes, 2018), and (5)the lack of strong political support. Loxley (2013) found that governments in South Africa in particular, and Africa in general provided no detailed information on value, risk, contracts, financial agreements, and schedules. This means that key elements in the PPP contract are not painstakingly addressed for lack of appropriate governance structures.

Unit (2014) shows that LAC countries that improved the institutional framework including the creation of new units and centralization of planning and promotion attracted better investments (Unit, 2014; The World Bank, 2018a). All PPP contracts must be approved by the central authority and priorities must be consistent with public investments priorities (Unit, 2014; Wibowo and Alfen, 2015; The World Bank, 2018a). All contract drafts are expected to be included in the requests for proposals (Liu et al., 2015, The World Bank, 2018a). Kotze et al. (1999) found that the lack of detailed draft contracts lengthened the negotiation process even after a bid was awarded. Standardized contract models should be available for orientation to better and more efficient agreements (Kotze et al., 1999; The World Bank, 2018a). An appropriate allocation of risks is a necessary condition for successful contracts (Marques and Berg, 2010; Marques and Berg, 2011; Soomro and Zhang, 2015; Wang et al., 2019). Panayides et al. (2015) found that market openness, ease to start a business, and enforcing contracts were important institutional determinants of port PPP success that attract private bidders and the

market competitiveness of ports. Using PPI data, Chou et al. (2012) found that the size of the market or large size markets and inflation attracted more PPP projects in developing economies. In short, from Table 2, this study hypothesizes that effectiveness in the practices at the preparation stage leads to better PPP outcomes. Table 2 presents the variables used to operationalize the practices of PPP preparation.

Table 2: Practices of the Preparation Stage

Stages	Practices/guidelines	Authors/sources
Preparation of PPPs	Central Budgetary Authority's approval	The World Bank, 2018a; Unit, 2014; Wibowo and Alfen, 2015;
	Fiscal treatment of PPPs	The World Bank, 2018a; Siemonsma et al., 2012; El-Sawalhi and Mansour, 2014; Jacob et al., 2014; Kashi, 2015; Soomro and Zhang, 2015; Opawole and Jagboro, 2017; The World Bank, 2018a; Lee et al, 2018; Osei-Kyei and Chan, 2019
	PPP's prioritization consistent with public investment prioritization	The World Bank, 2018a
	Economic analysis assessment	The World Bank, 2018a; El-Sawalhi and Mansour, 2014; Siemonsma et al., 2012; El-Sawalhi and Mansour, 2014; Jacob et al., 2014; Kashi, 2015; Soomro and Zhang, 2015; Opawole and Jagboro, 2017; The World Bank, 2018a; Lee et al, 2018; Osei-Kyei and Chan, 2019
	Fiscal affordability assessment	The World Bank, 2018a
	Risk identification	The World Bank, 2018a; El-Sawalhi and Mansour, 2014; Loxley, 2013; Marques and Berg, 2010; Marques and Berg, 2011; Soomro and Zhang, 2015; Wang et al., 2019
	Financial viability assessment	The World Bank, 2018a; Wibowo and Alfen, 2015; Loxley, 2013; Siemonsma et al., 2012; El-Sawalhi and Mansour, 2014; Jacob et al., 2014; Kashi, 2015; Soomro and Zhang, 2015; Opawole and Jagboro, 2017; The World Bank, 2018a; Lee et al, 2018; Osei-Kyei and Chan, 2019
	PPP vs. Public Procurement comparative assessment	The World Bank, 2018a
	Market Sounding analysis	The World Bank, 2018a; EIU, 2015; Panayides et al., 2015; Chou et al., 2012
	Environment impact assessment	The World Bank, 2018a;
	Assessments included in the RFP and/or tender documents	The World Bank, 2018a; Liu et al., 2015
	Draft PPP contract included in the request for proposals	The World Bank, 2018a El-Sawalhi and Mansour, 2014; Loxley, 2013; Kotze et al., 1999
	Standardized PPP model contracts and/or transaction documents	The World Bank, 2018a; Kotze et al., 1999; Panayides et al.; 2015

Procurement of PPPs and Influence on PPP Outcomes

The practices at the procurement stage can influence the outcome of PPP projects. In the procurement phase, required principles include freedom of access, equal treatment of bidders, competition, objectivity of procedures, and transparency in the process (PNDES, 2016). Desired practices at this stage also include qualified evaluation committee members, issuance of a procurement notice by the procuring authority, a minimum time of 30 days for bid submissions, available procurement procedures, and permission for foreign companies to participate in the bidding (Soomro and Zhang, 2015). Bao et al. (2018) found that from 1996 to 2016, 42 of 282 publications on PPP addressed the PPP procurement phase. The studies focused on the bidding process including concessionary selection, negotiation, critical success factors for bidding process, and incentive creation. They also focused on bidders' concerns such as financial viability, risk assessment, and bid-winning strategies.

Osei-Kyei and Chan (2015) reviewed studies on the critical success factors for PPP projects from 1990 to 2013. The top five influential factors were risk allocation and sharing, strong private consortium, political support, community or public support, and transparent procurement. Direct negotiation, presence of details of the procurement stages and prequalification criteria, and openness to clarification questions on RFPs are necessary for a successful PPP project (El-Sawalhi and Mansour, 2014; Liu et al., 2015). Furthermore, pre-bidding conference, evaluation of proposals based on published criteria, simultaneous submission of financial models and proposals, public of award notice and of contract, negotiation before contract signing, and notification of the results of the procurement process are key practices to be observed. The lack of attention to those practices can lead to failure (The World Bank, 2018a). Soomro and Zhang (2015) found that among 27 failure mechanisms initiated by the public sector partners, 14

failures occurred during the procurement process. This converts to twice more than the failures in the preparation stage and three times more than the management stage. Complex issues of procedures at this stage impede competition and cost-effective PPP bidding (Carrillo et al., 2008; Chen and Doloi, 2008; De Clerck and Demeulemeester, 2014). Osei-Kyei and Chan (2016) argued that the lack of competition and transparency in SSA projects led to project failure. Eberhard and Gratwick (2013) discussed success stories of independent power projects (IPPs) in African countries including South Africa, Kenya, and Nigeria. They found that success factors included competitive bids for renewable energy, well-designed procurement process, expertise, and the flexibility in the design of subsequent bid rounds. In short, this study hypothesizes that effectiveness in the practices at the procurement stage leads to better PPP outcomes. Table 3 presents the variables used to operationalize the practices of PPP procurement.

Table 3: Practices of the Procurement Stage

Stages	Practices/Guidelines	Authors/sources
Procurement of PPPs	Evaluation committee members required to meet specific qualifications	The World Bank, 2018a
	Public procurement notice of the PPP issued by procuring authority	The World Bank, 2018a
	Foreign companies permitted to participate in PPP bidding	The World Bank, 2018a; Soomro and Zhang, 2015
	Minimum period of time to submit the bids (>=30 days)	The World Bank, 2018
	Availability of various procurement procedures for PPPs	The World Bank, 2018a; Eberhard and Gratwick, 2013
	Direct negotiation not discretionary	The World Bank, 2018a; El-Sawalhi and Mansour, 2014; Liu et al., 2015
	Tender documents detail the stages of the procurement process	The World Bank, 2018a; Eberhard and Gratwick, 2013
	Tender documents specify prequalification criteria	The World Bank, 2018a; El-Sawalhi and Mansour, 2014; Liu et al., 2015
	Clarification questions for procurement notice and/or the request for proposals	The World Bank, 2018a; El-Sawalhi and Mansour, 2014; Liu et al., 2015
	Pre-bidding conference	The World Bank, 2018a;
	Financial model submitted with proposal	The World Bank, 2018a;
	Proposals strictly and solely evaluated in accordance with published evaluation criteria	The World Bank, 2018a; El-Sawalhi and Mansour, 2014; Liu et al., 2015
	Treatment when only one proposal is received	The World Bank, 2018a;
	Publication of award notice	The World Bank, 2018a;
	Notification of the results of the PPP procurement process to all bidders	The World Bank, 2018a
	Negotiations with the selected bidder before contract signing	The World Bank, 2018a; El-Sawalhi and Mansour, 2014; Liu et al., 2015; Bao et al., 2018
	Standstill period	The World Bank, 2018a
	Publication of contract	The World Bank, 2018a

PPP Contract Management and Influence on PPP Outcomes

Good practices in the contract management stage include among others the systems for managing the implementation, the system for tracking the progress of the contract work, and the monitoring and evaluating system (Soomro and Zhang, 2015). Bao et al. (2018) found that from 1996 to 2016, 47 of 282 publications on PPP dealt with the implementation phase. The studies focused on risk management including risk mitigation strategies; the stakeholder management including the relationship between stakeholders; the implementation performance including monitoring performance, overruns, and technological innovation; and change management including the renegotiation, sharing excess resources, and dispute resolution.

For project success, it is necessary that precautions be taken for change in the structure in the private partner, modification or renegotiation of contract, and unforeseen circumstances during the contract (Marques and Berg, 2010, The World Bank, 2018a). Cruz et al. (2014) examined road PPP contracts in Portugal. They found that unilateral changes by the government, changes in design due to environmental reasons, delays in expropriation, and traffic below expectations were among the main causes of renegotiation of contracts. Guasch et al.'s (2016) renegotiation study in Latin America showed that causes of renegotiation included economic crises, elections and change in administration, breach of contract obligation by governments, lack of preparation, bidding errors, and opportunistic behavior. Important considerations include dispute resolution mechanisms (Liu, et al., 2015); protection from expropriation, arbitration procedures, respect for contract agreements, processes for recovering of costs, and making profits proportional to project risk (Jamali, 2004); and lender step-in right, ground for termination, and permission for foreign companies to repatriate income (Soomro and Zhang, 2015).

Moszoro et al. (2014) argued that PPP investment in infrastructure is highly sensitive to the number of disputes in a sector. Contractual disputes between the public and private sector partners is costly as the renegotiation and termination of PPP contracts impede infrastructure development, disrupt public services, discourage private investments, and increase risk premiums (Lee et al, 2018). Soomro and Zhang (2013) examined the factors hindering transport PPPs. They found that poor economic and financial assessments for feasibility studies, inappropriate risk allocation between partners at the procurement stage, delayed land acquisitions at the construction stage, and lower user demand at the operation stage led to project failures. Osei-Kyei and Chan (2016) argued that high toll-fee charges, high cost of construction, poor public-user relationship, and negative public perception on PPP toll roads in Sub-Saharan Africa (SSA) led to project failure. Ismail and Harris (2014) found that the lack of government guidelines and procedures, lengthy delays in negotiations, high user charges, project delays caused by political debate, and confusion over government objectives and evaluation criteria for projects, mostly affected project implementation in Malaysia. In short, this study hypothesized that effectiveness in the practices at the contract management stage leads to better PPP outcomes. Table 2 presents the variables used to operationalize the practices of PPP contract management.

Table 4: Practices of the Management Stage

Stages	Practices/Guidelines	Authors/sources
PPP contract management	System to manage the implementation of the PPP contract	The World Bank, 2018a; Bao et al., 2018; Soomro and Zhang, 2015
	System for tracking progress and completion of construction works	The World Bank, 2018a; Soomro and Zhang, 2015
	Monitoring and evaluation system	The World Bank, 2018a; Bao et al., 2018; Soomro and Zhang, 2015
	Foreign companies permitted to repatriate income	The World Bank, 2018a
	Change in the structure of the private partner	The World Bank, 2018a; Bao et al., 2018; Marques and Berg, 2010
	Modification/renegotiation of the PPP contract regulated	The World Bank, 2018a; Bao et al., 2018; Marques and Berg, 2010
	Circumstances that may occur during the life of the PPP contract regulated	The World Bank, 2018a; Marques and Berg, 2010
	Dispute resolution mechanisms	The World Bank, 2018a; Bao et al., 2018
	Lenders step-in right	The World Bank, 2018a
	Grounds for termination of a PPP contract	The World Bank, 2018a

Table 4 shows the studies and authors that found support for the influence of the 10 contract management practices on the indicators of PPP outcome. The practices become the variables in the analysis section of this dissertation. The idea that PPP governance (preparation, procurement, and management) has an influence on PPP outcome is showed in Figure 3.

Figure 3: Influence of PPP Governance on PPP Outcome

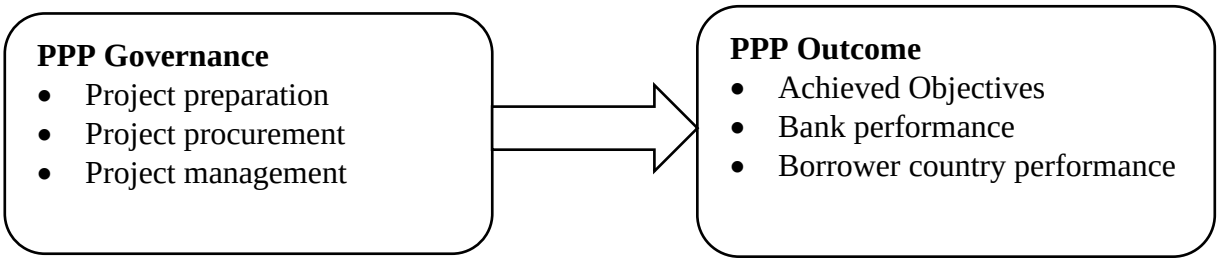


Figure 3 is set up for the purpose of this research to show the relationships between PPP governance and PPP outcome. It is a representation of the relationship between PPP governance and PPP outcome. PPP governance is expected to have a positive influence on PPP outcome.

Governance Theory and its Relation to PPP Governance and PPP Outcome

Past studies that used good governance have focused on the six indicators developed by (Kaufmann et al., 2010). Two of the six indicators belong to political governance and include political stability and voice and accountability. Two others pertain to economic governance and encompass government effectiveness and regulation quality. The last two belong to institutional governance and entail corruption control and the rule of law (Asongu and Nwachukwu, 2017). This dissertation uses the six indicators, which become the variables of good governance. This section defines and explains each of the indicators. Findings from past studies on the indicators and their influence on PPP outcome are also discussed following the relationships shown in Figure 4.

Figure 4: Influence of Country Governance on PPP Governance and Outcome

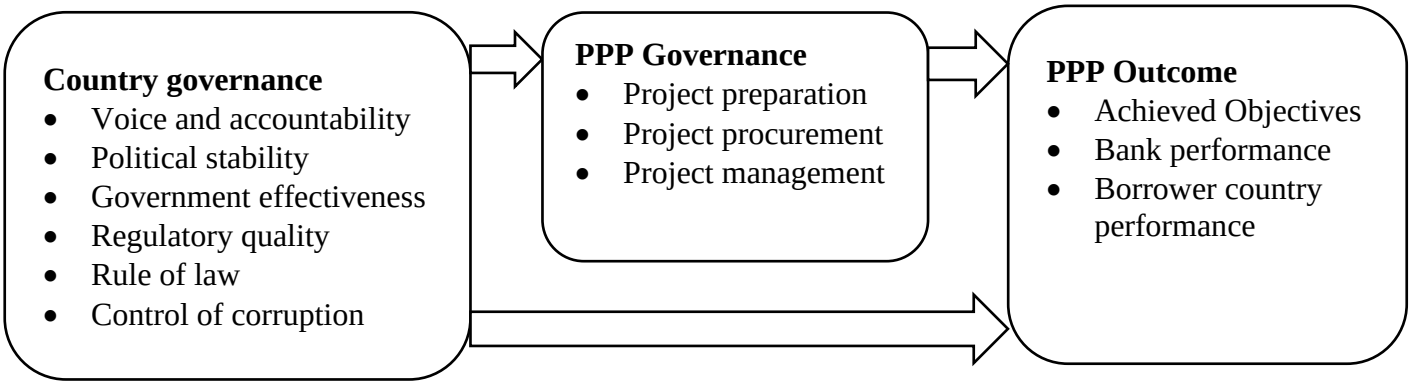


Figure 4 is set up for the purpose of this research to show the relationships between country governance, PPP governance, and PPP outcome. In Figure 4, the relationship between country governance factors and PPP governance is represented by the shorter arrow. The longer arrow represents the relationship between country governance factors and PPP outcome. The purpose is to identify significant relationships between the two sets of factors.

Voice and Accountability: Influence on PPP Governance and Outcome

The indicator "Voice and accountability" is defined as "…the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and free media (Kaufmann et al., 2010, p. 4). Accountability is important for progress when governments answer to people on the use of resources. Holding these lines helps prevent mismanagement of resources and opportunistic behaviors. The lack of accountability in financial management in developing countries such as Mali, Mozambique, Peru and Uganda, constitutes greater obstacle to progress than the lack of resources that developing countries themselves experience (OECD, 2014). Domestic accountability, considering horizontal

accountability and vertical accountability, in the entire government system and structure can mean greater commitment to good governance practices. Bureaucratic accountability can mean accountability to the internal hierarchy, accountability to the legislature, accountability to the judiciary, accountability to the citizens and accountability to the media (Sultana, 2012). Effective domestic accountability means that there is transparency whereby citizens have access to information about government commitments and action taken to meet them (OECD, 2014). It also entails answerability in the sense that citizens can ask for explanations and justifications (OECD, 2014). Enforceability must also prevail for citizens to be able to sanction the government if the government fails to meet certain standards (OECD, 2014).

Domestic accountability is an important consideration for international donors who want to cooperate with national governments. A government in good terms with its citizens and institutions presents a favorable climate of investment, of citizens' participation and acceptance of investment outputs, and use of the final products. Actions taken by a government that is illegitimate can be suspected or boycotted by citizens. OECD (2014) suggests that international organizations can contribute to improving domestic accountability by understanding the political context, power, and incentives; considering accountability as a whole; and ensuring that development assistance does not undermine domestic accountability. Brown-Shafii and ProQuest (2011) argued that the World Trade Organization agreement can be used to promote accountability because countries agree to participate based on legal accountability that they have or are willing to build the institutional and human capacity necessary. However, the countries must be given to necessary timelines to meet the conditions. The definition and description of accountability and the findings implied that the strength of voice and accountability in a country leads to better outcomes in that country in general.

From the perspective of PPP projects, greater accountability is related to better PPP investments and outcome (Lee et al., 2018; Galilea and Medda, 2009). Focusing on developing countries, Wang et al. (2019) examined the relationship between risk allocation and private investment in PPP market using PPI, WGI, and WDI data. They found that better governance in developing countries led to less risk assumed by private partners. Wang et al. (2019) recommended that transport and information, communication, and technology (ICT) sectors pay greater attention to improving regulation quality and voice or accountability to reduce the negative impact of risk allocation in private investments. Using PPIs, WGI, and World Bank's World Development indicators, Pérez-D'Oleo et al. (2015) analyzed the influence of institutional environment on the investment carried out through public-private partnerships in 80 middle-and-low income countries for the period 1996–2011. They found that countries with better institutional environment tend to have a higher level of investment in PPP projects. This influence was more significant for the indicator voice and accountability. Hayllar (2010) argued that mechanisms that supported PPPs included democratic mechanisms to prevent inequitable concentrations of power. Politicians should be responsible and accountable through regular and fair elections. A parliament in such context should promote participation and transparency and plays its role of oversight (Hayllar, 2010). Thus, this study tests for the positive influence of voice and accountability on PPP governance and PPP outcome.

Political Stability: Influence on PPP Governance and Outcome

Political stability is defined as "…the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism" (Kaufmann et al., 2010; p.4). Alemu (2018) found that controlling corruption and maintaining political stability reduced the illicit financial outflow in 32 African countries. Aisen

and Veiga's (2013) research on 169 countries showed that political instability reduced economic growth because of its adverse effects on productivity growth and physical and human capital accumulation. In their study of 157 countries from 1964 to 2014, Karnane and Quinn (2019) found that ethnic fragmentation and corruption caused political instability, which in turn had a negative impact on economic growth. Houdhary and Reksulak (2019) argued that ethnic divisions may have a negative impact on economic whereas strong economic institutions and policies that provide for the needs of people may mitigate ethnic tensions. Easterly and Levine (1997) believed that ethnic diversity led to polarization of interest groups in countries with high numbers of ethnic groups and therefore accounted for rent-seeking behavior and lack of consensus for public goods. The lack of social cohesion issues and social constraints make it difficult to build quality institutions that can support growth and long-term economic policies. As Easterly, Ritzen, and Woolcock (2006) puts it, opportunistic politicians take advantage of ethnic differences to seek political power, a process that can exacerbate division as groups are politically mobilized along ethnic lines. Asongu and Nwachukwu (2017) examined the impact of terrorism on governance in Africa. They found that domestic, transnational, unclear, and total terrorism negatively impact political governance and its constituents. Second, evidence of a negative relationship is sparingly apparent in economic governance and its components. More than domestic terrorism, transnational terrorism negatively affects political, economic, and general governances.

The literature shows that there is a positive relationship between political stability and PPP investments and outcome. Eberhard and Gratwick (2013) noted the political uncertainty for investments in countries such as in Nigeria because of interruptions and changing in political administrations. Lee et al (2018) found that internal conflict had an impact on PPP outcome.

Osei-Kyei and Chan (2017) found that political support and acceptability for PPPs, government positive attitude towards private sector investments, and political stability were the most impactful factors attracting investments in developing countries. Chou et al. (2012) examined the determining factors in attracting the private partners for infrastructure projects using World Bank PPI data. They found that political stability was one of the important factors. Thus, this study tests for the positive influence of political stability and lack of terrorism on PPP governance and PPP outcome.

Government Effectiveness: Influence on PPP Governance and Outcome

Government effectiveness refers to "…the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies" (Kaufmann et al, 2010; p. 4). Alam, Kiterage, and Bizuayehu (2017) examined the impact of government effectiveness on economic growth in 81 countries. They found that government effectiveness had a significantly positive effect on economic growth. Their finding is key as international organizations and multilateral development banks and developed countries evaluate government effectiveness when allocating foreign aid (Alam, et al, 2017). Kaufmann (2009) argued that government effectiveness in terms of improved governance and anti-corruption will lead to aid effectiveness in developing countries. Stakeholders must work on solutions that address or include governance and political corruption, IT revolution, free media, innovations in public-private partnerships, private donors (Kaufmann (2009). When African countries met for the first Public Procurement Conference in November 30- December 4, 1998 held in Abidjan, Cote d' Ivoire, they agreed with donors on a consensus document which called for building support for reform, political commitment, resources for reform, strategy for reforms,

steps in developing a strategy, and changes to support reform (International Trade Centre, 1999). The 2008 Accra Agenda for Action, a continuation of the 2005 Paris Declaration called for strengthening country ownership over development, building more effective and inclusive partnerships for development, delivering, and accounting for development results, and looking forward (OECD, 2019). Developed countries required recipient countries to build procurement capacities and meet requisite standards on efficiency and probity as preconditions for disbursing aid (OECD, 2019).

The literature showed that there is a positive relationship between government effectiveness and PPP investments and outcome. Lee et al (2018) found that the quality of bureaucracy had an impact on PPP outcome and higher government effectiveness in a developing country reduces the negative relationship between risk allocation and private investment. Pérez-D'Oleo et al. (2015) found that countries with better institutional environment tended to have a higher level of investment in PPP projects. Though less influential, they found that government effectiveness had an impact in level of investments. Sabry (2015) and Bota-Avram (2014) found that good governance institutions with bureaucratic efficiency and independence increased PPP performance because of their positive effect on investment growth. Osei-Kyei and Chan (2017) found that the top five important factors attracting private investments included political support and acceptability for PPPs, government positive attitude towards private sector investments, political stability, favorable existing legal framework and policy and well-organized and committed contracting authority. Unit (2014) showed that Latin America and the Caribbean countries that built institutional knowledge through repetitive PPPs project implementation, international and domestic training had improved their operational maturity. Operational maturity allows the public sector to improve its project management

capacity, planning, and oversight. Furthermore, countries perform better when they are effective in balancing technical and economic criteria in project selection and efficient risk allocation laws (Unit, 2014). Countries that demonstrate the connection between political support for PPPs and performance in the regulatory and institutional frameworks improve their performance. They develop national development plans that support PPPs had the best investment climate (Unit, 2014). Strong political will strengthens PPPs (Pebble, 2015) while deteriorated political support is harmful to investment. Furthermore, countries with effective financial facilities such as strong capital markets, effective government finances, and use of subsidies improved their capacity of government to meet their obligation to private partners (Unit, 2014). The IEG report includes the bank and the borrower country performance as well as the project outcome (IEG, 2019). Thus, this study tests for the positive influence of government effectiveness on PPP governance and PPP outcome.

Regulatory Quality: Influence on PPP Governance and Outcome

"Regulatory quality" is defined as "…the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development" (Kaufmann et al., 2010; p. 4). The quality of institutions matters to economic growth. Mudassaar, Khan, and Aziz (2019) found that ineffective institutions and weaker governance reduced the impact of investment on economic growth because of the lack of property rights, lack of protection to investment in human capital and physical capital. Acemoglu and Robinson (2010) argued that institutions play a major role in growth and development of countries as they are responsible for good practices such as in property rights protection. While institutions are different across countries because of social and political forces that determine the quality of the institutions, improving poor institutions will lead to be better growth and development. Das and

Quirk (2016) examined which institutions promote economic growth. They found that market-creating institutions played a very significant role in the promotion of economic growth. Market-stabilizing institutions and human capital also had an impact on growth. Furthermore, market-creating and market-stabilizing institutions were more relevant for lower income countries. However, they argued that democratic institutions did not necessarily mean growth for poor countries.

The literature showed that there is a positive relationship between regulatory quality and PPP investments and outcome. Moszoro et al. (2014) argued that that PPP investment in infrastructure is highly sensitive to the quality of regulations. Regulatory quality in a developing country reduces the negative relationship between risk allocation and private investment (Wang et al., 2019). Baker (2016) found from a sample of 83 developing countries for the period 1999–2011 that regulatory quality had a positive impact in attracting private investors to PPP markets regardless of the degree of uncertainty in the exchange environment. Panayides et al. (2015) found that regulatory quality was an important institutional determinant of port PPP success that attracted private bidders and the market competitiveness of the ports. Using Private Participation in Infrastructure (PPI) data, Moszoro et al. (2015) showed that countries that significantly improve the quality of regulation could gain 3% increase in infrastructure investments. Chou et al. (2012) found that quality of regulation and governance were some of the important factors. Pérez-D'Oleo et al. (2015) concluded that countries that improved in regulatory quality attracted a higher level of investment through PPP projects. Sabry (2015) and Bota-Avram (2014) found that good governance institutions with good regulatory quality help PPPs in performing well. Thus, this study tests for the positive influence of regulatory quality on PPP governance and PPP outcome.

Rule of Law: Influence on PPP Governance and Outcome

"Rule of law" is "…the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence" (Kaufmann et al., 2010; p. 4). The rule of law is also considered as a legal order consisting of predictable, enforceable and efficient rules required for a market economy to flourish (Santos, 2012). The World Development Report (WDR) issued in 2017 referred to the rule of law as the impersonal and systematic application of known rules to government actors and citizens alike which is needed for a country to realize its full social and economic potential (Chalmers and Pahuja (2019) or the guiding principle of legitimate governance (Allan, 2003). The institutionalization of a legal system that is capable of both authorizing and enforcing the new developmental state protects foreign investment. Salevao (2005) emphasized the rule of law in its demands for the equality of all citizens, fairness in the way government treats its citizens, the absence of arbitrary rule, responsibility and accountability of government to the governed, equity, respect for human dignity, the protection of rights and liberties (Salevao, 2005). The rule of law is the instrument that provides some guarantee that government will be conducted justly, fairly, honestly, and openly for the benefit of all citizens of the state (Salevao, 2005). Many aid projects in developing economies set the improvement and strengthening of the rule of law as a condition. They support their decision with the argument that a stronger rule of law leads to success in projects. Ranasinghe and Restuccia (2018) argued that weak rule-of-law institutions substantially amplify the negative impact of financial frictions and financial liberalization would be beneficial if property rights security results from the rule of law.

The literature showed that there is a positive relationship between the rule of law and PPP investments and outcome. Moszoro et al.' (2014) findings also showed that that PPP investment in infrastructure is highly sensitive to the rule of law. Lee et al (2018) found that law and order had an impact on PPP outcome. The rule of law in a developing country reduces the negative relationship between risk allocation and private investment (Wang et al., 2019). Baker (2016) also showed that regulatory quality had a positive impact in attracting private investors to PPP markets. Moszoro et al. (2015) showed that the private sector is more likely to invest 4% more in infrastructure if countries significantly improve the enforcement of the rule of law. Thus, this study tests for the positive influence of rule of law on PPP governance and PPP outcome.

Control of Corruption: Influence on PPP Governance and Outcome

The control of corruption captures "…the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests" (Kaufmann et al., 2010; p. 4). Gberevbie et al. (2014) observe the manifestation of unethical behavior amongst public officials as the major challenge hindering development in the country. They recommended among others the need for the government to strengthen the existing anti-corruption agencies to enable them to enforce proper ethical standards. Mudassaar et al. (2019) found that corruption had a negative effect on economic growth in developed and West Asian economies as corruption meant diversion of resources and human talent and imposition of taxes which increases the cost of doing business. Ahmad, Ullah, and Arfeen (2012) argued that while corruption may not reduce growth if other conducive factors are in place, highs level of corruption of bureaucratic inefficiency erode domestic and foreign direct investments and investments in education, health and infrastructure project. Anoruo and Braha (2005) argued that corruption in Africa has a negative direct impact on economic growth

as it lowers productivity. Indirectly, it impacts economic growth by hampering investments. Dridi (2013) argued that corruption was most likely to reduce growth through its effects on human capital and political instability. Freckleton, Wright, and Craigwell (2012) found that corruption in the long run had no impact on growth as investors are usually driven by prospects of profitability, government directed incentives, and local institutional and human capital effectiveness.

The literature showed that there is a positive relationship between control of corruption and PPP project operations. Lee et al (2018) found that the level of corruption had an impact on PPP outcome and greater transparency and less corruption can significantly reduce a project's hazard rate. Moszoro et al. (2014) argued that PPP investment in infrastructure is highly sensitive to freedom from corruption. Osei-Kyei and Chan (2016) studied transportation projects across Nigeria, Mozambique, and South Africa. They found that allegations of corruption were one of the failure factors of projects. Controlling corruption in a developing country reduces the negative relationship between risk allocation and private investment (Wang et al., 2019). Pusok (2016) examined PPP and corruption in the water and sanitation sectors in developing countries. Pusok (2016) found that high corruption influenced the private actors to pursue profit maximization over public needs, leading to inadequate water sanitation. Moszoro et al. (2015) showed that the private sector is more likely to invest 7% more in a country that successfully controls corruption. In the same study, they concluded that corruption in transport would not be improved despite progress. Pérez-D'Oleo et al. (2015) concluded that countries that improved in control of corruption attracted a higher level of investment through PPP projects. Galilea and Medda (2009) found that the perception of a country's level of corruption influenced the success

of PPPs. Thus, this study tests for the positive influence of control of corruption on PPP governance and PPP outcome.

Table 5: Sources, Factors, and Outcome

Governance Factors	Sources of Factors	Sources of outcome
Voice and accountability	Kaufmann et al., 2010; WGI 2018; Sultana ; 2012	Lee et al., 2018; Galilea and Medda, 2009; Wang et al., 2019; Pérez-D'Oleo et al., 2015 ; Hayllar , 2010
Political stability	Kaufmann et al., 2010; WGI 2018	Eberhard and Gratwick, 2013; Lee et al., 2018; Osei-Kyei and Chan, 2017;Chou et al., 2012
Government effectiveness	Kaufmann et al., 2010; WGI 2018	Lee et al., 2018; D'Oleo et al., 2015; Sabry, 2015; Bota-Avram, 2014; Osei-Kyei and Chan, 2017; Unit, 2014; Pebble, 2015; IEG, 2019
Regulatory quality	Kaufmann et al., 2010; WGI 2018	Moszoro et al., 2014; Wang et al., 2019; Baker, 2016; Panayides et al., 2015 ; Chou et al., 2012; Pérez-D'Oleo et al., 2015; Sabry, 2015; Bota-Avram, 2014; IEG, 2019
Rule of law	Kaufmann et al., 2010; WGI 2018	Moszoro et al., 2014; Lee et al., 2018; Wang et al., 2019 ; Baker, 2016; IEG, 2019
Control of corruption	Kaufmann et al., 2010; WGI 2018; Gberevbie et al. (2014)	Lee et al., 2018; Moszoro et al., 2014; Osei-Kyei and Chan, 2016; Pusok, 2016; Pérez-D'Oleo et al., 2015; Galilea and Medda, 2009; IEG, 2019

Table 5 summarized the authors and sources that studied governance factors. The authors and sources for each factor are summarized. Table 5 then grouped the authors and sources that found significant relationship between the governance factors and PPP outcome. The authors and sources are grouped by factor.

From the literature review, it was clear that the mediating role of PPP governance or the practices of PPPs was not examined. The relationships between good governance and PPP outcome, between PPP governance and PPP outcome, and between country governance and PPP governance were ambiguously studied in previous research. This study fills the gap and address the ambiguity in previous studies. The methods section shows how the relationships are studied for the purpose of exploring the relationships and addressed the gaps.

CHAPTER III

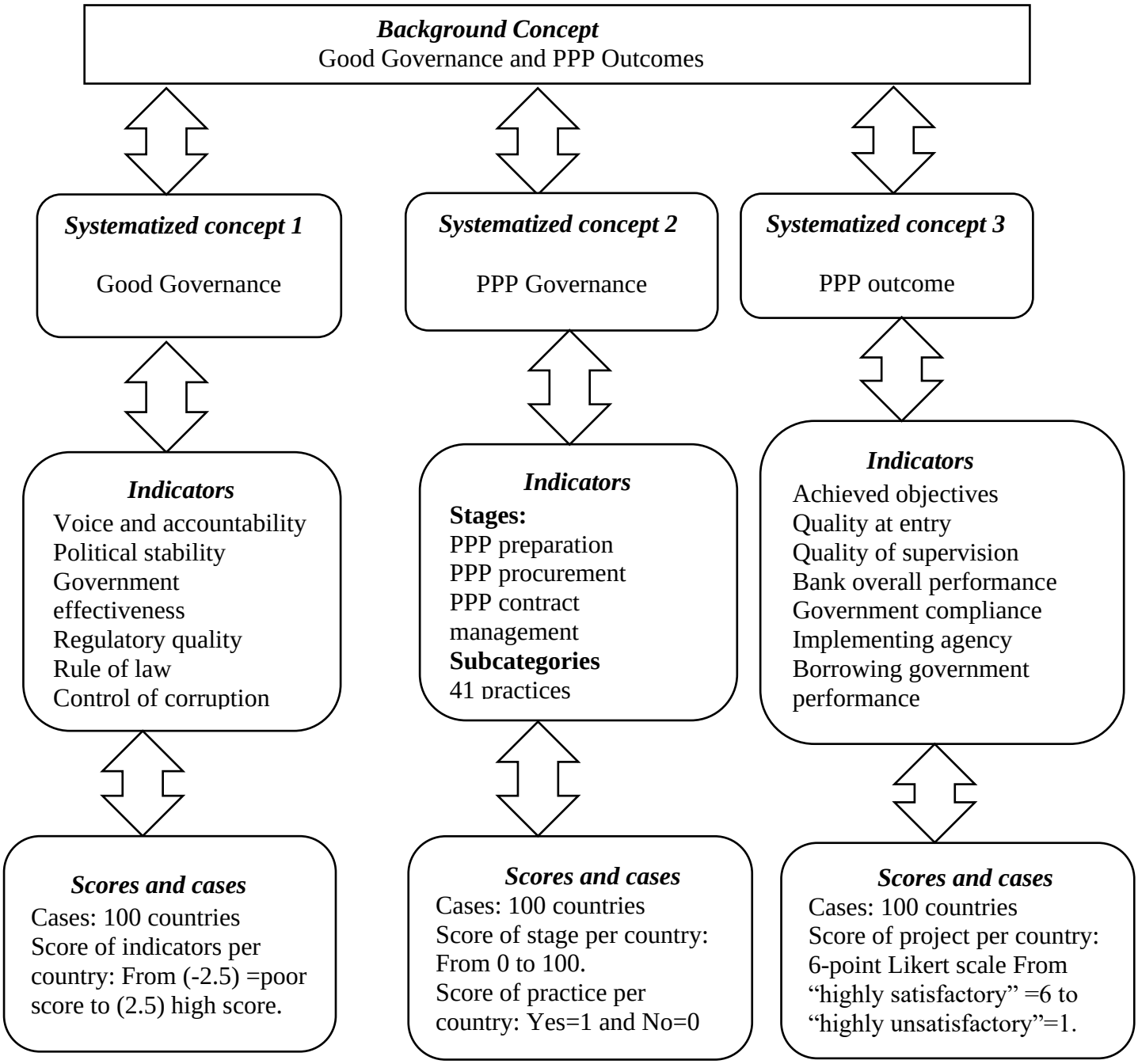
METHODOLOGY

The methods section presents the main concepts, indicators and measures used in the study. The endogenous, the endogenous mediator, the exogenous variables, and the control variables are explained along with their measures. The methods section also presents the data collection including the sample and the procedures for data collection; missing data, data transformation, and the limitations of the data; and the methods of analysis including a discussion of the use of the mediation analysis and multivariate regression.

Concepts, Indicators, and Measures

Country governance, PPP governance, and PPP outcome are the main concepts examined in the dissertation. Country governance is composed of six indicators: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. The indicators were measured by a score of (-2.5) to (2.5). PPP governance is composed of three main indicators composed of the three PPP stages: PPP preparation, PPP procurement, and PPP contract management. They were measured by a score of 0 to 100. PPP governance is also composed of 41 binary indicators measured by 1 for yes and 0 for no (See Table 10 for binary indicators). PPP outcome is composed of seven indicators: achieved objectives, quality at entry, quality of supervision, Bank overall performance, government compliance, implementing agency, and borrowing government performance. The concepts, indicators and measures were explored for a sample of 100 countries. The exogenous, mediator-endogenous, and endogenous variables were drawn from these concepts, indicators, and measures. They were elaborated and explained in the rest of this chapter.

Figure 5: Concepts, Indicators, and Measures



Source: Figure 5 was adapted from Adcock and Collier (2001).

Endogenous Variable

The endogenous variable also known as independent variable is PPP outcome. The outcome indicators were extracted from the PPP database collected by the Independent Evaluation Group (IEG) on the World Bank lending projects that closed between the fiscal years 2001 and 2017 (IEG, 2019). The PPP outcome reported by the IEG included the following indicators: sustainability scores, borrower preparation scores, institutional development impact scores, achieved objective score, quality of entry, quality of supervision, overall bank performance score, government compliance, implementing agency performance, and overall borrower performance scores (IEG, 2019; IEG, 2019a). The IEG rated the projects based on the satisfaction level and so were the indicators that measured the outcomes of the projects. A 6-point Likert ordinal scale was used to rate the performance of each project. More specifically, the indicators are rated as "highly satisfactory, satisfactory, moderately satisfactory, moderately unsatisfactory, and unsatisfactory, highly unsatisfactory." From the scale, it is understood that projects are rated as "highly satisfactory" when they perform very well and "highly unsatisfactory" when they perform very poorly. Therefore, numerical values from "6" to "1" were assigned to the different scale items; "6" being "highly satisfactory" and "1" being "highly unsatisfactory." The levels of satisfaction "satisfactory", "moderately satisfactory", "moderately unsatisfactory", and "unsatisfactory" were rated 4, 3, 2 and 1 respectively. The numerical values are used in the statistical analysis. The rating scales and definitions from the IEG report (See IEG, 2019a) are as follows:

> *Highly Satisfactory:* There were **no** shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.
>
> *Satisfactory:* There were **minor** shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.

Moderately Satisfactory: There were **moderate** shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.

Moderately Unsatisfactory: There were **significant** shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.

Unsatisfactory: There were **major** shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.

Highly Unsatisfactory: There were **severe** shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.

Not all the indicators were considered in the study. Only the indicators achieved objectives, the quality of entry, the quality of supervision, government compliance, implementing agency performance, and overall borrower performance scores were considered. These indicators were retained because data were available. In addition, these indicators were relevant for evaluating the outcome of the PPP projects from both the recipient country perspective and the donor organization (World Bank) perspective.

Indicators such as sustainability scores, borrower preparation scores, institutional development impact scores that were discontinued because of improvements in the rating system were left out (IEG, 2019). For most of the countries, those indicators did not have any ratings and were simply marked "Not Rated." Indicators such as risk to development outcome (RDO) and the quality of monitoring and evaluation (M&E) did not have any ratings and were left blank in the database. These indicators were excluded from further consideration in the research. The exclusion of the indicators has no impact on the conclusions of the research because these indicators were independent from the indicators retained in the study.

Table 6 displays the frequencies for the seven PPP outcome variables composed of achieved objectives (Obj), quality at entry (QAE), quality of supervision (QOS), bank overall

performance (BOP), implementing agency performance (ImpAg), government performance (GovPerf), and Borrower overall performance (BorOp). For example, there are no data for the scale moderately unsatisfactory for the variable achieved objectives (Obj). For quality at entry (QAE), there are no data for highly unsatisfactory and moderately unsatisfactory. For all the variables, between 31% and 42 % of countries reported moderately satisfactory results. Between 24% and 40% of countries reported satisfactory results. Between 0% and 3% of countries reported highly satisfactory results. The frequencies showed that there are few countries that achieved highly satisfactory results whereas most countries have moderate or satisfactory results. This implied that the results and conclusions are expected to be more applicable to developing economies than developed economies.

Table 6: Frequencies of the Endogenous Variables

Indicators	Achieved Objectives		Quality at entry		Quality of supervision		Bank overall performance		Implementing agency performance		Government performance		Borrower overall performance	
Frequency & percentage	Freq	Perct	Freq	Perct	Freq	Perct	Freq	Perct	Freq	Perct	Freq	Perct	Freq	Perct
Highly Satisfactory	3	3	2	2	3	3	3	3	3	3	2	2	0	0
Satisfactory	31	31	31	31	40	40	28	28	31	31	24	24	27	27
Moderately Satisfactory	36	36	31	31	34	34	42	42	32	32	40	40	33	33
Moderately Unsatisfactory	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unsatisfactory	29	29	36	36	23	23	27	27	34	34	33	33	35	35
Highly Unsatisfactory	1	1	0	0	0	0	0	0	0	0	1	1	3	3

The Endogenous Mediator Variable

The endogenous mediator variable is PPP governance. According to Acock (2013), the endogenous mediator variable is independent with respect to some variables in the model and dependent with respect to other variables. In other words, the endogenous mediator variable plays a role between an exogenous variable and an endogenous variable and therefore the mediator endogenous is situated in the middle. As it will be shown later in the models, in a regression, the mediator endogenous variable behaves as an endogenous variable with regards to the exogenous variable. With regards to the known endogenous variable, in a regression, the mediator endogenous variable behaves as an exogenous variable. For this research, PPP governance is the endogenous mediator variable, which means that it is hypothesized to mediate the relationship between country governance and PPP outcome. The mediator was extracted from the *Procuring Infrastructure Public-Private Partnerships 2018 report* (The World Bank, 2018a). The report is designed to help governments improve their PPP regulatory quality.

The report reported on two components of PPP governance. The first component is the scores of the stages of the PPP process including PPP preparation, PPP procurement, PPP contract management, and unsolicited proposals. The four stages were rated 0 to 100. Higher scores signify that an economy's regulatory framework is in greater compliance with internationally recognized good practices in an area. Lower scores indicate that there is

considerable room for improvement because of less adherence to international good practices considered in the report (The World Bank, 2018a).

The second component comprises the subcategories of the three categories including PPP preparation scores, PPP procurement scores, and PPP contract management scores. There are thirteen subcategories for PPP preparation, 13 for PPP procurement, ten for PPP contract management, and five for unsolicited proposals (The World Bank, 2018a). The indicators excluding those of the unsolicited proposals are provided in Tables 2, 3 and 4.

The rating of the subcategories was complex. For example, for the indicator, fiscal treatment of PPPs, there were four different scores even after a country stated that such indicator was enforced. For the example of fiscal treatment of PPPs, a score of 0.5 was given if there was a specific budgetary treatment of PPPs based on a regulatory provision. A score of 0.25 was given if yes based on a recognized practice. A score of 0.5 was given if there was a specific accounting system for PPPs based on a regulatory provision. A score of 0.25 was given if the answer was based on a recognized practice. There were about 10 different scores for the indicator, mechanisms inclusion in the PPP contract's monitoring and evaluation system (The World Bank, 2018a). To avoid this complexity and ensure reliability in the data, the subcategories are recoded simply yes when a practice was enforced and no when it was not. The binary values of 1 and 0 were assigned to the responses, 1 for yes, and 0 for no.

Not all the binary indicators were used in the study. The unsolicited proposals (USP) scores were not considered in the research because there were no ratings across several

countries. Traditionally, the USP is not also considered a step or stage in the PPP project process. The *Procuring Infrastructure Public-Private Partnerships 2018 report* which report data on the USP referred to the USP as a special module (The World Bank, 2018a). Other binary variables were excluded for measurement validity considerations (See measurement validity section). The retained variables are displayed in Table 8. The PPP governance exists for the year 2017.

The year 2017 was retained to ensure that an acceptable sample was used in the dissertation. A total of 135 countries were assessed in 2017. Before 2017, there were two previous reports on PPP governance in 2015 and 2016 which respectively reported on 10 and 82 countries. The 2015 report focused on two main thematic areas which included the procurement process and the public procurement complaint review mechanisms. The 2015 report covered a total of eight indicators. The indicators comprised needs assessment, call for tender, and bid preparation; bid submission phase; bid opening, evaluation, and awarding phase; content and management of the procurement contract; performance guarantee; payment of suppliers; complaints submitted to the first-tier review body during the pre-award stage; and complaints submitted to the second-tier review body before the awarding of the contract. The data for 2015 could not be used because the data was limited to only eight countries. The 2016 report used a more descriptive approach and did not provide detailed information that could be used in the dissertation.

Even though the objectives of the reports were to help government improve their PPP contract process, the 2015, 2016, and 2017 reports measured different indicators. Table 7 is an example of the comparison of appraisal scores of 10 countries for 2015, 2016, and 2017. The ten countries are compared using the following indicators: the socio-economic impact, financial viability or bankability, affordability assessment, comparative assessment, market assessment, risk identification, assessment, and allocation among the countries.

Table 7: PPP Appraisal Scores for 10 Countries Over Three Years

Country	Year	Socio-economic impact	Financial Viability	Affordability assessment	Comparative assessment	Market assessment	Risk identification
Cameroun	2015	✓	✓	✓	✓	✓	
	2016						
	2017	✓	✓	✓	✓	✓	✓
Colombia	2015	✓	✓	✓	✓	x	✓
	2016						
	2017	✓	✓	✓	✓	✓	✓
Egypt	2015	✓	✓	x	✓	✓	✓
	2016						
	2017	✓	✓	✓	✓	✓	✓
Ghana	2015	x	✓	✓	✓	x	✓
	2016						
	2017	✓	✓	✓	✓	✓	✓
Kenya	2015	✓	✓	✓	✓	✓	✓
	2016						
	2017	✓	✓	✓	✓	✓	✓
Nigeria	2015	✓	✓	✓	✓	✓	✓
	2016						
	2017	✓	✓	✓	✓	✓	✓
Peru	2015	✓	✓	✓	✓	x	✓
	2016						
	2017	✓	✓	✓	✓	✓	✓
South Africa	2015	✓	✓	✓	✓	✓	✓
	2016						
	2017	✓	✓	✓	✓	✓	✓
Tanzania	2015	✓	✓	✓	✓	x	✓
	2016						
	2017	✓	✓	✓	✓	x	✓
Tunisia	2015	x	x	x	x	x	x
	2016						
	2017	✓	✓	✓	✓	x	x

Table 7 shows that all countries enforced all the indicators except that Tanzania, Peru, Ghana, and Columbia did not conduct market assessment. Egypt did not conduct any affordability assessment. Ghana did not conduct any socio-economic impact (IBRD, 2015). Tunisia is the only country that did not conduct any assessment for the year 2015. Overall, there is consistency in the scores of those countries based on the indicators. It was important to show this consistency because of the lack of available data for all three years for a considerable number of countries. Furthermore, it shows that PPP governance is considered by countries in their past practices. The issue is that data was collected extensively before 2017.

Table 8: Frequency of Binary Variables

Variables	Frequency		Percent	
	Yes	No	Yes	No
Central Budgetary Authority	88	12	88	12
Fiscal treatment	37	63	37	63
PPP prioritization	86	14	86	14
Economic assessment	92	8	92	8
Fiscal affordability assessment	85	15	85	15
Risk identification	82	18	82	18
Financial viability assessment	81	19	81	19
Market Sounding analysis	49	51	49	51
Environment impact assessment	81	19	81	19
Assessments included in the RFP	42	58	42	58
Draft PPP contract included in the RFP	77	23	77	23
Standardized PPP model contracts	34	66	34	66
Publication of contract	53	47	53	47
System to manage implementation	86	14	86	14
System for tracking progress	77	23	77	23
Monitoring and evaluation system	91	9	91	9
Foreign companies to repatriate income	98	2	98	2
Evaluation committee qualifications	74	26	74	26
Public procurement notice of the PPP issued	99	1	99	1
Foreign companies participate in PPP bidding	97	3	97	3
Minimum period/time to submit bid (>=60 days)	93	7	93	7
Tender documents detail the stages of the process	94	6	94	6
Clarification questions for procurement notice	95	5	95	5
Pre-bidding conference	50	50	50	50
Financial model submitted with proposal	49	51	49	51
Treatment when only one proposal is received	61	39	61	39
Negotiations with the selected bidder	58	42	58	42
Circumstances during the life of the PPP contract regulated	96	4	96	4
Dispute resolution mechanisms	99	1	99	1
Lenders step-in right	46	54	46	54
Ground for termination	90	10	90	10
Publication of award notice	91	9	91	9
Standstill period	39	61	39	61
Modification of the PPP contract regulated	84	16	84	16
Change in the structure of the private partner	67	33	67	33

Table 8 displays the frequencies of the binary variables. Table 8 showed how many times countries answered yes and no to each of the practices. The frequencies are important because they help understand how frequently countries enforce the internationally recognized PPP practices. For instance, less than 50 countries did not implement seven practices,

meaning that the frequencies for those seven practices is less than 50. In other words, at least 50 countries have implemented the rest of the practices. 99% of the countries enforced the dispute resolution mechanisms, meaning that 99 countries out of the 100 answered "yes." The implementation of the practice pre-bid conference is split at 50% for those that implemented it and those that did not.

Exogenous Variable

Country governance is the exogenous variable and is characterized by six indicators including voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann, et al., 2010; The World Bank, 2019a). The indicators were extracted from the Worldwide Governance Indicators (WGI) dataset (The World Bank, 2019a). The WGI project constructs aggregate indicators of six broad dimensions of governance from 1996 to 2017. The data are gathered from several survey institutions, think tanks, non-governmental organizations, international organizations, and private sector firms (The World Bank, 2019a). The aggregate of data from these entities yielded the scores on the good governance indicators. The estimates of governance performance for each variable range from approximately (-2.5) equal weak to (2.5) equal strong. For this dissertation, the data for the year 2017 were used because data for the same year were used for the endogenous and endogenous mediator variables. The data were used to examine the impact of governance for various regional and income-based entities. For example, Pérez-D'Oleo et al. (2015) and Wang, Liu, Xiong, and Song (2019) used the data to examine the influence of institutional environment on the investment carried out through PPPs in 80 middle-and-low income countries for the period 1996–2011. The exogenous variables are described in Table 9.

Control Variables

Two control variables are used in the study. The first is the gross national income per capita (GNI) referred to as GNI in the rest of the text. The GNI is used by international organizations such as the World Bank to classify countries into groups based on the income level. The GNI is used is used a control variable because the level of development including the economic and financial conditions of people influence not only the PPP governance but also the outcome of PPPs. In other words, people in a developed economy are more likely to ask for accountability than people in a less developed economy. However, there are some weaknesses associated with the use of the GNI. According to the World Bank, the GNI is often underestimated in lower-income countries that rely on informal and subsistence activities. In addition, the GNI does not reflect income inequalities in a country (The World Bank Group, 2020). This research tests whether the GNI influences the outcome of the PPP projects. The fact that the GNI is collected and reported in U.S. dollars alongside the PPP governance scores is another reason why its influence is tested (The World Bank, 2018a).

The second control variable is democracy. Democracy is seen as a system of strong institutions that guarantees freedom of expression, human rights, and transparency and fairness. The policies and programs of development are more likely to lead to more efficient and effective outcomes than in a non-democracy. Das and Kirk (2016) for example found the lower income countries with market-creating and market-stabilizing institutions had positive economic growth. That means countries that can improve their democratic governance including openness, transparency, and deliberative decision-making model will improve infrastructure investments (Hudon, 2011). Galilea and Medda (2009) linked democratic accountability to success in PPP projects. The consideration of democratic mechanisms is seen as necessary to prevent inequitable concentrations of power (Hayllar, 2010). Strong democratic institutions lead to political stability as all voices are allowed and considered.

Easterly and Levine (1997) and Easterly et al. (2006) argued that the lack of political stability due to ethnic divisions and wars had negative impact on development. Thus, it is necessary to test whether the overall democratic strength in countries affect their PPP outcome.

The data were extracted from Freedom House, which reported on the freedom scores. Freedom depends on the degree of democratic climate of countries. The democratic climate is assessed using the political liberties component and the civil rights component. The political liberties component comprises the electoral process, political pluralism and participation, and functioning of government (Freedom House, 2017). The civil rights comprise the freedom of expression and belief, associational and organizational rights, rule of law, and personal autonomy and individual rights (Freedom House, 2017). The dissertation uses the aggregate scores which ranges from 0 to 100.

Table 9: List of Variable, Measures, and Sources

Group	Variable		Measures	Data type	Source	Countries/Years
Mediator	PPP preparation (Subcategories)		Total scores out of 100 Yes=1, No=0	Continuous Binary	IPPP Report 2018	Selected countries, 2017
	PPP procurement (Subcategories)		Total scores out of 100 Yes=1, No=0	Continuous Binary	IPPP Report 2018	Selected countries, 2017
	Contract management (Subcategories)		Total scores out of 100 Yes=1, No=0	Continuous Binary	IPPP Report 2018	Selected countries, 2017
Endogenous variables	Outcome rating		"Highly Satisfactory" = 6 to "Highly unsatisfactory" =1	Ordinal	TPPI Report	project scores
	Bank perf.	Quality of entry		Ordinal	The PPI Report	project scores
		Quality of supervision		Ordinal	The PPI Report	project scores
		Overall bank perf.		Ordinal	The PPI Report	project scores
	Borr perf.	Govt compliance		Ordinal	The PPI Report	project scores
		Implementing agency		Ordinal	The PPI Report	project scores
		Overall Borr. perf		Ordinal	The PPI Report	project scores
Exogenous Variables	Voice and accountability			Interval	WGI 2018	2017 estimate
	Political stability		-2.5 (weak) to 2.5 (strong)	Interval	WGI 2018	2017 estimate
	Government effectiveness		-2.5 (weak) to 2.5 (strong)	Interval	WGI 2018	2017 estimate
	Regulatory quality		-2.5 (weak) to 2.5 (strong)	Interval	WGI 2018	2017 estimate
	Rule of law		-2.5 (weak) to 2.5 (strong)	Interval	WGI 2018	2017 estimate
	Control of corruption		-2.5 (weak) to 2.5 (strong)	Interval	WGI 2018	2017 estimate
Control Variables	Gross National Income		GNI per capital (USD)	continuous	WGI 2018	2017 estimate
	Freedom/Democracy		0-100	continuous	Freedom House	2017 scores

Table 9 presents the groups of mediators, endogenous, exogenous, and control variables. The mediator, composed of the three categories of PPP governance, is a continuous variable rated out of 100 for the year 2017. The mediator variable is also composed of 41 subcategories. Details of those factors are presented in Table 10. The endogenous variable is composed achieved objectives, the Bank overall performance, and borrower country performance. The World Bank performance and the borrower country performance have each three sub-elements. They have ordinal data for the year 2017 rated “Highly Satisfactory” equal 6 to “Highly unsatisfactory” equal 1. The exogenous variable, country governance, is composed of six interval data variables rated (-2.5 equal week) to (2.5 equal strong). The data exist for 2017. The control variables include the gross national income (GNI) and the aggregate democratic scores.

Table 10: PPP Governance Subcategories

Categories	Subcategories	Measure	Data Type	Source, Country, year
Preparation of PPPs (13)	Central Budgetary Authority's approval	Yes (1) or No (0)	Binary	IPPP Report 2018
	Fiscal treatment of PPPs			
	PPP's prioritization consistent with public investment prioritization			Selected countries, 2017
	Economic analysis assessment			
	Fiscal affordability assessment			
	Risk identification			
	Financial viability assessment			
	PPP vs. Public Procurement comparative assessment			
	Market Sounding analysis			
	Environment impact assessment			
	Assessments included in the RFP			
	Draft PPP contract included in the RFP			
	Standardized PPP model contracts			
Procurement of PPPs (18)	Evaluation committee members' qualifications	Yes (1) or No (0)	Binary	
	Public procurement notice of the PPP issued			IPPP Report 2018
	Foreign companies participate in PPP bidding			
	Minimum period/time to submit bid (>=60 days)			Selected countries, 2017
	Availability of various procurement procedures			
	Direct negotiation not discretionary			
	Tender documents detail the stages of the process			
	Tender documents specify prequalification criteria			
	Clarification questions for procurement notice and/or the RFP			
	Pre-bidding conference			
	Financial model submitted with proposal			
	Proposals evaluated in accordance with published evaluation criteria			
	Treatment when only one proposal is received			
	Publication of award notice			
	Notification of the results of the PPP procurement process to all bidders			
	Negotiations with the selected bidder before contract signing			
	Standstill period			
	Publication of contract			

Table 10 Continued

Contract management (10)	System to manage the implementation of the PPP contract System for tracking progress and completion of construction works Monitoring and evaluation system Foreign companies permitted to repatriate income Change in the structure of the private partner Modification/renegotiation of the PPP contract regulated Circumstances that may occur during the life of the PPP contract regulated Dispute resolution mechanisms Lenders step-in rights Grounds for termination of a PPP contract	Yes (1) or No (0)	Binary	IPPP Report 2018 Selected countries, 2017

Table 10 listed the subcategories for the categories of PPP governance. The dichotomous data exist for 2017. The data were coded 1 for “yes” answers and 0 for “no” answers. The subcategories were extracted from the *Procuring Infrastructure Public-Private Partnerships 2018* (The World Bank, 2018a).

Data Collection

Sample

The unit of analysis is the country. The population of the study comprises 189 member countries of the World Bank (The World Bank, 2018b). For PPP governance, the sampling population for which data were collected consisted of 135 countries in the *Procuring Infrastructure Public-Private Partnerships 2018* (The World Bank, 2018a). Not all 135 countries had available or usable data. Countries with significant missing data were removed from the analysis. The final sample for this study is limited to 100 countries or observations. Of the 100 countries, 32 are sub-Saharan African, 21 are in Europe and central Asia, 16 in Latin America and Caribbean, 10 in East Asia and Pacific, 8 in Middle East and North Africa, 7 in OECD high income countries, and 6 in South Asia. For the exogenous variable (country governance), data exist from 1996 to 2017 for a total of 214 countries or authorities. The data were extracted from the Worldwide Governance Indicators (WGI) (The World Bank, 2019a). The estimates of good governance indicators for the year 2017 were used because the data on the PPP governance are also available for the year 2017 only. The PPP governance had data for the years 2015 and 2016 but these data were not used because they existed for only a few countries. In addition, for the year 2016, not only were the indicators used different from the indicators for 2015 and 2017 but the process for data collection was not elaborated. For example, the indicators used in 2015 and 2017 were not used in 2016, which explained the empty cells in Table 7 where the appraisal scores are displayed.

For the exogenous variable, PPP outcome, the collection years go back to the 1960s on individual projects from various sectors for each country (IEG, 2019). Scores of PPI exist for countries around the world. Countries have benefited from several PPP transportation projects from the World Bank since the 1960s. Some countries have benefited from projects as recently as 2017. The scores of the last project for each country were considered as they are more likely to represent the country's current performance on PPP. The dataset contains the project approval date when the World Bank approved the project and the deactivation date when the project was completed and formally closed. The countries for which data are available are listed in Table 11.

The sample of 100 countries is debatable. Scholars have debated and proposed the sample size that is ideal for the structural equation modeling method. This discussion is relevant for this study that uses the generalized structural modeling (GSEM). The minimum sample size that must be used is at least 10 times the number of parameters that can be estimated in the model (Jayaram, Kannan, and Tan, 2004). Ramirez stated that the traditional approach is 10 subjects per parameter, not per variable (Chapter 17). Ramirez recommended a minimum of 100 subjects even if there are only a few parameters. However, if there are far more than 10 subjects per parameter, this may lead to a statistically significant chi-square even if the model fits relatively well (Chapter 17). Some suggested the minimum sample size for structural equation modeling at 150 (Bentler and Chou, 1987). Other put it at 200-500 or at least 200 (Celik and Yılmaz, 2013). Huber (2014) stated that the rule of thumb is to have more than 200 observations but added that 100 observations can be adequate. The ratios of observations to free parameters frequently encountered are 5:1 up to 20:1.

Scholars used different sample sizes in studies where countries were the unit of analysis. Langbein and Knack (2010) used a sample of 216 countries to validate the indexes of worldwide governance indicators (WGI) using path, factor, and confirmatory factor

analyses. Wang, Liu, Xiong, and Song (2019) used a sample of 138 countries to study the moderating role of governance environment on the relationship between risk allocation and private investment. Nokelainen showed that smaller numbers of (n=108) randomized were acceptable. Subsamples of approximately 20% of cases can also be used in structural equation modeling (SEM). In the study on the the contribution of public libraries to countries' economic productivity, Liu (2004) used 61 countries in the path analysis study. Muchdie (2017) studied economic growth and happiness using a cross-nation path analysis model. Data on the happiness index were from 156 countries, data on economic growth from 178 countries, and data on human development indexes were from 155 countries. They solved the problems of missing data by deleting countries with incomplete data. The final sample on happiness, economic growth, and human development had 124 countries. They reported the results by grouping the countries into low, medium, and high-income categories. There were groups of 9, 11, 12, 14, 15, 17, 20, and 41 countries. Diaz (2007) used a sample of 73 countries to analyze the effect of remittances on economic growth using path analysis. Kock and Gaskins (2014) used 24 Latin American and 23 sub-Saharan African countries in their study on the mediating role of voice and accountability in the relationship between internet diffusion and government corruption in those regions from 2006-2010. They multiplied the 47 countries by 5 to get a sample size of 235 data points. Thus, the sample of 100 observations can be used in this study. The subsamples are shown in Table 11.

Table 11: Country Income Classification

Level of Development	Low-Income Economies ($1,025 or less)	Lower-Middle-Income Economies ($1,026 to $4,035)	Upper-Middle-Income Economies ($4,036 to $12,475)	High Income Economies (>$12,475)
Countries	1. Afghanistan 2. Benin 3. Burkina Faso 4. Burundi 5. Chad 6. Congo, Dem. Rep. 7. Eritrea 8. Ethiopia 9. Guinea 10. Haiti 11. Madagascar 12. Malawi 13. Mali 14. Mozambique 15. Niger 16. Rwanda 17. Senegal 18. Sierra Leone 19. Somalia 20. Tanzania 21. Togo 22. Uganda 23. Zimbabwe	1. Armenia 2. Bangladesh 3. Cambodia 4. Cameroon 5. Côte d´Ivoire 6. Djibouti 7. Egypt, Arab Rep. 8. Ghana 9. Guatemala 10. Honduras 11. India 12. Indonesia 13. Kenya 14. Kosovo 15. Kyrgyz Republic 16. Lao PDR 17. Moldova 18. Mongolia 19. Morocco 20. Myanmar 21. Nicaragua 22. Nigeria 23. Pakistan 24. Papua New Guinea 25. Philippines 26. Sri Lanka 27. Sudan 28. Tajikistan 29. Tunisia 30. Ukraine 31. Vietnam 32. Zambia	1. Albania 2. Algeria 3. Angola 4. Argentina 5. Azerbaijan 6. Bosnia & Herzegovina 7. Belarus 8. Botswana 9. Brazil 10. Bulgaria 11. China 12. Colombia 13. Costa Rica 14. Dominican Republic 15. Ecuador 16. Gabon 17. Georgia 18. Iraq 19. Jamaica 20. Jordan 21. Kazakhstan 22. Lebanon 23. Macedonia, FYR 24. Malaysia 25. Mauritius 26. Mexico 27. Montenegro 28. Panama 29. Paraguay 30. Peru 31. Romania 32. Russian Federation 33. Serbia 34. Thailand 35. Turkey	1. Chile 2. Croatia 3. Estonia 4. Hungary 5. Korea Rep 6. Latvia 7. Lithuania 8. Poland 9. Portugal 10. Slovak Republic

Table 11 shows the list of countries based on income level for the year 2017. Countries are classified into four main groups: low-income economies, lower-middle-income economies, upper-middle-income economies, and high-income economies. Of the 102 economies, 23 countries are low-income economies; 32 are lower-middle-income economies; 35 are upper-middle income economies; and 10 are high-income economies. The income level represents the gross national income (GNI) per capita. The lowest GNI in Table 11 is $570 for Afghanistan. The highest GNI is $27,000 for South Korea. Except South Korea, no other country has $20,000 GNI. The GNI for the 10 high-income countries in Table 11 is slightly above the threshold.

Procedures

The dissertation examines multiple relationships between three sets of factors: Country governance factors, PPP governance factors, and PPP outcome factors. PPP governance data are gathered from the *Procuring Infrastructure Public-Private Partnerships 2018 report*, downloaded from the World Bank website (See the World Bank, 2018a). Three types of data are extracted from the report. First, the data for the main stages of PPP governance including PPP preparation, PPP procurement, and contract management were collected. The report rates each of the stages 0 to 100 per country. Second, each of the main stages has subcategories that are rated in the reports. There is a total of 41 subcategories. Scores of 1, 0.5, and 0.25 are assigned to each of the subcategories. The system of rating is too specific, but the details are irrelevant for this study. For example, a subcategory may be rated 0.5 because a country does not fully enforce the practice or subcategory. Furthermore, no specific method was used to show how the sub-scores sum up to an aggregate score in the main stages. Therefore, when collecting the data for the subcategories, any “Yes” answer is recoded 1 and any “No” answer is recoded 0. Third, the gross national income per capita

(GNI) per country is also extracted from the report. The data are reported in thousands of dollars. The three types of data are copied and pasted in an excel spreadsheet.

PPP outcome data were extracted from the independent evaluators group (IEG). The excel version of the project performance ratings data was downloaded from the IEG website (see IEG, 2019a). The IEG World Bank Project Performance Ratings Codebook was also downloaded and served as a guide for understanding the data (IEG, 2019a). The data were filtered to isolate transportation projects. For each country, there were several projects that were executed over several years. The study focused on projects that were more recently executed for each country. That is because the projects were awarded at different times. Thus, projects for countries were identified by the closing date of the project, which is usually the most recent date and year. Once the project for each country was identified, values were assigned to the Likert scale items. The responses on the performance on each project were "highly satisfactory, satisfactory, moderately satisfactory, moderately unsatisfactory, and unsatisfactory, highly unsatisfactory." Each of the scale items were then assigned the corresponding value from 6 to 1; 6 being the highest score and 1 being the lowest score. Countries that did not contain data on transportation projects were excluded.

Country governance data were extracted from the worldwide governance indicators file. The data were downloaded in excel version from the World Bank data catalog (See the World Bank, 2019b). The file contained estimates of six good governance indicators for all countries over several decades. The indicators were rated (-2.50 to 2.5). The 2017 estimates were reported in the excel spreadsheet along with the PPP governance and PPP outcome data. Only countries that had PPP governance data, PPP outcome data, and country governance data were retained.

Two control variables were included in the dataset: The GNI and democracy. The GNI was reported from the *2018 procuring infrastructure public-private partnerships.* The

democracy score is obtained from the Freedom House, which reported the freedom scores for countries (Freedom House, 2017). The score is an aggregate of the political liberties scores and civil liberties scores.

Missing Data

Of 135 countries for which data on PPP governance were collected, 35 countries were removed from the study because those countries had missing data when matched with the PPP outcome dataset from which the endogenous variables were drawn. Thus, some countries that had PPP governance scores had no data on PPP outcome for transportation projects. When no data existed for those countries, they were noted as "Not rated." Thus, while country governance and PPP governance had larger available observations, the number of observations was reduced to correspond to the number of countries which had available PPP outcome data. In short, the number of observations was narrowed as a result of matching across all three types of datasets.

Data Transformation

For the mediator, the study used three main categories which were rated 0 to 100. The subcategories were dichotomous, with "yes or no" questions. These elements were recorded in the study as 1 for "yes" and 0 for "no." For the country governance scores, no changes were made to the scores which initially ranged from (-2.5) to (+2.5). As for the PPP outcome, the data were rated from "highly satisfactory" to "highly unsatisfactory" with a maximum of 6 rating in the scale. The data were recoded 6 for "highly satisfactory" and 1 for "highly unsatisfactory."

Limitation of Data

There are some limitations to the use of data. For the mediator variable, PPP governance, data exist for 135 countries collected for the year 2017, which limits the number of countries that could be used in the study. Furthermore, not all the 135 countries had data

reported across both the exogenous and endogenous variables. The sample is finally narrowed down to 100 countries. Thus, the number of observations is relatively low. However, considering that the total number of countries is 189, and that the data on the mediator were collected for 135 countries, the sample size of 100 is reasonable.

A second limitation is that the data for the mediator is available for only the year 2017. That is because the data collection for PPP governance started in 2015 with a pilot study of 10 countries followed by a 2016 assessment on 82 countries (The World Bank, 2018a). The 2017 assessment covered 135 countries. The 2017 assessment of 135 countries has the largest number of countries ever covered on PPP governance. The newness of the collection of data on PPP practices explains the limited number of countries covered.

Methods of Analysis

Mediation Analysis

A mediation analysis is an analysis where an exogenous variable affects an endogenous variable, not directly but rather through an intervening process captured by the endogenous mediator variable (Iacobucci, 2008). Baron and Kenny (1986), Iacobucci (2008), and Kenny (2018) argued that four steps or conditions must be met. The researcher must be able to show that

1. the causal variable is correlated with the outcome
2. the causal variable is correlated with the mediator
3. the mediator affects the outcome variable
4. M (mediator) completely mediates the X-Y relationship.

Acock (2013) argued that contrary to early requirements, recent models of mediation do not require the existence of correlations. Iacobucci (2008) added that only partial mediation is reached if only the first three steps are supported. In addition, the effect of the

exogenous variable (X) directly on the endogenous variable (Y) becomes significantly smaller in size relative to the effect size in the second equation (Iacobucci, 2008).

According to Kenny (2018), the effects of the mediational model can be estimated using multiple regressions, ordinary least squares (OLS), logistic regression, multilevel modeling, and structural equal modeling (Kenny, 2018). Baron and Kenny (1986) and Acock (2013) suggest estimating three regression equations for testing the mediating role of a variable. First, one should regress the mediator on the exogenous variable. Second, one should regress the endogenous variable on the exogenous variable. Third, one should regress the endogenous variable on both the exogenous variable and on the mediator (Baron and Kenny, 1986).

Kenny's (2018) approach is relevant for this dissertation because it shows that one does not need to necessarily run a single mediation model with SEM. Kenny's (2018) approach showed that by running the correct models using the correct variables, one is able to determine the effect of a mediator. As stated earlier, the variables used in this dissertation are ordinal, dichotomous, interval, and continuous. The data therefore violate the assumptions of normality required for structural equation modeling with an endogenous variable, a mediator, and an exogenous variable. Again, multivariate regression appeared as the correct methods to test the data. However, when one is faced with the challenge of running a multivariate ordinal logistic regression, the alternative is to use the generalized version of structural equation model known as GSEM. GSEM is useful to run sets of equations with variables including any data type. The study uses a GSEM because the endogenous variable outcome is composed of ordinal variables. The GSEM method allows the use of ordinal, continuous, categorical and interval data. Several exogenous variables can be entered simultaneously.

Following Kenny's (2018) approach, this dissertation explores the mediating role of PPP governance on the relationship between country governance and PPP outcome using

regression. The mediation claim is reached by comparing its results with sequential analyses. It is required to identify the direct relationship between country governance and PPP outcome. Following Kenny's approach means that three main models will be run. First, the influence of country governance on PPP outcome is tested. The main hypothesis is:

H1: Country governance has a positive influence on PPP outcome.

> ***Equation 1****: PPP outcome = f* ((voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, control of corruption) + (GNI, democracy)).

Second, the relationship between country governance, and the mediator, PPP governance is tested. The main hypothesis tested is:

H2: Country governance has a positive influence on PPP governance. The following sub-hypotheses are tested using the GSEM regression.

H2a) Country governance has a positive influence on PPP governance (main variables)

H2b) Country governance has a positive influence on PPP preparation (subcategories)

H2c) Country governance has a positive influence on PPP procurement (subcategories)

H2d) Country governance has a positive influence on contract management (subcategories)

> ***Equation 2:*** *PPP governance = f (*(voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, control of corruption) + (GNI, democracy)).
>
> ***Equation 3:*** *PPP governance (PPP preparation, PPP procurement, contract management) = f (*(voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, control of corruption) + (GNI, democracy)).
>
> ***Equation 3a:*** *PPP governance (subcategories of PPP preparation) = f (*(voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, control of corruption) + (GNI, democracy)).
>
> ***Equation 3b:*** *PPP governance (subcategories of PPP procurement) = f (*(voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, control of corruption) + (GNI, democracy)).
>
> ***Equation 3c:*** *PPP governance (subcategories of PPP contract management) = f (*(voice and accountability, political stability and absence of violence, government

effectiveness, regulatory quality, rule of law, control of corruption) + (GNI, democracy)).

Third, the relationship between PPP governance and PPP outcome is tested. The main hypothesis is:

H3: PPP governance has a positive influence on PPP outcome.

The following sub-hypotheses are tested using the GSEM regression.

H3a: PPP governance has a positive influence on PPP outcome (Main variables)

H3b) PPP preparation has a positive influence on PPP outcome.

H3c) PPP procurement has a positive influence on PPP outcome.

H3d) Contract management has a positive influence on PPP outcome.

The end goal was to evaluate whether PPP governance mediates the relationship between country governance and PPP outcome. Thus, the role of the mediator PPP governance on the relationship between country governance and PPP outcome was determined using the results from the three previous models. The complex models run in STATA (See Table 12) yielded some results that allow for the analysis of the multiple relationships between the endogenous, exogenous, and mediator variables. The goal was to determine the mediating role of PPP governance, hence:

H4: PPP governance mediates the relationship between PPP country governance and PPP outcome.

To determine the mediating role, it becomes necessary to set the following sub-hypotheses.

H4a: PPP governance mediates the relationship between PPP country governance and PPP outcome (Main variables).

H4b) PPP preparation mediates the relationship between PPP country governance and PPP outcome.

H4c) PPP procurement mediates the relationship between PPP country governance and PPP outcome.

H4d) Contract management mediates the relationship between PPP country governance and PPP outcome.

Hypotheses 1, 2 and 3 are examined for each of the income level groups. The fourth hypothesis is not tested within the income level groups because of limited sample for examining the mediating role of PPP governance.

Multivariate Regression

The multivariate regression is "a kind of structural model in which each member of a set of observed endogenous variables is a function of the same set of observed exogenous variables and a unique random disturbance term" (StataCorp, 2019, p. 653). In a multivariate regression, the disturbances are correlated. It is important to note that multivariate is different from multilevel structural equation modeling. In effect, multilevel structural equation modeling refers to "the simultaneous handling of group-level effects, which can be nested or crossed" (StataCorp, 2019, p. 313). With the multilevel modeling, the researcher used subjects are nested in subgroup, and that subgroup itself is nested in a larger group. An example of a multilevel modeling would be study where the researcher considers students as subjects nested into classrooms, classrooms nested into schools, and stated nested into states.

Because different measurements including binary and ordinal variables are used, only the generalized structural equation modeling (GSEM) could be used to test the relationship between the exogenous, mediator endogenous, and endogenous variables. A total of four models were tested. The models are displayed in Table 12. With GSEM, the measurements can be continuous, binary, count, categorical, ordered, fractional, and survival times (StataCorp, 2019). Generalized linear response variables allow fitting logistic, probit, Poisson, multinomial logistic, ordered logit, ordered probit, beta, and other models

(StataCorp, 2019). The multivariate ordinal logit regression was used to test Model 1 and Model 3 because the endogenous variables (see Table 12) were ordinal. The subcategories of the mediator variable were binary variables, which called for the use of the Bernoulli (logit) distribution. Two continuous control variables, including democracy and GNI, were included in all models to assess whether they affected the endogenous variables (See Table 12).

Table 12: Models for Testing Hypotheses

Models	Model 1	Model 2(a, b, c, d)	Model 3 (a, b, c, d)	Model 4 (a, b, c, d)
Purpose	*Influence of country governance on PPP outcomes*	*Influence of country governance on PPP governance*	*Influence of PPP governance on PPP outcome*	*Mediating role of PPP governance*
Hypotheses	H1	H2	H3	H4
Endogenous variables	- Achieved objectives - Quality at entry - Quality of supervision - Bank overall performance - Implementing agency performance - Government compliance - Borrowing government performance	- PPP preparation, PPP procurement, PPP contract management - Subcategories of PPP preparation - Subcategories of PPP procurement - Subcategories of contract management	- Achieved objectives - Quality at entry - Quality of supervision - Bank overall performance - Implementing agency performance - Government compliance - Borrowing government performance	- PPP outcome and PPP governance (see Model 1, 2, and 3).
Mediating variables	NA	NA	NA	PPP governance
Exogenous variables	- Voice and accountability - Political stability - Government effectiveness - Regulatory quality - Rule of law - Control of corruption	- Voice and accountability - Political stability - Government effectiveness - Regulatory quality - Rule of law - Control of corruption	- PPP preparation, procurement, contract management - Subcategories of PPP preparation - Subcategories of PPP procurement - Subcategories of contract management	- Country governance and PPP governance (See Model 1, 2, and 3).
Control variables	- Score of democracy - Gross National Income per capita (GNI)	Score of democracy - Gross National Income per capita (GNI)	Score of democracy - Gross National Income per capita (GNI)	- Score of democracy - Gross National Income per capita (GNI)
Analysis method	- Multivariate ordinal logistic regression (GSEM)	- Multivariate multiple regression - Multivariate logistic regression (logit).	- Multivariate ordinal logistic regression (Bernouli, logit)	- Multivariate multiple regression - Multivariate ordinal logistic regression (logit).
Sample size	100	100	100	100

Table 12 displayed the models and the corresponding endogenous, exogenous, mediator variables, and the control variables. Table 12 also showed the methods that are used to analyze the data. The sample size is also provided.

Data Summary

The exogenous variable, country governance, comprised the observed variables "voice and accountability, political stability, government effectiveness, control of corruption, rule of law, and regulatory quality". "PPP governance" comprises the observed variables "preparation (Prep), procurement (Proc), and contract management (Mgt)." The PPP governance comprises 34 binary variables. The summary of the 34 binary variables is provided in Table 14 and have the value 0 and 1. "PPP outcome" comprises the observed variables "achieved objectives (Obj), quality at entry (QAE), quality of supervision (QOS), the world bank overall performance (BOP), implementing agency performance (ImpAg), government compliance (GovPerf), borrowing government overall performance (BorOp". The summary of the data is displayed in Table 13.

Table 13: Data Summary

Variable	Obs	Mean	Std. Dev.	Min	Max
Levels	100	2.32	.9415225	1	4
PPP preparation	100	47.87	21.13433	8	92
PPP procurement	100	61.06	18.24791	7	95
PPP contract management	100	53.82	16.51041	9	88
Voice and accountability	100	-.3485287	.7970292	-2.165193	1.213141
Political stability	100	-.4235517	.8517651	-2.780772	1.585588
Government effectiveness	100	-.2712166	.7486493	-2.055587	2.205368
Regulatory quality	100	-.2151143	.7438809	-2.195756	2.115007
Rule of law	100	-.3552316	.6946736	-1.689727	1.822819
Control of corruption	100	-.4275446	.6723603	-1.544762	2.133488
Achieved objectives	100	3.76	1.280152	1	6
Quality at entry	100	3.63	1.307747	2	6
Quality of supervision	100	4	1.206045	2	6
Overall Bank performance	100	3.8	1.206045	2	6
Implementing agency	100	3.69	1.308056	2	6
Government performance	100	3.52	1.344499	1	6
Overall borrower performance	100	3.59	1.256056	1	6
Gross national income	100	4964.23	5047.841	280	27600
Democracy score	100	52.32	24.91719	3	97
Central budgetary authority	100	.88	.3265986	0	1
Fiscal treatment	100	.37	.4852366	0	1
PPP prioritization	100	.86	.3487351	0	1
Economic assessment	100	.92	.2726599	0	1
Fiscal assessment	100	.85	.3588703	0	1
Risk identification	100	.82	.3861229	0	1
Financial viability	100	.81	.3942772	0	1
Market sounding analysis	100	.49	.5024184	0	1
Environment assessment	100	.81	.3942772	0	1
Assessment of the RFP	100	.42	.496045	0	1
Draft PPP contracts	100	.77	.4229526	0	1
Standard PPP models	100	.34	.4760952	0	1
Evaluation committee	100	.74	.440844	0	1
Public procurement notice	100	.99	.1	0	1
Foreign companies' participation	100	.97	.1714466	0	1
Minimum period	100	.93	.2564324	0	1
Tender documents	100	.94	.2386833	0	1
Clarification question	100	.95	.2190429	0	1
Prebid conference	100	.5	.5025189	0	1
Financial model	100	.49	.5024184	0	1
Treatment of sole proposal	100	.61	.4902071	0	1
Public of award notice	100	.91	.2876235	0	1
Standstill period	100	.39	.4902071	0	1
Negotiation with selected bidder	100	.58	.496045	0	1
System for implementation	100	.86	.3487351	0	1
System for tracking progress	100	.77	.4229526	0	1
Monitoring and evaluation	100	.91	.2876235	0	1

Table 13 Continued

Foreign companies' income	100	.98	.1407053	0	1
Change in structure	100	.67	.4725816	0	1
Modification/ renegotiation	100	.84	.3684529	0	1
Circumstances regulations	100	.96	.1969464	0	1
Dispute resolution	100	.99	.1	0	1
Lender's rights	100	.46	.5009083	0	1
Ground for termination	100	.9	.3015113	0	1

Table 13 shows the number of observations, the mean, the standard deviation, the minimum and maximum of each observation for each variable. The sample size comprises 100 observations or countries. The mean and the standard deviation of all the variables are presented for visualization purposes. There are six interval exogenous variables, seven ordinal endogenous variables, and three continuous mediator variables composed of 34 binary mediator variables. Considering the minimum and maximum for the mediator variables PPP preparation (Prep), PPP procurement (Proc), and PPP contract management (Mgt), the values vary greatly. Out of 100 possible points, the smallest value for PPP preparation is 8 compared to 92. The smallest for PPP procurement is seven compared to 95, and the smallest for PPP contract management is nine compared to 88 (See Table 13). For the exogenous variable, the smallest for four of the six interval variables including voice and accountability, political stability, government effectiveness, and regulatory quality is at least (-2) and the highest ranges from 1 to 2 (See Table 13). The large differences mean that there is a large deviation between the observations in the dataset, which may have caused the kurtosis and skewness in the normality results. In effect, a test of normality was run for country governance which has interval data and PPP governance which has continuous data. The results of the skewness and kurtosis test are displayed in Table 14. A non-significant Prob>chi2 at the 95 % confidence level means that the variable is normally distributed.

Table 14: Test of Normality Results

Variable	Obs	Pr (Skewness)	Pr (Kurtosis)	adj chi2(2)	Prob>chi2
Voice and accountability	100	0.7223	0.0133	5.96	0.0509
Political stability	100	0.0824	0.6118	3.37	0.1858
Government effectiveness	100	0.1062	0.3805	3.47	0.1761
Regulatory quality	100	0.0970	0.2544	4.17	0.1244
Rule of law	100	0.0110	0.3107	6.91	0.0317
Control of corruption	100	0.0003	0.0287	14.48	0.0007
PPP preparation	100	0.8917	0.0175	5.49	0.0641
PPP procurement	100	0.0207	0.7814	5.31	0.0703
PPP contract management	100	0.2419	0.9495	1.41	0.4953

Looking at the Prob>chi2 at the 95 % confidence level (See D' Agostino et al., 1990), Table 15 showed that four variables of country governance including voice and accountability, political stability, government effectiveness, and regulatory quality are normally distributed ($p>0.05$). Rule of law and control of corruption are not normally distributed. The three variables of PPP governance including PPP preparation, PPP procurement, and PPP contract management were normally distributed. Normality is required for the multivariate multiple regression, which is used to test Model 2. Despite the skewness of rule of law and control of corruption, no transformation was applied to the two variables. Instead, the robust estimation is used to remedy the violation of normality and ensure that the results are more accurate.

Measurement Validity

According to Cronbach and Meehl (1955) and Adcock and Collier (2001), measurement validity occurs when the operationalization and the scoring of cases adequately reflect the concept the researcher seeks to measure. It is an examination of the relation among scores, indicators, and the systematized concept (Adcock and Collier, 2001). One of the types of validity is content validity or the adequacy of content (Adcock and Collier, 2001), which is to ensure that the indicator adequately capture the full content of the systematized concept. On the one hand, the researcher asks whether key elements were omitted from the indicator. As far as this is concerned, no key element is omitted from this dissertation research. There were no omissions from the country governance indicators. On the other hand, the researcher asks whether certain elements are inappropriately included in the indicators. For the PPP governance, the unsolicited proposals section was omitted because the section is not considered a stage of the PPP process. For the subcategories, it appears that it would be inappropriate to include some practices in the models either because they were repetitive, or they were vague. The interpretation of the results of these variables would not point to clear concluding points. The evaluation of proposals according to criteria (Propls) was automatically omitted by STATA and was removed because of collinearity. The availability of various procedures (AvailProc) is not included because the question is not specific about the type of procedures. Even if the variable is significant, its relevance to the conclusions would still be vague. The practice on the specification of prequalification/shortlisting criteria of the tender documents available to all the bidders was excluded because it was not expected to be enforced by all countries. The notification of all bidders (Notfictio) is not included because there was a previous question on the publication of award notice. The direct negotiation (not discretionary) and the publication of contract (Pblctio) were removed from the data because they were repetitive. On the PPP preparation subcategories, the comparative

assessment even though important, was removed because it was less relevant to the PPP governance. It was unrelated to the rest of the subcategories. This may be related to the fact that the practice was newly added.

Table 15: Correlation Matrix for the Exogenous Variables

Continuous and Interval variables	Voice and accountability	Political stability	Government effectiveness	Regulatory quality	Rule of law	Control of corruption	PPP preparation	PPP procurement	PPP management
Voice and accountability	1.0000								
Political stability	0.5065	1.0000							
Government effectiveness	0.5824	0.6760	1.0000						
Regulatory quality	0.6787	0.6618	0.9197	1.0000					
Rule of law	0.6339	0.6949	0.9257	0.9005	1.0000				
Control of corruption	0.5715	0.6475	0.8798	0.8445	0.9258	1.0000			
PPP preparation	0.3003	0.1350	0.2594	0.2585	0.2355	0.2093	1.0000		
PPP procurement	0.4047	0.2269	0.3921	0.3995	0.3997	0.3728	0.5202	1.0000	
PPP management	0.1703	0.1142	0.1799	0.1838	0.1799	0.1914	0.5297	0.4364	1.000

One of the most important tests of the measurement validity is correlation (Cronbach and Meehl, 1955). Therefore, a correlation test was run to determine the construct validity of the six exogenous variable of country governance (See Table 15). To determine the measurement validity, the convergent validity must be tested first. There is convergent validity when the scores of the systematized concept produced by the indicators of that same concept are empirically associated (Adcock and Collier, 2001). In other words, the six variables that compose country governance including voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption are included in the correlation test. Stronger associations between those variables constitute evidence that the six variables are convergent and measure country governance. The results of the correlation matrix are displayed in Table 15. The relationships between the six exogenous variables in Table 15 range moderately correlated (r=0.51) to highly correlated (r=0.92). This means that that there is a good convergent validity and the variables are a good measure of country governance. The convergent validity for the three variables of PPP governance was also tested. The results are displayed in Table 15. The relationship ranged from weakly correlated (r=0.44) to moderately correlated (r=0.53). This means that the evidence of convergent validity is weak, and the variables do not adequately measure PPP governance. However, the data summary showed there were larger differences between the observations. The difference may have contributed to the weak correlation between the variables.

Furthermore, discriminant validation is used to determine the construct validity. Discriminant validation is when the indicators of a systematized concept have a weaker association with the indicators of a second or different systematized concept, thus discriminating the second group of indicators from the first group (Cronbach and Meehl, 1955; Adcock and Collier, 2001). Weaker associations mean that there is discriminant

validity between the two concepts. To test for discriminant validity, the correlation between the six variables of country governance and the three variables of PPP governance were compared. The results in Table 15 showed that the relationships between the variables are weak, which confirmed the strength of discriminant validity.

A Spearman's correlation test was run to assess the relationship between the endogenous variables (PPP outcome variables). There was a strong relationship (from r=0.5 to r=0.8) between the variables, hence the monotonic relationship required for the use of Spearman's correlation was met. Overall, the results of the measurement validity showed that the operationalized variables could be used to test the hypotheses set in the study. The convergent validity was moderately strong. The discriminant validity appeared very strong as well. The operationalized variables were run using the multivariate regression. The results are presented and analyzed in Chapter IV.

CHAPTER IV

RESULTS AND ANALYSIS

This "results and analysis" section presents the data description and data summary as well as the measurement validity of the data. The results of the hypotheses and models are presented and analyzed in four different steps followed by a summary of the key results. This was done for the entire sample of 100 countries and for the different income level groups.

Analysis: Country Governance on PPP Outcome

The first step in the mediation analysis process using regression is to test the influence of the exogenous variables on the endogenous variables. In this step, the study answered the first research question: Is there any positive relationship between country governance and PPP outcome? Thus, Model 1 tested the influence of country governance on PPP outcomes. In other words, Model 1 tested the effect of the six country governance variables on the seven variables of PPP outcome. The exogenous variables include voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. The exogenous variables are interval because they are rated from (-2.5) to (2.5). The endogenous variables include achieved objectives, quality of entry, quality of supervision, overall Bank performance score, government compliance, implementing agency performance, and overall borrower performance. Because the endogenous variables are ordinal, the multivariate ordinal logistic regression (logit) is used to test Model 1. For Model 1, the assumptions of the multivariate ordinal logistic regression include the requirement that the dependent variable must be ordinal (i.e. Likert scale data) (Statistics Solutions, 2020). In addition, the assumption that the observations must be independent from one another was met because the observations were individual countries (Statistics Solutions, 2020). The assumption that the exogenous variable must have no multicollinearity is also met as the exogenous variables as shown earlier are not too highly correlated (r=0.5 to r=0.92). Another

assumption is the use of large sample. The size of the sample was discussed earlier as being acceptable even though a larger sample would be preferred.

The results of Model 1 are reported in exponentiated coefficients and are displayed in Table 16. The exponentiated coefficients are interpreted as odds ratios (See StataCorp, 2019). An exponentiated coefficient or odd ratios (OR) of more than 1 (OR>1) means the outcome is more likely to occur whereas an odd ratio less than 1 (OR<1) means that the outcome is less likely to occur. The exogenous variables are interval (data) and the results are analyzed and interpreted accordingly.

Table 16: Results of Model 1-Country Governance on PPP Outcome

Country governance	On PPP outcome						
	Objective	Quality at entry	Quality of supervision	Bank overall performance	Implementing agency	Government performance	Borrower overall performance
Voice & Accountability	0.3748911* (0.1627215)				0.4310826^{+} (0.170481)		
Political stability	2.460341* (0.796172)	2.912011* (0.9593568)	2.064789* (0.6535593)	2.514281* (0.8041818)	2.900966* (0.9555848)		2.648148* (0.8490881)
Regulatory quality	0.1689821* (3.866768)						
Government effectiveness	5.049964* (0.1407372)						
Rule of Law							
Control of corruption							

*indicates significant at the 95% confidence level. $^{+}$ indicates robust error significance.

The statistical significance was determined using both the default standard errors estimation and the robust estimation. The standard errors estimation test showed that country governance factors had a significant effect on the factors of PPP outcome (See Table 16). The exponentiated coefficients of political stability (OR= 2.46, 95% CI: 1.30-4.64, p=0.005) and government effectiveness (OR=5.05, 95% CI: 1.12-22.65, p=0.034) had a significant positive effect on achieved objectives. This means that an increase in the scores for political stability and regulatory quality increases the probability of highly satisfactory achieved objectives. Political stability also had a positive effect on quality at entry (OR=2.91, 95% CI: 1.526-5.55, p=0.001), quality of supervision (OR=2.064, 95% CI: 1.11-3.84, p=0.022), Bank overall performance (OR=2.51, 95% CI: 1.34-4.70, p=0.004), implementing agency performance (OR= 2.90, 95% CI: 1.52-5.53, p=0.001), and borrowing country overall performance (OR=2.64, 95% CI: 1.41-4.96, p=0.002). That means that the increase in the political stability in a country increases the probability that the scores of most of the PPP outcome factors will be highly satisfactory for quality at entry, quality of supervision, the Bank overall performance, and the borrowing country overall performance. Voice and accountability (OR= 0.374, 95% CI: 0.16-0.87, p=0.024) and government effectiveness (OR=0.1689821, 95% CI: 0.03-0.86, p=0.033) had a negative effect on achieved objectives. This means that an increase in the scores of voice and accountability and government effectiveness decreases the probability of achieving highly satisfactory results.

With the robust test, the effect of voice and accountability (OR=0.43, 95% CI: 0.19-0.93, p=0.033) on the implementing agency performance (ImpAg) became significant. However, its effect was negative, meaning that an increase in the scores of voice and accountability decreases the probability of increasing the scores of the implementing agency performance. The control variable, gross national income per capita (GNI) had a weak positive relationship with quality of supervision, government effectiveness, and borrowing

country overall performance with an OR= 1.00, 95% CI: 1.00-1.00, p=0.007 for all the significant effects.

Thus, country governance had a significant effect on PPP outcome via political stability, regulatory quality, voice and accountability and government effectiveness. Hypothesis 1 was supported by the variable of political stability via its positive effects on quality at entry, the quality of supervision, the Bank overall performance, and the borrowing country overall performance and by regulatory quality via its positive effect on achieved objectives. In other words, two country governance variables had a positive effect on five PPP outcome variables, which is a significant result.

In terms of substantive significance, the World Bank and member countries should focus on improving the political stability and the quality of regulations in the recipient countries to increase the outcome of PPP projects. Hypothesis 1 was not supported for voice and accountability and government effectiveness because of the negative direction of the effects, which is contrary to the expectations. This also means that too much focus on voice and accountability and government effectiveness may produce the opposite effect.

Another key remark is that political stability had the most recurrent influence on the outcome of PPP governance from the perspective of both the World Bank and the recipient countries. Political stability facilitates the effective execution of the tasks that fall under the Bank's responsibilities. Furthermore, political stability improves the performance of recipient countries in PPP projects. Surprisingly, voice and accountability, which refers to freedom of expression, of association and of the media not only negatively impact the performance of the implementing agencies in recipient countries but also the objectives of PPP projects. Another surprising result is the lack of significant impact of control of corruption on the outcome of PPP. While step 1 consisted of testing the H1, the results will be compared with the results in step 2 and step 3 presented in later sections.

Analysis: Country Governance on PPP Governance

Step 2 of the mediation analysis consists in assessing the effect of the exogenous variable on the endogenous mediator variable. In this step, the study answered the second research question: Is there any positive relationship between country governance and PPP governance? Step 2 includes Model 2a, which tested the effect of country governance variables on the three continuous mediator endogenous variables. The continuous variables are considered endogenous in Model 2. Therefore, the multivariate multiple regression is used, and the normality of data is assumed. The Prob>chi2 showed that the three main endogenous mediator variables PPP preparation, PPP procurement, and PPP contract management are normally distributed. The Prob>chi2 showed that the six exogenous variables except the rule of law (RuleL) and control of corruption (Concor) were normally distributed. The skewness and kurtosis became worse when the two variables were log-transformed. The violation of the normality assumption was in part due to the large disparities between the scores since some countries scored very high while others scored extremely low. Nonetheless, the multivariate regression using the initial normality results.

In addition, Model 2b, Model 2c, and Model 2d assess the effect of country governance on the subcategories of PPP preparation, PPP procurement, and contract management, respectively. Since all the variables in Model 2b, Model 2bc, and Model 2d are binary, the multivariate Bernouli (logit) regression is used to test all three models. For Model 2b, Model 2bc, and Model 2d, certain assumptions had to be met. The endogenous variables in these models are binary (i.e. 1=yes and 0=no). In addition, the assumption that the observations must be independent from one another was met because the observations were individual countries. The assumption that the exogenous variable must have no multicollinearity is also met as the exogenous variables as shown earlier are not too highly correlated (r=0.5 to r=0.92). Another assumption is the use of large sample. Again, the size of

the sample was discussed earlier as being acceptable even though a larger sample would be preferred.

Considering the sample size, GSEM does not allow fitting more than 12 variables at a time in addition to the two control variables. As a result, the binary subcategory variables were divided into three groups or models.

Country Governance of PPP Governance: Main Categories.

When the multivariate regression was run for Model 2a, none of the six country governance variables had a significant effect on the three continuous PPP governance variables (Model 2a). Only the control variable democracy had a significant effect on PPP preparation, PPP procurement, and PPP contract management at $P<0.05$, and negatively affected all three variables. Therefore, the hypothesis (H2a) that country governance had a positive influence on the three continuous PPP governance variables was not supported. This is a surprising finding since countries with good governance are expected to yield better outcomes. The higher the scores of the PPP preparation, PPP procurement, and contract management, the better the outcome is expected to be. Their lack of significance or opposite effects may mean that rating the stages of PPP do not matter. Model 2b, 2c, and 2d were run to check if country governance had a positive influence on the subcategories of the PPP governance.

Country Governance on the Subcategories of PPP Preparation

For the Bernoulli logit regression (See Model 2b), government effectiveness (OR= 16.44, 95% CI:0.97-278.76, p=0.052) had a positive significant effect on PPP prioritization, meaning that for a 1-point increase in the score of government effectiveness, the probability of ensuring consistency in the PPP prioritization gets higher. Voice and accountability had a significant effect on risk identification (OR=0.24, 95%CI: 0.056-1.01, p=0.052) and economic analysis assessment (OR=0.10, 95% CI: 0.01-1.03, p=0.054) and affected the two

variables negatively (See Table 17). In other words, a 1-point increase in the score of voice and accountability reduces the likelihood that the score of risk identification and economic analysis will be enforced. When the score of political stability (OR=0.26, 95% CI: 0.07-0.88, p=0.031) increases by a 1-point, the likelihood that the PPP prioritization will not be enforced becomes higher. With the robust test, voice and accountability (OR=0.33, 95% CI: 0.12-0.86, p=0.024) and political stability (OR=0.50, 95%CI: 0.26-0.95, p=0.036) became statistically significant, affecting negatively the assessment of RFP and the environmental impact assessment respectively (See Table 17). In other words, the probability that a 1-point increase in voice and accountability and political stability will lead to assessment of RFP and the assessment of environmental impact gets lower respectively. The GNI per capita had a significant positive effect when the draft PPP contract was included in the RFP. Democracy had a significant positive on economic analysis, risk identification, and assessment of RFP. Overall, the hypothesis (H2b) that country governance has a positive influence on the PPP preparation variables is supported by the relationship between government effectiveness and the PPP prioritization only.

Table 17: Results of Model 2b-Country Governance on PPP Preparation Subcategories

Country governance	On PPP Preparation (practices)				
	PPP Prioritization	Economic assessment	Risk identification	Environmental assessment	Assessment of the RFP
Voice and accountability		0.1022425* (0.1209741)	0.2403478* (0.1765812)		0.3287448* (0.1917574)
Political stability	0.2581404* (0.1625047)			0.5062112^{+} (0.1639197)	
Regulatory quality					
Government effectiveness	16.44632* (23.74917)				
Rule of law					
Control of corruption					

*indicates significant at the 95% confidence level. $^{+}$ indicates robust error significance.

Practically, effective governments are more likely to consider the consistency between their PPP prioritization and their investment prioritization. However, having one positive result out of 12 possible variables means weak results for Model 2b. In fact, most of the significant effects were negative, and therefore produced the opposite direction. For example, increasing the voice and accountability and political stability and lack of terrorism reduce the probability that countries will conduct risk identification, economic assessment, environment impact assessment, assessment of RFP, and ensure PPP prioritization. This calls for a lot of caution when trying to focus on the good governance factors to enforce the practices of PPP governance. It was also surprising to note that good governance features such as voice and accountability, political stability and lack of terrorism, government effectiveness, regulatory quality, rule of law and control of corruption did not influence the enforcement of PPP practices. In other words, a country with political stability may not conduct market sounding

analysis. One explanation is that market sounding analysis is already being done or it is a far-fetched demand from the reality of PPPs or the PPP process does not allow the necessary time for such assessment to take place.

Country Governance on the Subcategories of PPP Procurement

For Model 2c, voice and accountability had a significant positive effect on the minimum period to submit bid (OR=196.32, 95%CI:2.33-16512.32, p=0.020) and the issuance of procurement notice (OR=7.69e+13, 95%CI: 9.40e+11-6.30e+15, p=0.000), meaning that a 1-point increase in the scores of voice and accountability and government effectiveness increases the probability of respecting the 60-day minimum period to submit bids. Government effectiveness had a significant positive effect on the minimum period to submit bid (OR=3892.88, 95%CI:6.09-2485958, p=0.012) and the issuance of procurement notice (OR=2.32e+42, 95%CI:= 2.11e+39-2.55e+45, P=0.000). This means that countries increase their score of government effectiveness by 1 point were more likely to meet the 60-day minimum period to submit bids. The rule of law (OR=7.95e+16, 95% CI: 4.27e+11-1.48e+22, p=0.000) became statistically significant and positively affected the issuance of procurement notice. This means that a 1-point increase in the score of the rule of law reduces the probability that procurement notice will be issued. In terms of practical significance, countries that want to meet the minimum period of 60 days and publish the procurement notice should seek to improve the scores in voice and accountability, government effectiveness, and rule of law.

On the opposite hand, countries that increase their scores by 1 point in political stability (OR=0.10, 95%CI: 0.01-0.972, p=0.047) and regulatory quality (OR=0.00, 95%CI: 1.04e-06-0.24, p=0.016) were less likely to meet the 60-day minimum period to submit bids. In addition, when countries increase their score by 1 point in political stability (OR=6.67e-21, 95% CI: 9.38e-23-4.74e-19, p=0.000) and regulatory quality (OR=1.78e-51, 95% CI: 4.55e-

55-6.99e-48, p=0.000), the probability that a procurement notice will not be issued gets higher (See Table 18). Political stability (OR=0.1322608, 95% CI: 0.02-0.72, p=0.020) also had a significant negative effect on the publication of award notice, meaning that a 1point increase in political stability reduces the probability that the award notice will be published. With the robust estimation, political stability (OR=0.07, 95% CI: 0.00-0.77, p=0.030) and voice and accountability (OR=0.34, 95% CI: 0.13-0.92, p=0.033) became statistically significant, meaning that a 1-point increase in the scores of political stability and voice and accountability is less likely to lead to the elaboration of PPP stages in bid documents and an effective treatment in the case of the reception of one proposal respectively (See Table 18).

Table 18: Results of Model 2c-Country Governance on PPP Procurement

Country governance	PPP procurement (Practices)				
	Public Procurement notice	Minimum period	Tender documents	Treatment/one proposal	Publication of award notice
Voice and accountability	7.69e+13 $^{+}$ (1.73e+14)$^{+}$	196.3266* (443.955)		0.3464216^{+} (0.1727235)	
Political stability	6.67e-21^{+} (1.45e-20)	0.1030835* (0.1180633)	0.070068^{+} (0.0858838)		0.1322608* (0.1148199)
Regulatory quality	1.78e-51^{+} (7.52e-51)	0.0005098* (0.0016102)			
Government effectiveness	2.32e+42^{+} (8.29e+42)	3892.888* (12829.41)			
Rule of law	7.95e+16^{+} (4.92e+17)				

*indicates significant at the 95% confidence level. $^{+}$ indicates robust error significance.

Practically, focusing on improving the scores of political stability, regulatory quality, voice and accountability does not necessarily guarantee that the 60-day minimum period to submit bids will be met, that a procurement notice will be issued, that award notice will be published, that the elaboration of PPP stages will be included in bid documents and that sole bids will be effectively treated.

GNI had a significant positive effect on the 60-day minimum period and the negotiation with the selected bidders and a significant negative effect on the publication of award notice. Democracy had a significant positive effect on the detailing of the PPP stages in bid documents and foreign companies' participation and a significant negative effect on the publication of the procurement notice.

Country Governance on the Subcategories of PPP Contract Management

No significant results were found when Model 2d was tested using the standard error default in STATA. However, when the robust error test was applied, political stability (OR=10.32, 95% CI: 2.87-37.10, p=0.000) and rule of law (OR=531.06, 95% CI: 14.26-19772.88, p=0.001) became significant, positively affecting permission of foreign companies to repatriate income whereas voice and accountability (OR=0.33, 95% CI: 0.132-0.84, p=0.020) and control of corruption (OR=0.00, 95% CI: 2.68e-07- 0.93, p=0.48) became significant but negatively affecting permission of foreign companies to repatriate income (See Table 19). Put otherwise, an increase in the score of political stability and rule of law means that foreign companies will be permitted to repatriate income whereas an increase in the score of voice and accountability and control of corruption means that they will not. Voice and accountability (OR=3.58e+13, 4.37e+11 -2.93e+15,p=0.000), government effectiveness (OR= 2.08e+41, 95% CI: 1.89e+38-2.28e+44, p=0.000), and rule of law (2.69e+16, 95% CI: 1.44e+11-5.01e+21, p=0.000) became statistically significant and affected the dispute resolution mechanisms positively whereas political stability (OR=2.22e-20, 95% CI: 3.12e-22-1.58e-18,p=0.000) and regulatory quality (OR= 3.15e-50, 95% CI:8.05e-54-1.24e-46), p=0.000) negatively affected the dispute resolution mechanisms. This means that an increase in the score of voice and accountability, government effectiveness, and rule of law increase the performance on the dispute resolution mechanisms whereas such performance is reduced when there is an increase in the score of political stability and

regulatory quality. Regulatory quality (OR=0.05, 95% CI: 0.00-0.92, p=0.044) became significant and negatively affecting monitoring and evaluation, meaning that an increase in the score of regulatory quality reduces the performance on monitoring and evaluation. GNI per capita had a significant positive effect on ground for termination of a PPP contract and on change in the structure of the private partner (See Table 19). Democracy had a significant positive effect on monitoring and evaluation, and modification. Democracy and the GNI per capita became significant, affecting circumstances that may occur and dispute resolution mechanisms when the robust estimation was used.

Table 19: Results of Model 2d-Country Governance on PPP Contract Management

Country governance	PPP contract management (Practices)		
	Monitoring &evaluation	Foreign companies' income	Dispute resolution
Voice and accountability		0.3347652^{+} (0.1580238)	0.58e+13^{+} (8.04e+13)
Political stability		10.32645^{+} (6.738766)	2.22e-20^{+}(4.82e-20)
Regulatory quality	0.0520081^{+} (0.0762758)		3.15e-50^{+}(1.33e-49)
Government effectiveness			2.08e+41^{+} (7.42e+41)
Rule of law		531.0617^{+} (980.0946)	2.69e+16^{+} (1.67e+17)
Control of corruption		0.0005009^{+} (0.0019248)	

$^{+}$ indicates robust error significance.

In short, the hypothesis (H2d) that country governance had a positive influence on contract management subcategories was supported by the variables including political stability, rule of law, voice and accountability, and government effectiveness due to their positive effects on the permission of foreign companies to repatriate income and the dispute

resolution mechanisms. Practically, countries that are eager to guarantee permission to foreign companies to repatriate income and improve the dispute resolution mechanisms should focus on improving their score on political stability, rule of law, voice and accountability, and government effectiveness. Caution should be exercised when using voice and accountability and control of corruption to guarantee the permission to foreign companies to repatriate income and political stability. There needs to be caution when regulatory quality is used to increase the dispute resolution mechanisms.

Analysis: PPP Governance on PPP Outcome

The third step in the mediation analysis is to assess the influence of the PPP governance on PPP outcome. In this step, the study answered the third research question: Is there any positive relationship between PPP governance and PPP outcome? This step includes Model 3a, which tested the effect of PPP governance on the seven variables of PPP outcomes. In Model 3a, PPP governance is the exogenous variable and PPP outcome is the endogenous variable. PPP governance comprises two types of variables: the continuous variables composed of PPP preparation, PPP procurement, and contract management; and the binary variables composed of 34 binary variables. Thus, Model 3a is tested using the multivariate ordinal logistic regression.

First, the effect of the three continuous variables on PPP outcome is tested (Model 3a) using the multivariate ordinal logistic regression. For Model 1, the assumptions of the multivariate ordinal logistic regression include the requirement that the dependent variable must be ordinal (i.e. Likert scale data). In addition, the assumption that the observations must be independent from one another was met because the observations were individual countries. The assumption that the exogenous variable must have no multicollinearity is also met as the exogenous variables (i.e. the three main variables) as shown earlier are not too highly correlated (r=0.4 to r=0.5). Another assumption is the use of large sample. The size of

the sample was discussed earlier as being acceptable even though a larger sample would be preferred.

Second, the effect of the binary variables is tested. For the binary variables, three different models (Model 3b, Model 3c, and Model 3d) are tested. For Model 3b, Model 3c, and Model 3d, the assumptions of the multivariate ordinal logistic regression include the requirement that the dependent variable must be ordinal (i.e. Likert scale data). In addition, the assumption that the observations must be independent from one another was met because the observations were individual countries. The exogenous variable are the binary variables (i.e. 1=yes and 0=no). The size of the sample was discussed earlier as being acceptable even though a larger sample would be preferred. Considering the sample size, GSEM does not allow fitting more than 12 variables at a time in addition to the two control variables. Therefore, the binary subcategory variables have been divided into three groups. The first group constitutes the subcategories of the PPP preparation (Model 3b). The second group (Model 3c) constitutes the subcategories of the PPP procurement. The third group (Model 3d) constitutes the subcategories of the PPP contract management. The test of each model is further explained in the rest of the section. As in step 1 and step 2, the statistical significance in step 3 is determined using both the standard errors estimation and the robust estimation. The exponentiated results are reported in Table 20.

Stages of PPP Governance on PPP Outcome

With the standard errors estimation for the continuous variables (Model 3a), only procurement management (OR=0.97, 95% CI: 0.94-0.99, p=0.030) had a negative effect on quality at entry (See Table 19). Considering that an odd ratio of 1 is considered a neutral effect, the odd ratio of (0.97) means that the negative effect is negligible and translated to no effect. In other words, an increase in the scores of contract management does not influence the scores of the quality at entry. Thus, the hypothesis (H3a) that the three continuous of PPP

governance have a positive influence on PPP outcome is not supported. The results are surprising since countries that enforce the internationally recognized practices of the PPP governance should logically be able to improve their outcomes. GNI had a significant effect on achieved objectives, quality of supervision, Bank overall performance, government effectiveness, and borrowing country overall performance with an OR=1, significant at p<0.030).

Table 20: Results of Model 3a-Stages of PPP Governance on PPP Outcome

PPP governance	PPP outcome					
	Achieved objectives	Quality at entry	Quality of Supervision	Overall Bank performance	Implementing agency	Government performance
PPP Preparation		0.9700303* (0.0135735)				
PPP Procurement						
PPP management						

*indicates significant at the 95% confidence level.

Subcategories of PPP Preparation on PPP Outcome

The standard errors estimation of the binary variables showed some statistical significance on the PPP outcome variables (See Table 21). The standardization of PPP model contracts or the development of transaction documents had a significant positive effect on achieved objectives (OR= 2.37, 95% CI: 1.02-5.52, p=0.044), quality at entry (OR=3.78, 95% CI: 1.56-9.18, p=0.003), and Bank overall performance (OR=2.64, 95% CI: 1.10-6.34, p=0.029). This means that countries that standardized their PPP model contracts are more likely to increase the probability of satisfactory results on achieved objectives, quality at

entry, and Bank overall performance than those that do not. Countries that also assess their requests for proposals are more likely to increase the probability of satisfactory results on quality of supervision than those that do not. The robust estimation increased the list of expected results. For instance, the effect of fiscal affordability assessment (OR=3.43, 95% CI: 1.01-11.61, p=0.048) on achieved objectives became significant and was positive, meaning that country that carry on fiscal assessment are more likely to reach satisfactory achieved objectives. In addition, when countries conduct environment impact assessment (OR=2.26, 95%CI: 0.99-5.13, p=0.051), the probability of satisfactory score on government performance increases more than when they do not. These significant results point to the expected direction. Therefore, Hypothesis 3a (H3b) is supported by the variables including standardization of PPP model contracts, assessment of request for proposals, fiscal affordability assessment, and environmental impact assessment via their significant positive effect on achieved objectives, quality at entry, Bank overall performance, quality of supervision and government performance. This means that countries that are eager to yield satisfactory outcomes on their PPP projects should focus on those variables.

A few significant results point to the opposite direction. For example, countries that conduct risk identification are less likely to increase the probability of satisfactory results on quality at entry (OR=0.21, 95%CI: 0.05-0.78, p= 0.020), quality of supervision (OR=0.22, 95% CI: 0.05-0.87, p=0.032), and government performance (OR=0.20, 95% CI: 0.06-0.71, p=0.013) (See Table 21). Countries are less likely to increase their satisfaction level in Bank performance (OR=0.30, 0.09-0.99, p=0.050) and implementing agency performance (OR= 0.28, 95% CI: 0.08-0.98, p=0.048) when they focus on ensuring consistency between PPP prioritization and public investment prioritization than when they do not. In other words, risk identification, and prioritization of PPP do not support H3b because their effects are negative.

Table 21: Results of Model 3b-Subcategories of PPP Preparation on PPP Outcome

PPP governance	PPP outcome						
	Achieved objectives	Quality at entry	Quality of Supervision	Overall Bank performance	Implementing agency	Government performance	Overall Borrower performance
Standard PPP model	2.37538* (1.022431)	3.787213* (1.712424)		2.645445* (1.181227)		0.2069761* (0.131044)	
Fiscal assessment	3.429006^{+} (2.133992)						
Risk identification		0.211594* (0.1417968)	0.2202167* (0.154984)	0.2798681* (0.1857631)			
Assessment of the RFPs			2.611134* (1.261898)				
PPP Prioritization				0.2999283* (0.1839219)	0.2871034* (0.1808651)		
Financial viability						0.4842549^{+} 0.2251893	
Environmental assessment						2.260709^{+} (0.9466573)	

*indicates significant at the 95% confidence level. $^{+}$ indicates robust error significance.

Overall, the hypothesis (H3b) that the subcategories of PPP preparation have an influence on PPP outcome was supported. When countries enforce the internationally recognized practices, they are more likely to improve their performance in PPP projects both in terms of achieved objectives and improved effectiveness in the Bank's and the recipient countries' actions. While the standardization of PPP model contracts, the assessment of the request for proposals, the fiscal assessment, and the environment impact assessment contribute to the greater performance, it is surprising that risk identification had the opposite effect on PPP outcome. The risk identification is one of the practices that are recommended to be done before any partnership projects are implemented. It was surprising to note that the enforcement of practices such as the approval of the central budgetary authority, fiscal treatment of PPPs, financial viability assessment, and market sounding analysis did not have any influence on the outcome of PPPs.

Subcategories of PPP Procurement on PPP Outcome

The hypothesis (H3c) that the subcategories of PPP procurement had a positive influence on PPP outcome was supported. The results also showed that countries which bid documents detail the stages of the process (OR= 7.23, 95% CI: 0.98-53.00, p=0.052), those that provide clarification questions for procurement notice (OR=16.89, 95% CI:1.28 221.32, p=0.031), and those that allow negotiations with the selected bidder before contract signing (OR=2.89, 95% CI:1.11-7.52, p=0.029) are more likely to reach better satisfaction in the objectives that they seek to achieve than those that do not. The overall performance of the borrowing countries are more likely to improve for countries with detailed bid documents (OR=11.20, 95% CI: 1.32-94.74, p=0.027) and those that provide clarifications (OR=18.50, 95% CI: 0.98-349.16, p=0.052) (See Table 22). The performance of the implementing agency is more likely to improve for countries with detailed bid documents of the PPP process (OR=38.051, 95% CI: 1.72-838.96, p=0.021) (See Table 22). The robust test showed that

when foreign companies can participate in PPP bidding (OR=10.57, 95% CI: 2.15-51.89, p=0.004), the probability of satisfactory scores of Bank overall performance increases more than when they cannot.

Again, Hypothesis 3c (H3c) is supported by the variables detailed bid documents, clarification of questions, negotiation before signature, permission for foreign companies in the bidding process via their positive effects on achieved objectives, borrowing country overall performance, Bank overall performance, and performance of the implementing agency. The results of the subcategories of the procurement are very important. In terms of practical significance, it means that countries interested in achieving their objectives and increasing their performance must ensure that they have bid documents that provide details on the PPP stages. They must be forthcoming in providing clarifications and information necessary to the procurement process, conducting negotiations with the selected bidders before signing the contract, and allowing foreign companies to participate in the bidding process.

Some significant results in Model 3c were negative and did not support H3c. The results showed that countries that hold pre-bid conference were less likely to improve their scores on achieved objectives (OR=0.39, 95% CI: 0.15-0.99, p=0.048) and quality of supervision (OR= 0.32, 0.13-0.83, p=0.019) than those that do not. The publication of award notice had a negative effect on Bank overall performance (OR=0.21, 95% CI: 0.04-1.02, p=0.053) and the performance of the implementing agency (OR=0.10, 95% CI: 0.01-0.67, p=017). This means that countries that publish the award notice are less likely to improve the implementing agency performance than those that do not. The publication of award notice (OR= 0.10, 95% CI: 0.01- 1.01, p=0.052) also became significant but negatively affecting the quality of supervision, meaning that countries that consider the publication of award notice are less likely to increase the probability of satisfactory results on the quality of supervision.

Countries with qualified evaluation committee members (OR=0.32, 95% CI: 0.11-0.90, p=0.031) are less likely to improve their Bank overall performance scores than those without. Countries that issue public procurement notice of the PPP (OR=0.00, 0.00- 0.33, p=0.017) are less likely to improve their scores on achieved objectives than those that do not. The same was true for the effect of the issuance of the public procurement notice of the PPP (OR= 0.00, 95% CI: 0.00-0.12, p=0.001) on the performance of the implementing agency and the performance of the borrowing country overall performance, meaning that countries that issue notice of PPP are less likely to improve the performance of their implementing agency and the borrowing country overall performance than those that do not.

Table 22: Results of Model 3c-Subcategories of PPP Procurement on PPP Outcome

PPP governance	PPP outcome						
	Achieved objectives	Quality at entry	Quality of supervision	Overall Bank performance	Implementing agency	Government Performance	Overall borrower Performance
Public procurement notice	0.0024251* (0.0061087)				0.0055913^{+} (0.0088911)		0.018771^{+} (0.0250372)
Tender documents	7.231478* (7.349343)				38.05095* (60.0525)		11.20348* (12.2037)
Clarification questions	16.89311* (22.17455)						18.50418* (27.7336)
Prebid conference	0.3937169* (0.1859948)		0.3287352^{+} (0.1503359)				
Negotiations	2.894988* (1.410644)						
Foreign companies' income			10.5742^{+} (8.582288)				
Publication of award notice			0.2004972^{+} (0.1628486)	0.2142171* (0.1706307)	0.1061264^{+} (0.1223252)		
Evaluation committee				0.320085* (0.1688632)			

*indicates significant at the 95% confidence level. $^{+}$ indicates robust error significance.

In other words, focusing on pre-bid conference, the publication of award notice, the evaluation of committee members' qualifications, and issuance of procurement notice of PPP as a strategy for improving the outcomes of PPP projects produces the opposite effect. The fact that those practices have the opposite effect is surprising. The pre-bid conference is praised as an opportunity to share important information of the projects with potential bidders. The publication of award notice, the evaluation of committee members' qualifications, and the issuance of procurement notice of PPP are designed to ensure transparency and fairness in the procurement process. When there is transparency, better outcome is expected as the contract is awarded to the best bidder chosen through a transparent process by a competent committee. The GNI per capita had a significant positive effect on quality of supervision.

Subcategories of PPP Contract Management on PPP Outcome

The hypothesis (H3d) that the subcategories of the PPP contract management had a positive influence on PPP outcome was supported by the variables including lender's step-in rights, dispute resolution mechanisms, and permission to foreign companies to repatriate income due to their positive effect on quality of supervision, implementing agency performance, government performance, and quality at entry. For instance, countries that consider lender's step-in rights were more likely to improve the level of satisfaction on the quality of supervision (OR=2.98, 95% CI: 1.19-7.42, p=0.019), implementing agency performance (OR=2.59, 95% CI: 1.05-6.36, p=0.038) and government performance (OR=2.48, 95% CI: 0.99-6.20, p=0.052 (See Table 23) than those that do not. Countries with dispute resolution mechanisms (OR=9.39, 95% CI: 1.50-58.41, p=0.016) become more likely to perform better in quality at entry than those without. When foreign companies are permitted to repatriate income (OR=3.56, 95% CI: 1.08-11.71, p=0.036), the probability of satisfactory on government performance increases more than when they are not.

Some significant results for H3d did not point to the expected direction. For instance, the system to manage implementation (OR=0.14, 95% CI: 0.03-0.62, p=0.010) had a significant effect on government performance, meaning that countries that had a system to manage implementation are less likely to increase the probability of satisfactory government performance than those that did not. The control variable GNI had a very minimal positive effect on quality of supervision, Bank overall performance, government performance, and borrower overall performance whereas democracy had a negative effect on achieved objectives and government effectiveness.

Table 23: Results of Model 3d-Subcategories of PPP Contract Management on PPP Outcome

PPP contract management	PPP outcome						
	Achieved objectives	Quality at entry	Quality of supervision	Overall Bank performance	Implementing agency	Government performance	Overall borrower performance
Dispute resolution		9.391285^{+} (8.757745)					
Lender's rights			2.985361* (1.388358)		2.592274* (1.188992)	2.481761* (1.159887)	
System						0.1429818* (0.108141)	
Foreign companies' income						3.566231^{+} (2.164699)	

*indicates significant at the 95% confidence level. $^{+}$ indicates robust error significance.

Overall, the practices at the contract management stage contribute to better outcomes in PPP projects. In terms of substantive significance, countries that give the right to lenders to intervene in project management when necessary, those that have mechanisms in place to settle disputes, and those that allow foreign companies to repatriate income from their work have a positive influence on the actions of both the World Bank performance and the performance of recipient countries' government and of their implementing agency. A surprising finding is the fact that countries that had a system in place to manage the implementation of the PPP contract negatively impacted the performance of their governments. It was surprising that practices such as tracking the progress and completion of construction works and monitoring and evaluation did not have any influence on the outcome of PPP projects.

Summary of Results

Table 24 summarized the results of the hypotheses that were supported and those that were not. The hypothesis (Hypothesis 1) that country governance had a positive influence on PPP outcome was supported considering the statistical significance of country governance variables on PPP outcome variables. Four of the six country governance factors including political stability, regulatory quality, voice and accountability, and government effectiveness had significant effects on the variables of PPP outcome including achieved objectives, quality at entry, quality of supervision, Bank overall performance, and borrower country overall performance. Of the six country governance variables, political stability is by far the most recurring influential variables because of its positive effect on six of the seven PPP outcome variables. Apart from political stability, only regulatory quality had a positive effect on achieved objectives.

The hypothesis (Hypothesis 2a) that country governance had a positive influence on PPP governance was rejected for the main variables and supported for the subcategories.

The main hypothesis that country governance had a positive influence on the three continuous variables was not supported (see Table 24). None of the six country governance variables had a significant effect on the three main PPP governance variables.

Second, the hypotheses that country governance had a significant effect on PPP governance via the subcategories were supported. The hypothesis (Hypothesis 2b) that country governance had a significant effect on the subcategories of PPP preparation was supported. Government effectiveness had a positive effect on PPP prioritization. Voice and accountability did not support Hypothesis 3a because of its negative effect on economic assessment and risk identification. The hypothesis (Hypothesis 2c) that the subcategories of PPP procurement had a positive effect on PPP outcome was supported. Government effectiveness and voice and accountability had a positive effect on the 60-day minimum period to submit bids and the issuance of procurement notice whereas political stability and regulatory quality had a negative effect on the same variables. The rule of law had a positive effect the issuance of procurement notice.

The hypothesis (Hypothesis 2d) that the subcategories of PPP contract management had a positive effect on PPP outcome was supported. Political stability and rule of law had a positive effect on the permission of foreign companies to repatriate income whereas voice and accountability and control of corruption had a negative effect on the permission of foreign companies to repatriate income. Voice and accountability, government effectiveness, and rule of law had a positive effect on the dispute resolution mechanisms whereas political stability and regulatory quality had a negative effect on the same variable.

The hypothesis (Hypothesis 3a) that PPP governance had a positive influence on PPP outcome was rejected for the main variables and supported for the subcategories. First, the main hypothesis that the three main PPP governance variables had a positive influence on PPP outcome was not supported (see Table 24). Only the contract management had a

negative effect on quality at entry. The hypotheses that the subcategories of PPP governance had a positive influence on PPP outcome were supported. The hypothesis (Hypothesis 3b) that the subcategories of PPP preparation had a positive influence on PPP outcome was supported. The standardization of PPP model contracts had a positive effect on achieved objectives, quality at entry, and Bank overall performance. Fiscal affordability assessment had a positive effect on achieved objectives. Environment impact assessment had a positive effect on government performance.

The hypothesis (Hypothesis 3c) that the subcategories of PPP procurement had a positive influence on PPP outcome was supported. Bid documents with details of the stages of the process, the clarification of questions, the issuance of procurement notice, negotiation with the selected bidder before contract signing had a positive effect on achieved objectives. Bid documents with details of the stages of the process and clarifications of questions had a positive effect on borrowing country overall performance. Bid documents with details of the stages of the process had a positive effect on the implementing agency performance. The permission of foreign companies to participate in bidding had a positive effect on Bank overall performance.

Table 24: Supported Hypotheses for Models 1, 2, & 3

Hypotheses	Results	Comments
H1: Country governance has a positive influence on PPP outcome.	Supported	There were both positive and negative statistical significance
H2: Country governance has a positive influence on PPP governance		
• H2a Country governance has a positive influence on PPP governance (main variables)	Not supported	
• H2b) Country governance has a positive influence on PPP preparation	Supported	There were both positive and negative statistical significance
• H2c) Country governance has a positive influence on PPP procurement	Supported	There were both positive and negative statistical significance
• H2d) Country governance has a positive influence on contract management	Supported	There were both positive and negative statistical significance
H3: PPP governance has a positive influence on PPP outcome.		
H3a: PPP governance has a positive influence on PPP outcome (3 main variables)	Not supported	The lone statistical significance was negative.
• H3b) PPP preparation has a positive influence on PPP outcome.	Supported	There were both positive and negative statistical significance
• H3c) PPP procurement has a positive influence on PPP outcome.	Supported	There were both positive and negative statistical significance
• H3d) Contract management has a positive influence on PPP outcome.	Supported	There were both positive and negative statistical significance

The hypothesis (Hypothesis 3d) that the subcategories of PPP contract management had a positive influence on PPP outcome was supported. Lender's step-in rights had a positive effect on quality of supervision, implementing agency performance, government performance. Dispute resolution mechanisms had a positive effect on quality at entry. The permission for foreign companies to repatriate income had a positive effect on government performance. The system to manage implementation had a significant effect on government performance.

Analysis: The Mediating Role of PPP Governance

Iacobucci (2008) argued that in mediation analysis, the effect of the exogenous variable (X) directly on the endogenous variable (Y) becomes significantly smaller in size relative to the effect size of the mediator on the endogenous variable. Put otherwise, the odd ratio of country governance on PPP outcome will be significantly smaller than the odd ratio of PPP governance on PPP outcome. Table 25 displayed the odd ratio of both models.

It is time to examine whether the PPP governance mediates the relationship between country governance and PPP outcome. Each of the seven outcome variables is examined.

Table 25: Summary of Mediation Results

Variables	On PPP outcome						
Country governance	Achieved objectives	Quality at entry	Quality of supervision	Overall Bank performance	Implementing agency	Government performance	Overall borrower performance
Voice and accountability	0.3748911				0.4310826^{+}		
Political stability	2.460341	2.912011	2.064789	2.514281	2.900966	2.648148	2.648148
Regulatory quality	0.1689821						
Government effectiveness	5.049964						
PPP management		0.9700303					
PPP Prioritization				0.2999283	0.2871034		
Fiscal assessment	3.429006^{+}						
Risk identification		0.211594	0.2202167			0.2069761	
Financial viability						0.4842549^{+}	
Environmental assessment						2.260709^{+}	
Assessment of the RFP			2.611134				
Standard PPP model	2.37538	3.787213		2.645445			
Evaluation committee				0.320085			
Public procurement notice	0.0024251				0.0055913^{+}		0.018771^{+}
Foreign companies' participation				10.5742^{+}			
Tender documents	7.231478				38.05095		11.20348
Clarification questions	16.89311						18.50418
Prebid	0.3937169		0.3287352				
Publication of award notice			0.2004972^{+}	0.2142171	0.1061264		
Negotiation	2.894988						
System of implementation						0.1429818	
Foreign companies' income						3.566231^{+}	
Dispute resolution		9.391285 $^{+}$					
Lender's rights			2.985361		2.592274	2.481761	

*indicates significant at the 95% confidence level. $^{+}$ indicates robust error significance.

Looking at the odd ratios of country governance variables on achieved objectives on Table 25, the highest is 5.05. Any PPP governance variable with an odd ratio higher than 5.05 will be considered a mediator. It appears that the odd ratios of bid documents of the PPP stages which is 7.23 and for clarifications of questions which is 16.9 are higher than 5.05. Therefore, bid documents of the PPP stages and clarifications of questions mediate the relationship between voice and accountability, political stability, regulatory quality, government effectiveness and achieved objectives. A more detail examination showed that negotiation with selected bidders with an odd ratio of 2.89 and fiscal analysis assessment with an odd ratio of 3.43 mediate the relationship between voice and accountability, political stability, regulatory quality, and achieved objectives.

For the odd ratios of country governance variables on quality at entry, the highest is 2.91. Any PPP governance variable with an odd ratio higher than 2.91 will be considered a mediator. Standardized PPP model contracts with an odd ratio of 2.37 and dispute resolution mechanisms with an odd ratio of 9.39 are higher than 2.91. Therefore, standardized PPP model contracts and dispute resolution mechanisms mediate the relationship between political stability and quality at entry. For the odd ratios of country governance variables on quality of supervision, the highest is 2.06. Any PPP governance variable with an odd ratio higher than 2.06 will be considered a mediator. The assessment of RFP with an odd ration of 2.61 and lender step-in rights with an odd ratio of 2.98 mediate the relationship between political stability and quality of supervision. For the odd ratios of country governance variables on Bank overall performance, the highest is 2.51. Any PPP governance variable with an odd ratio higher than 2.51 will be considered a mediator. It appears that the odd ratios of standardized PPP model contracts with an odd ratio of 2.64 and foreign company permission with an odd ratio of 10.572 are higher than 2.51. Therefore, standardized PPP model

contracts and foreign company permission mediate the relationship between political stability and Bank performance.

As far as the odd ratios of country governance variables on the implementing agency are concerned, the highest is 2.90 whereas the odd ratios of bid documents detailing the PPP stages are 38.05. Therefore, bid documents detailing the PPP stages mediate the relationship between political stability and implementing agency. The highest odd ratios of country governance variables on government performance are 2.65. Any PPP governance variable with an odd ratio higher than 2.65 will be considered a mediator. It appears that the odd ratios of foreign company income repatriation with an odd ratio of 3.56 is higher than 2.65. Therefore, foreign company income repatriation mediates the relationship between political stability and government performance. Looking at the odd ratios of country governance variables on borrower overall performance, the highest is 2.65. Any PPP governance variable with an odd ratio higher than 2.65 will be considered a mediator. The odd ratios of bid documents detailing the PPP stages with an odd ratio of 11.20 and clarification questions with an odd ratio of 18.50 are higher than 2.65. Therefore, bid documents detailing the PPP stages and clarification questions mediate the relationship between political stability and the borrower overall performance.

The analysis showed that PPP governance factors mediate the relationship between country governance factors and PPP outcome factors. Each of the-seven outcome variables one way or the other has been mediated by a PPP governance variable.

Analysis: Results by Income Level

The hypotheses used to analyze the research questions on the relationships between country governance, PPP governance, and PPP outcome are used for the income level analysis. In other words, the same hypotheses, H1, H2 (a, b, c, d), H3 (a, b, c, d) are tested for

each income level group. H4 could not be run for the income level analysis because of limited sub-samples.

Model 1, Model 2 (a, b, c, d), and Model 3 (a, b, c, d) were run to assess the multiple influences between country governance, PPP governance, and PPP governance by including all the 100 countries in the same sample. The dissertation is also interested in those relationships within specific income levels. More specific models were run to understand the influence of country governance on PPP outcome by income level. Five models are used to test five different levels of income.

The first model (Model I) included the low income countries with a sample of 23 countries. It was shown earlier that the assumptions of the endogenous variables were met. There has been no change in the endogenous variables. However, the normality test showed that four variables of country governance including government effectiveness, regulatory quality, rule of law, and control of corruption were not normally distributed. However, the distribution for government effectiveness, regulatory quality, rule of law, and control of corruption were not severe. Therefore, no transformation of the data occurred. The main variables of PPP governance including PPP preparation, PPP procurement, and PPP contract management were all normally distributed ($p>0.05$). A correlation test of the exogenous variable (country governance) showed that there was no multicollinearity ($r=0.45$ to $r=0.95$). For the main PPP governance variables, the relationship was weak to moderate. This was explained by the fact that the sample size is small.

The second included the lower-middle income countries with a sample of 32 countries (Model II). The normality test showed that five of the six variables of country governance including voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, were normally distributed. Only the distribution for control of corruption was not normally distributed. No transformation of the variable occurred because the non-

distribution was not severe (P=0.038). The two main variables of PPP governance including PPP preparation and PPP contract management were normally distributed (p>0.05). The PPP contract management variable was slightly non-normal (p=0.04). A correlation test of the exogenous variable (country governance) showed that the relationships were strong except the relationships between political stability; and government effectiveness; and rule of law; and control of corruption were moderate. Only the relationship between voice and accountability and political stability was weak (p=0.25). In addition, there was no multicollinearity. For the main PPP governance variables, the relationship was moderate to strong, which is acceptable for running the multivariate regression.

The third constituted the upper-middle income level with a sample of 35 countries. It was shown earlier that the assumptions of the endogenous variables were met. There has been no change in the endogenous variables. The normality test showed that five of the six variables of country governance including voice and accountability, government effectiveness, regulatory quality, rule of law, and control of corruption were normally distributed. Only the distribution for political stability was slightly not normally distributed (p=0.045). No transformation of the variable occurred because the non-distribution was not severe. The three main variables of PPP governance were normally distributed (p>0.05). A correlation test of the exogenous variable (country governance) showed that the relationships were moderate to strong. In addition, there was no multicollinearity. For the main PPP governance variables, the relationships were strong.

The fourth group included all the levels excluding high income countries with a sample of 90 countries. It was shown earlier that the assumptions of the endogenous variables were met. There has been no change in the endogenous variables. However, the normality test showed that four variables of country governance including government effectiveness, regulatory quality, rule of law, and control of corruption were not normally distributed.

Therefore, no transformation of the data occurred because the data was used in previous models. The purpose of income level analysis is to compare the results by income level. Therefore, transforming the data would be detrimental to the spirit of the analysis. The main variables of PPP governance including PPP preparation and PPP contract management were normally distributed ($p>0.05$) except the PPP procurement variable which was slightly non-normal ($p=0.044$). A correlation test of the exogenous variable (country governance) showed that there was no multicollinearity ($r=0.43$ to $r=0.90$) and the variables were moderately and strongly correlated. For the main PPP governance variables, the relationships were moderate to strong.

The fifth group concerned a sample of 32 Sub-Saharan African countries. Again, it the assumptions of the endogenous variables were met. However, the normality test showed that four variables of country governance including government effectiveness, regulatory quality, rule of law, and control of corruption were not normally distributed. As in the previous income level, no transformation of the data occurred because the data was used in previous models. Again, the purpose of income level analysis is to compare the results by income level. Therefore, transforming the data would be detrimental to the spirit of the analysis. All the main variables of PPP governance were normally distributed ($p>0.05$). A correlation test of the exogenous variable (country governance) showed that there was no multicollinearity ($r=0.43$ to $r=0.90$) and the variables were strongly correlated. For the main PPP governance variables, the relationships were moderately correlated.

Four models including Model I, Model II, Model III, and Model IV were run to test hypothesis I (H I), hypothesis II (H 2), hypothesis III (H III), and hypothesis IV (H IV) (See Table 26 for models and hypotheses). The models and hypotheses were tested for each of the five income levels. The hypotheses were the same as in Model 1, Model 2, and Model 3 except that the binary variables were not tested. The binary variables were not tested because

the samples at each level became too small for the large number of binary variables. It was also impossible to run the data in STATA and obtain results, hence the decision to remove the binary variables.

The exogenous variables and the endogenous variables for Model I, Model II, and Model III in Table 26 remained the same as in Model 1, Model 2, and Model 3. The change occurred with the endogenous mediator variable as the binary variables were left out. Thus, for the mediator endogenous variable, only the three continuous endogenous mediator variables were used. There was no change in the two control variables which included democracy and GNI. Model I and Model III were tested using the multivariate ordinal logistic regression (GSEM). Model II was tested using the multivariate multiple regression. Model IV summarized the results of the three other models to deduct the mediating role of PPP governance.

Table 26: Models for Testing Hypotheses by Income Level

Purpose	Model I Influence of country governance on PPP outcomes	Model II Influence of country governance on PPP governance	Model III Influence of PPP governance on PPP outcome	Model IV Mediating role of PPP governance
Hypotheses	H I	H II	H III	H IV
Endogenous variables	- Achieved objectives - Quality at entry - Quality of supervision - Bank overall performance - Implementing agency performance - Government compliance - Borrowing government performance	- PPP preparation - PPP procurement - PPP contract management	- Achieved objectives - Quality at entry - Quality of supervision - Bank overall performance - Implementing agency performance - Government compliance - Borrowing government performance	- PPP outcome and PPP governance (see Model I, II, and III)
Mediating variables	- NA	- NA	- NA	- PPP governance
Exogenous variables	- Voice and accountability - Political stability - Government effectiveness - Regulatory quality - Rule of law - Control of corruption	- Voice and accountability Political stability - Government effectiveness - Regulatory quality - Rule of law - Control of corruption	- PPP preparation - PPP procurement - PPP contract management - Subcategories of PPP preparation	- Country governance and PPP governance (see Model I, II, and III).
Control variables	- Score of democracy - Gross National Income per capita (GNI)	- Score of democracy - Gross National Income per capita (GNI)	- Score of democracy - Gross National Income per capita (GNI)	- Score of democracy - Gross National Income per capita (GNI)
Analysis method	- Multivariate ordinal logistic regression (GSEM)	- Multivariate multiple regression	- Multivariate ordinal logistic regression (logit)	- Multivariate multiple regression - Multivariate ordinal logistic regression (logit)
Sample size	23, 32, 32, 35,90	23, 32, 32, 35,90	23, 32, 32, 35,90	23, 32, 32, 35,90

Low Income Countries

The hypothesis (H I) that country governance had a positive influence on PPP outcome was tested for the sample of 23 low income countries. Political stability had a significant positive effect on the performance of the implementing agency (OR: 14.87, 95% CI: 1.05-209.03, p=0.045). This means for a 1-point increase in the score of political stability of low income countries, the probability of higher satisfaction in the performance of implementing agencies gets higher. Regulatory quality had a significant negative effect on the quality of supervision (OR: 0.00, 95% CI: 0.00-1.05, p= 0.052), meaning for an increase in the score of regulatory quality of low income countries, there is a lower probability that there are higher satisfactory results. The GNI per capita (OR: 0.03, 95% CI: 1.00-1.01) had a significant but a neutral effect on government performance. Thus, the hypothesis that country governance had a positive influence on PPP outcome for low income countries is supported by political stability via its effect on the implementing agency performance. Practically, for low-income countries, political stability contributes to better performance of recipient countries, especially the performance of the implementing agencies. The regulatory quality had a negative influence on the quality of supervision.

For the influence of country governance on PPP governance (H II), only government effectiveness was significant with a negative effect on contract management (OR= -27.91, 95%CI: -56.19- 0.36, p=0.053). This shows that a 1-point increase in the government effectiveness score lowers the score of contract management by 56.2%, controlling for the effect of all other variables. Thus, the hypothesis (H II) that country governance had a positive influence on PPP outcome for low income countries was not supported. Practically, focusing on government effectiveness will more likely lower the scores of PPP contract management.

As far as the influence of the PPP governance on PPP outcome (H III) was concerned, PPP preparation had a significant positive effect on the borrowing country overall performance (OR=1.108684, 95%CI: 1.00-1.22, p=0.046), meaning that an increase in the score of PPP preparation leads to higher probability of satisfactory performance of the borrower country. PPP contract management had a significant effect on achieved objectives (OR= 0.89, 95%CI: 0.79-0.98, p=0.030), quality at entry (OR= 0.9099126, 95%CI: 0.83-0.99, p=0.043), Bank overall performance (OR= 0.89, 95%CI: 0.81-0.989, p=0.028), government performance (OR=0.87, 95%CI: 0.78-0.96, p=0.011), and the borrowing country overall performance (OR= 0.83, 95%CI: 0.72-0.95, p=0.009). In other words, for a 1-point increase in the scores of contract management, the probability of satisfactory results gets lower for all these variables. However, it is important to note that these variables are not too far from being positive. If positive, these variables would have shown that contract management was important for achieving greater PPP outcomes. PPP procurement had a significant effect on Bank overall performance (OR= 0.9290738, 95%CI: 0.86-0.99, p=0.040) and the implementing agency performance (OR= 0.92, 95%CI: 0.86- 0.99, p=0.048). Thus, an increase in the score of PPP procurement reduces the probability that the implementing agency performance will be more satisfactory. However, the reduction of such probability is very small at about 8%.

Thus, the hypothesis (H III) that PPP governance had a positive influence on PPP outcome was supported by PPP preparation via its effect on the borrowing country overall performance. The effects of PPP procurement and contract management do not support H III. However, their odd ratios are closer to 1. Practically, when low income countries increase their PPP preparation scores, they are more likely to perform better. While PPP procurement and contract management failed to be positively significant, in practice, they are very close to

having a positive influence on PPP outcome. In other words, they should not be discarded as being irrelevant for satisfactory outcomes.

Lower-Middle Income Countries

The influence of country governance on PPP outcome for the 32 lower-middle income countries was also tested, but there were no significant results. Only the control variable GNI 1.00, 95% CI: 1.000-1.002, p=0.014) had a significant effect on the quality at entry. Therefore, the hypothesis (H I) that country governance had a positive influence on PPP outcome for lower-middle income countries was not supported.

The test of the influence of country governance on PPP governance (H II) showed that government effectiveness had a significant positive effect on PPP preparation (OR=39.61, 95%CI: -1.44-80.66, p=0.058). This means that a 1-point increase in the score of government effectiveness leads to an increase in the score of PPP preparation by 39.61%, controlling for the effect of all other variables. Control of corruption (OR= 35.14, 95%CI : 5.84-64.43, p=0.021) for the first time had a significant positive effect on PPP preparation. This means lower-middle income countries that increase their score in the control of corruption, the score of PPP preparation increases by 35.14%, controlling for the effect of all other variables. The effect of political stability (OR= -12.88, 95%CI: [-22.74667) - (-3.021258), p=0.013] on PPP procurement was significant and negative; which means that a 1-point increase in the score of political stability leads to 12.88% reduction in the score of PPP procurement, controlling for the effect of all other variables. Thus, the hypothesis (H II) that country governance had a positive influence on PPP governance for lower-income countries was supported by government effectiveness and control of corruption via their effects on PPP preparation. In terms of substantive significance, this means that when lower-income countries improve their score in government effectiveness and control of corruption, the scores of PPP preparation also increase; hence they should focus on those two variables.

The test of the influence of PPP governance on PPP outcome (H III) for lower-middle income countries showed that only PPP preparation had a significant negative impact on quality at entry (OR=0.94, 95%CI: .89-0.99, p=0.049). The probability of higher satisfactory results for quality at entry gets lower as the score of PPP preparation increases by 1 point. This means that the hypothesis (H III) that PPP governance had a positive influence on PPP outcome for lower-middle income countries was not supported.

Upper-Middle Income Countries

The influence of country governance on PPP outcome for upper-middle income countries was tested. Political stability had a significant positive effect on achieved objectives (OR: 25.3251, 95% CI: 4.64-138.08, p=0.000), quality of supervision (OR: 6.94, 95% CI: 1.78-27.04, p=0.005), Bank overall performance (OR: 15.92, 95% CI: 3.21-78.98, p=0.001), performance of the implementing agency (OR: 5.51, 95% CI: 1.46-20.71, p= 0.012), government performance (OR: 4.65, 95% CI: 1.23-17.58, p=0.023), quality at entry (OR: 20.74, 95% CI: 3.50-122.79, p=0.001), and the borrower government overall performance (OR: 7.98, 95% CI: 2.00-31.78, p=0.003). This means that for a 1-point increase in the score of political stability, the outcome for each of achieved objectives, the quality of supervision, the Bank overall performance, the performance of the implementing agency, and quality at entry is more likely to be satisfactory. It was also found that for the upper-middle income countries, a 1-point increase in the score of regulatory quality is more likely to lead to more satisfactory achieved objectives (OR: 658.15, 95% CI: 16.12-26871.1, p=0.001), performance of the implementing agency (OR18.29, 95% CI: 1.12-296.66, p=0.041), government performance (OR: 44.17, 95% CI: 2.08-936.30, p=0.015), and the overall performance of the borrowing country (OR: 16.99, 95% CI: 0.96-298.96, p=0.053). Control of corruption (OR: 20.60, 95% CI: 1.10-384.94, p=0.043) had a significant positive effect on achieved objectives. This means that for a 1-point increase in the score of control of

corruption, the probability of better satisfactory achieved objectives gets higher. Voice and accountability (OR: 5.857865, 95% CI: 1.11-30.84, p=0.037) had a significant positive effect on the Bank overall performance.

Overall, the hypothesis (H I) that country governance had a positive influence on PPP outcome for upper-middle income countries was supported by political stability, control of corruption, and regulatory quality via their strong and extensive significant effect on the variables of PPP outcome. The practical significance is that upper-middle income countries should focus on improving political stability, control of corruption, and regulatory quality.

Some significant effects were negative. Government effectiveness (OR: 0.01, 95% CI: 0.00-0.36, p=0.010) and rule of law (OR: 0.00, 95% CI: 2.90e-06- 0.13, p=0.007) had a significant negative effect on achieved objectives. In other words, the probability of better achieved objectives gets lower for a 1-point increase in the score of government effectiveness and rule of law. As the score in the rule of law increases by 1 point, the probability of satisfactory results for the quality at entry (OR: 0.0067783, 95% CI: 0.00-1.02, p=0.051), Bank overall performance (OR: 0.00, 95% CI: 0.00-0.61, p=0.031), performance of the implementing agency (OR: 0.00, 95% CI: 0.00-0.24, p=0.012), government performance (OR: 0.01, 95% CI: 0.00-0.82, p=0.039) and the borrowing government overall performance (OR: 0.00, 95% CI: 0.00- 0.29, p=0.014) gets lower. The control variable, democracy (OR: 0.92, 95% CI: 0.86-0.97, p=0.008) had a significant effect on the government performance. Thus, government effectiveness and rule of law did not support hypothesis I (H I). Upper-middle income countries should exercise caution in their approach to government effectiveness and rule of law.

When the test was run for the effect of country governance on PPP governance (Hypothesis II), it is found that upper-middle income countries which increase their score of regulatory quality (OR=29.0716, 95%CI: -0.69-58.83, p=0.055) by 1 point also increase their

score of PPP preparation by about 29.07%. When they increase their score in the rule of law (OR=-57.28, 95%CI: (-104.12)- (-10.43), p=0.018) by 1 point, their score in PPP preparation is significantly reduced by 57.28%, controlling for the effect of all other variables. Thus, the hypothesis (H II) that country governance had a positive influence on PPP outcome was supported by regulatory quality via its effect on PPP preparation.

The test of the influence of PPP governance on PPP outcome (Hypothesis III) for upper-middle income countries showed that PPP procurement (OR=1.06, 95%CI: 1.00-1.12, p=0.040) had a significant positive effect on achieved objectives. This means that the increase in the probability of higher satisfactory outcomes from the increase in the score of PPP procurement is only 6%. Upper-middle income countries that increase their PPP procurement (OR: 1.08, 95%CI: 1.01-1.14, p=0.013) score by 1-point are expected to increase the probability of greater performance of the implementing agency by only 7%. When those countries increase their contract management (OR= 0.92, 95%CI: 0.86-0.99, p=0.03 score by 1-point, they are expected to have lower performance of their implementing agencies. Overall, the hypothesis (H III) that PPP governance had a positive influence on PPP outcome for upper-middle income countries was supported by PPP procurement via its effects on achieved objectives and implementing agency performance. This means that in practice, upper-middle income countries with high scores in PPP procurement achieved greater PPP outcomes.

Low, Lower-Middle and Upper-Middle Income Countries

For the influence of country governance on PPP outcome (H I), political stability had a significant positive effect on achieved objectives (OR=2.69, 95% CI: 1.40-5.15, p=0.003), quality at entry (OR=3.49, 95% CI: 1.76-6.90, p=0.000), quality of supervision (OR=2.19, 95% CI: 1.16-4.13, p=0.015), Bank overall performance (OR =2.96, 95% CI: 1.54-5.68, p=0.001), the performance of the implementing agency (OR=2.90, 95% CI: 1.50-5.59,

p=0.001), and the overall performance of the borrowing country (OR: OR=3.01, 95% CI: 1.56-5.78, p=0.001). This means that for all these variables, an increase by 1 point in the score of political stability leads to higher satisfactory scores. When the score in the voice and accountability (OR: 0.37, 95% CI: 0.14-0.98, p=0.046) increases by 1 point, the probability of higher satisfactory outcomes gets lower. Overall, the hypothesis (H I) that country governance had a positive influence on PPP outcome is supported by political stability via its effects on quality at entry, quality of supervision, Bank overall performance, implementing agency performance, and borrowing country overall performance. In other words, political stability is important for greater performance in PPP projects.

No significant effect was found when the test of the influence of country governance on PPP governance was run. This means that hypothesis II that country governance had a positive influence on PPP governance was not supported.

For the influence of PPP governance on PPP outcome, it was found that the contract management (OR= 0.96, 95%CI: 0.93-0.99, p=0.023) had a significant negative effect on achieved objectives. The probability of greater satisfactory outcomes is lowered only by 4% for any 1-point increase in the score of PPP contract management. This means that hypothesis III was not supported.

Sub-Saharan African Countries

The hypothesis (H I) that country governance had a positive influence on PPP outcome for Sub-Saharan African countries was supported. In effect, political stability had a significant positive effect on the Bank overall performance (OR=3.34, 95% CI: 0.99-11.25, p=0.051), borrowing country overall performance (OR: 8.74, 95% CI: 1.71-44.64, p=0.009), and the performance of the implementing agency (Robust) (OR: 3.27, 95% CI: 1.06-10.02, p= 0.038]. This means there is a higher probability of an increase in the scores of the Bank

overall performance, borrowing country overall performance, and the performance of the implementing agency for a 1-point increase in the score of political stability.

The test of the influence of country governance on PPP governance for Sub-Saharan African countries showed that when these countries increase their score in voice and accountability (OR= 10.85629, 95%CI: 2.79-18.91, p=0.010), their score in PPP procurement increases by almost 11%. When their score in political stability increases by 1 point, their score in PPP procurement [OR=-9.76, 95%CI: (-17.38) – (-2.14), p=0.014] lowers by almost 10%. The hypothesis (H III) that country governance had a positive influence on PPP governance for Sub-Saharan African countries was supported by voice and accountability via its effect on PPP procurement. For sub-Saharan African countries, no significance was found for the test of the influence of PPP governance on PPP outcome. In other words, hypothesis III was not supported.

In short, the analysis provided the significant results on the relationships between country governance and PPP outcome, country governance and PPP governance, and PPP governance and PPP outcome as well as the mediating role of PPP governance in the relationship between country governance and PPP outcome. The analysis focused on the results for the sample of 100 countries and then broke down the countries by income level. The analysis of the results by income level were explained earlier. The significant results are discussed in Chapter V.

CHAPTER V

DISCUSSION AND CONCLUSION

The purpose of this study was to examine the relationships between country governance, PPP governance, and PPP outcome and determine whether PPP governance mediated the relationship between country governance and PPP outcome. To that regard, five research questions were posed and answered through the analysis of the results. This section discusses and concludes on the important findings.

Concluding Points: Country Governance and PPP outcome

To the first question on whether there was a relationship between country governance on PPP outcome, the study found that the hypothesis that country governance had a positive influence on PPP outcome was supported. The significant (positive and negative) results appear on Figure 6. The study found that countries that had political stability and were free of terrorism and ethnic divisions achieved the objectives of their PPP projects. Political stability was defined as the likelihood that the government will be destabilized by unconstitutional or politically motivated violence and terrorism (Kaufmann et al., 2010; WGI, 2018). Where there are political stability and no terrorism or ethnic division, the recipient countries are more likely to improve the performance of the implementing agencies as well as the overall performance of the recipient country in the PPP projects. Under the same circumstances, the World Bank performs better with regards to quality at entry, which entails identifying, facilitating the preparation of, and appraising the operation. The World Bank also performs more effectively with regards to its proactive supervisory role and addressing threats. Under politically stable conditions, the Bank claims higher overall performance. These findings are supported by scholars who found that the lack of political stability (Chou et al., 2012) or political instability (Eberhard and Gratwick,

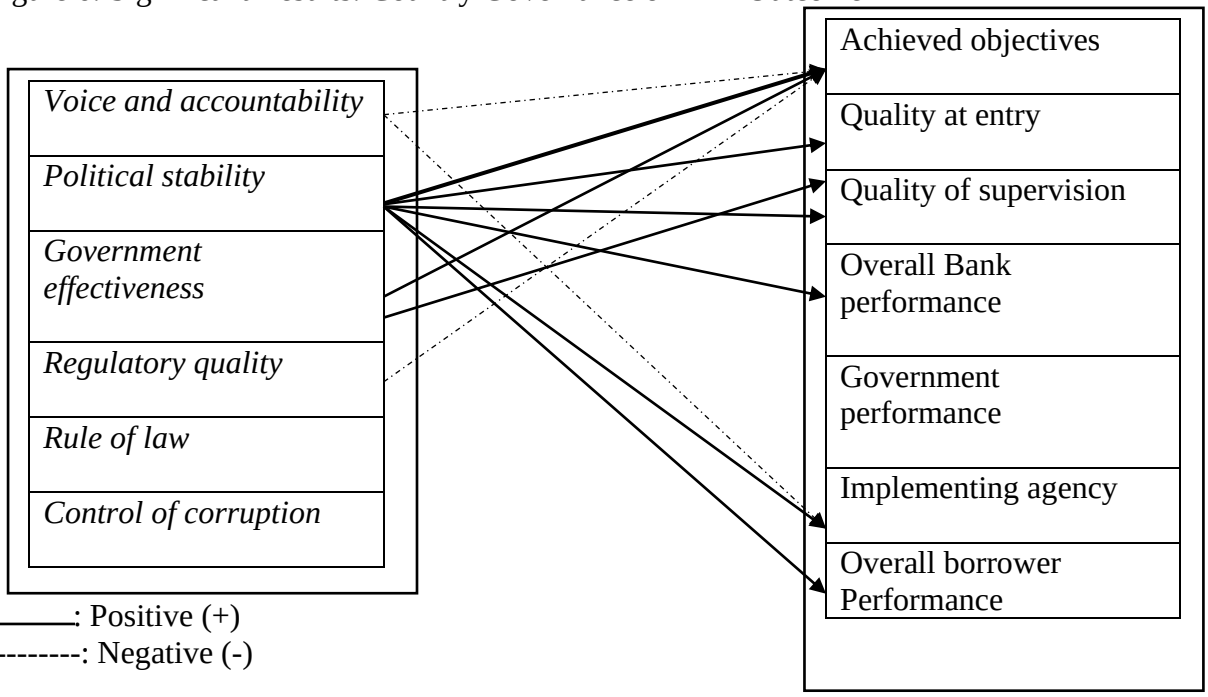
2013), internal conflict (Lee et al., 2018), and political uncertainty (Osei-Kyei and Chan, 2017) had a negative effect on PPP investments. From a broader perspective, scholars also found that ethnic fragmentation (Karnane and Quinn, 2019), ethnic divisions and tensions (Houdhary and Reksulak, 2019), the lack of social cohesion (Easterly and Levine, 1997), and opportunistic politics (Easterly, Ritzen, and Woolcock, 2006) led to the degradation of the economic fabric of countries. When decisions on PPPs are made under these conditions, the impact is more likely to be negative on the performance of both the recipient countries and the World Bank.

The study also found that the quality of regulations had a positive influence on the objectives of PPPs. The quality of regulations is defined as the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development (Kaufmann et al., 2010; WGI 2018). Previous findings showed that PPP investment in infrastructure was highly sensitive to the quality of regulations (Moszoro et al., 2014; Moszoro et al., 2015) and that regulatory quality had a positive impact in attracting private investors (Pérez-D'Oleo et al., 2015; Baker, 2016) and the private bidders and the market competitiveness of the ports (Panayides et al., 2015). Wang et al. (2019) showed that regulatory quality in developing countries reduced the negative relationship between risk allocation and private investment. Even though these findings showed a positive direction of expected relationships, they differ from the finding in this research because this study went further to show that the specific impact of regulatory quality is on the objectives of PPPs.

The surprising finding is the negative influence of voice and accountability on the performance of the implementing agency of recipient countries. "Voice and accountability" was defined as the participation of a country's citizens in selecting their government as well as freedom of expression, freedom of association, and free media (Kaufmann et al., 2010, WGI,

2018). Pérez-D'Oleo et al. (2015) and Wang et al. (2019) found that countries that focused on voice and accountability could attract more investments and reduce risk. Their finding was not supported in this study. On the contrary, the study showed that greater accountability could have a negative influence on the performance of the implementing agencies. The reasons may be that accountability is sometimes a political process and the political influence on PPPs may be based on political interests that manipulate the decisions of the agencies.

Figure 6: Significant Results: Country Governance on PPP Outcome



In Figure 6, the solid lines show the positive findings whereas the dotted lines show the negative findings. Figure 6 shows that for the influence of country governance on PPP outcome, seven relationships were positive whereas three relationships were negative. The relationships were

discussed earlier. Rule of law, control of corruption, and government performance have no lines because there were no significant results from or to those variables.

Concluding Points: Country Governance and PPP Governance

To the second research question whether there was any relationship between country governance and PPP governance, the study found no support for the hypothesis when a global score is assigned at the stage level of PPPs; that is, rating each of the preparation, procurement, and management out of 100. The lack of support may be related to the fact the details or the practices at each level are more important than the scores at the stage level. In effect, the study found support for the hypothesis that country governance had a positive influence on the practices of PPP preparation. The significant (positive and negative) results appear on Figure 7. The study found that government effectiveness had a strong positive influence on the prioritization of PPP. Government effectiveness was defined as the quality of public services or civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to policies (Kaufmann et al, 2010). This finding is relevant in that an effective government is more likely to prioritize the PPPs to make them consistent with the investment priorities. Previous findings showed that higher government effectiveness in developing countries (Lee et al., 2018), bureaucratic efficiency and independence (Sabry, 2015; and Bota-Avram, 2014), and government positive attitude towards private sector investments (Osei-Kyei and Chan, 2017) led to higher level of investments.

The study found that voice and accountability and political stability had a negative effect on the assessment of the RFPs and the environmental impact assessment, respectively. Perhaps the assessment of the RFPs and the environment impact are more effectively conducted when there is no political or media involvement in the decision making. In effect, in some countries, there are independent specialized units and agencies that are responsible for conducting such assessments. Political stability had a negative effect on PPP prioritization. That may mean that countries that are politically stable and safe have no

urgency in seeking consistency between prioritization of PPPs and the investments priorities as such measures may already exist.

To the hypothesis that country governance had a positive influence on the practices of PPP procurement, the study found support. The study found that countries with greater freedom of expression and accountability are more likely to meet the 60-day minimum period to bidders to submit bids. This finding is meaningful since media may report on the delays in the contracts while bidders usually have the right to appeal. This makes the procurement authorities more likely to act diligently. Countries with greater government effectiveness tend to meet the minimum period of submission and tend to publish the public procurement notice of the PPPs. Countries that respect and enforce the rule of law tend to issue the public procurement notice as well. No previous studies have focused on the specific practices of PPP procurement. Therefore, it is impossible to discuss these results in light of the extant literature. Furthermore, the purpose of the study was to investigate these new practices.

Unlike accountability and government effectiveness, countries with greater political stability and regulatory quality tend to neither meet the 60-day minimum period to submit nor publish the public procurement notice. Countries with greater political stability and voice and accountability fail to provide details of the PPP stages in bid documents and effectively treat sole proposals. Those with greater political stability tend to not publish the award notice.

To the question on whether country governance had a positive influence on the practices of PPP contract management, the study found support. Political stability and rule of law had a positive influence on the permission of foreign companies to repatriate income whereas voice and accountability and control of corruption had the opposite influence. Previous studies supported that countries with greater political stability (Osei-Kyei and Chan., 2017; Chou et al., 2012) and the rule of law (Moszoro et al., 2014; Lee et al., 2018) attract investors and more investments. The finding is logical as the rule of law provides

some guarantee that government will act with justice, fairness, honesty, and openness for the benefit of all citizens (Salevao, 2005). However, it is also understandable that greater voice and accountability and control of corruption do not work in favor of foreign companies when they repatriate income. In fact, media reporting on the benefits made from projects may discredit the reputation of foreign companies and tag them as greedy. As for corruption, it has been often cited as the reason for capital flight from poor countries to developed countries. An effective control of corruption may therefore limit foreign companies' capacity to repatriate income, especially through illegal means. Foreign companies often see such control as exaggerated and arbitrary. Another important finding is that countries with greater voice and accountability, government effectiveness, and rule of law tend to have the best dispute resolution mechanisms whereas those with greater political stability and regulatory quality tend to have the opposite influence. Solutions are easily found where people are accountable and express their positions freely; when the government has effective means in place; and when the rule of law is enforced. On the other hand, political stability and the regulatory quality may obstruct the process of dispute resolution because of cumbersome strict regulations. It was found that regulatory quality had a negative influence on monitoring and evaluation, which may again be explained by the fact that cumbersome regulations limit the possibilities of further evaluation of projects. The regulations themselves may not be well-designed and fit. The results discussed earlier are presented in Figure 7.

Figure 7: Significant Results: Country Governance on PPP Governance

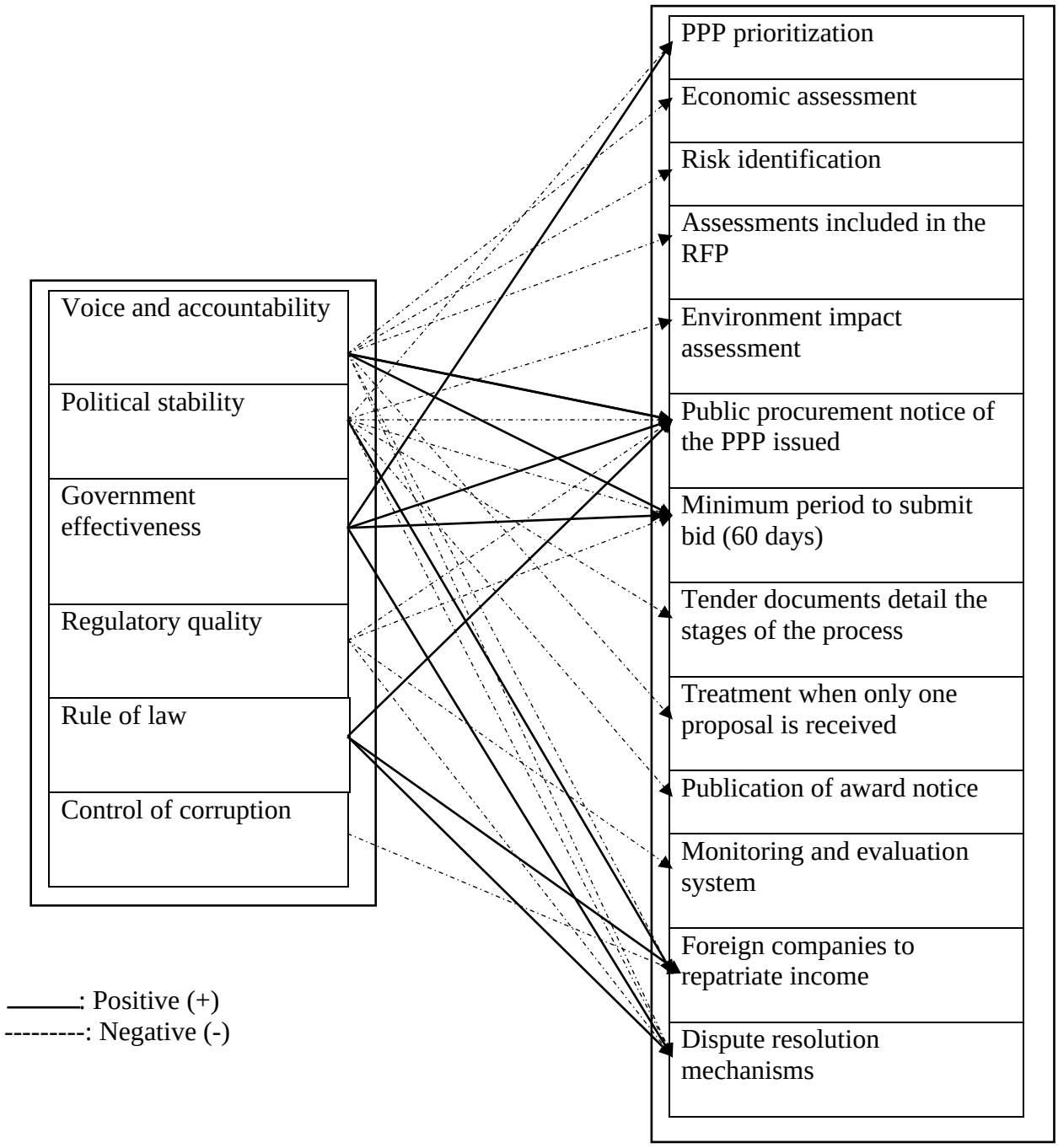


Figure 7 is a summary of the positive and negative results for the influence of country governance on PPP governance. The solid lines show the positive findings whereas the dotted lines represent the negative findings. Figure 7 shows that for the influence of country governance on PPP governance, nine relationships were positive whereas 18 relationships were negative.

Concluding Points: PPP Governance and PPP Outcome

To the third research question that PPP governance had a positive influence on PPP outcome, the study found no support for the hypothesis when a global score is assigned at the stage level of PPP; that is, rating each of the preparation, procurement, and management out of 100. This means that it may not be reasonable to rate PPP at the stage level. Again, the lack of support may be related to the fact that the details or the practices at each level are more important than the scores at the stage level. Thus, the study found support for the hypothesis that the practices of PPP preparation had a positive influence on PPP outcome. The significant (positive and negative) results appear on Figure 8. The study found that countries with standardized PPP model contracts had higher satisfaction in terms of achieved objectives, quality at entry, and Bank overall performance. This confirms previous findings that standardized contract models are important for orientation to better and more efficient agreements (Kotze et al., 1999; The World Bank, 2018a). In particular, standardized models are important for achieving the objectives and for the World Bank to assume its roles of assisting in the preparation and supervision. It was found that fiscal affordability assessment contributes to greater achieved objectives, which was confirmed by the World Bank (2018a). When countries assess their requests for proposals, the World Bank is more likely to provide quality supervision; and when countries conduct environment impact assessment, they are more likely to increase their performance in terms of compliance. The surprising finding is that risk identification negatively influences the Bank's assistance as well as the recipient

country government performance. Difficulties and complexities related to risk identification may slow down the progress of the World Bank and recipient countries. Perhaps seeking consistency between PPP prioritization and public investment prioritization becomes a burden for the Bank and the implementing agencies in recipient countries.

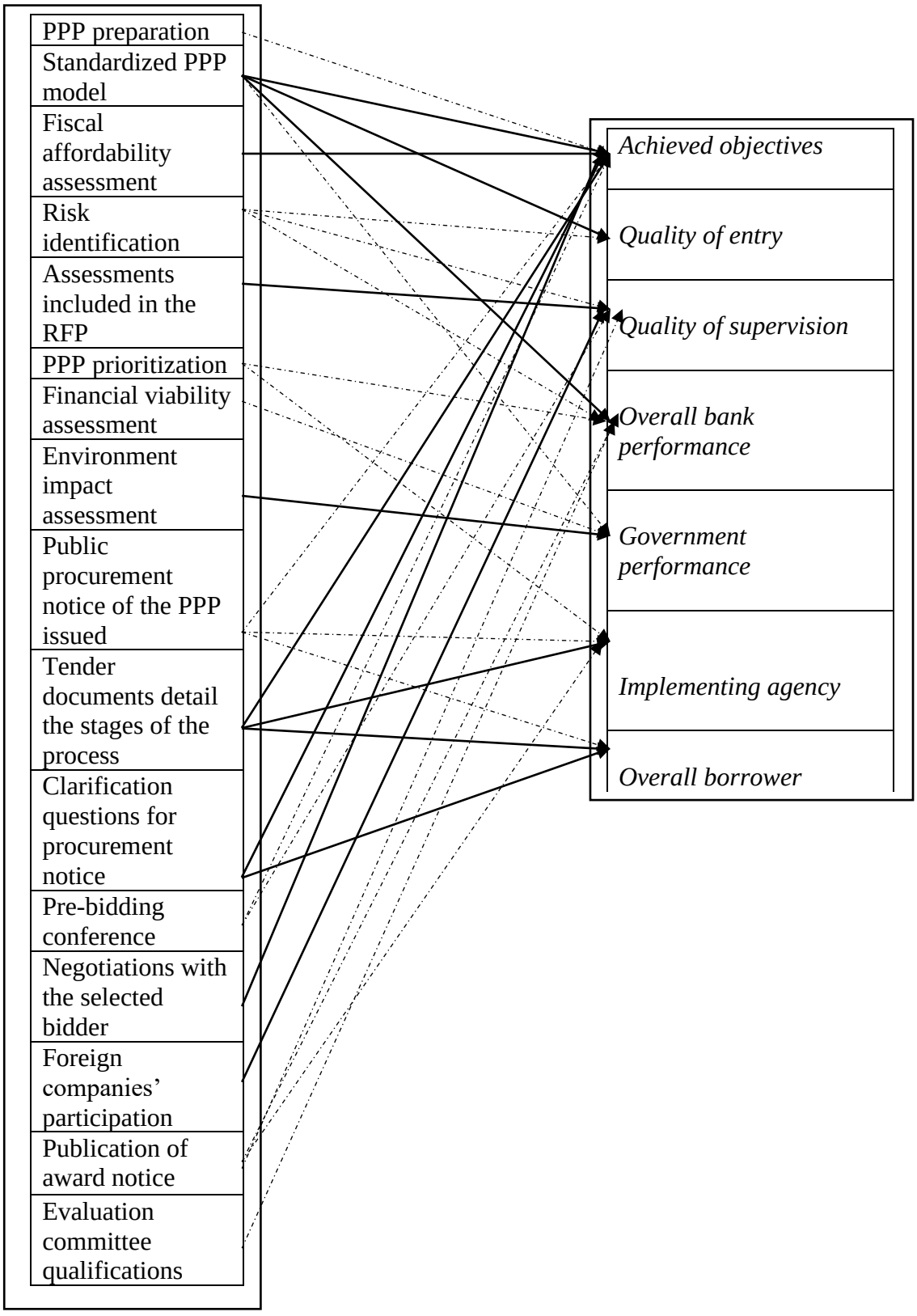
The study found support for the hypothesis that the practices of PPP procurement had a positive influence on PPP outcome. Countries that had bid documents detailing the stages of the process, provided clarification questions, and allowed negotiations with the selected bidder before signing the contract had higher satisfactory achievement of objectives. This finding is supported by past studies which found that direct negotiation, presence of details of the procurement stages, prequalification criteria, and openness to clarification questions on RFPs were necessary for a successful PPP project (El-Sawalhi and Mansour, 2014; Liu et al., 2015). Countries with details of the procurement stages and openness to clarifications improved their overall performance in projects (El-Sawalhi and Mansour, 2014; Liu et al., 2015). Countries with details of the procurement stages could increase the performance of their implementing agencies. The World Bank could expect to increase its overall performance when foreign companies are allowed to participate in the bidding for PPP contracts.

On the other hand, countries that hold a pre-bid conference could neither achieve their objectives nor improve the quality of supervision. The publication of award notice did not facilitate the supervisory role of the Bank either. These findings contradicted the previous literature that pre-bid conference and the publication of award notice were key to PPP success (El-Sawalhi and Mansour, 2014; Liu et al., 2015). It was not also clear why the publication of award notice would have a negative impact on the Bank overall performance as well as on the performance of the implementing agency. The qualifications of evaluation committee members reduced the Bank overall performance while issuing the public procurement notice

of the PPP led to less satisfactory achieved objectives, lower performance of the implementing agency, and of the borrowing country. This finding is contradictory to past studies that found qualifications of evaluation committee members to be a desired practice (Soomro and Zhang, 2015).

The study found support for the hypothesis that the practices of contract management had a positive influence on PPP outcome. In effect, countries that guarantee the rights of lenders to intervene in the process, the dispute resolution mechanisms, and the permission for foreign companies to repatriate income had extensive influence on the performance of the Bank in terms of quality at entry and quality of supervision and on the recipient country in terms of the implementing agency performance and government compliance. This influence is understandable in that the World Bank needs those guarantees to prepare and sustain partnerships. One surprising finding is the negative influence on government performance when there is a system in place to manage the implementation of PPP projects. This negative influence may occur when the system is too strict or not related to the recipient country's conditions or the recipient countries is unprepared to work effectively from the system established to manage the projects. The results discussed earlier are summarized in Figure 8.

Figure 8: Significant Results: PPP Governance on PPP Outcome



_____: Positive (+)
---------: Negative (-)

Figure 8 is a summary of the positive and negative results for the influence of PPP governance on PPP outcome. The solid lines show the positive findings whereas the dotted lines represent the negative findings. Figure 8 show that for the influence of PPP governance on PPP governance, 12 relationships were positive whereas 18 relationships were negative.

Concluding Points: The Mediating Role of PPP Governance

To the question whether PPP governance mediated the relationship between country governance and PPP outcome, the study found that the hypothesis was supported. The findings are new as no previous studies examined the mediating role of PPP governance. The significant results appear on Figure 9. The study found that countries with the bid documents that describe the PPP stages and are open to clarifications of questions mediated the relationship between each of the variables voice and accountability, political stability, regulatory quality, government effectiveness and the PPP outcome variable, achieved objectives. In other words, the influence of voice and accountability, political stability, regulatory quality, and government effectiveness on achieved objectives is indirect through having the bid documents. This also mean that countries with greater voice and accountability, political stability, regulatory quality, government effectiveness may still need to have bid documents if they want to achieve their objectives. It is understandable that the bid documents are important since they describe the stages of the PPP process for potential bidders. The presence of bid documents detailing the PPP stages was also found to mediate the relationship between political stability and the implementing agency performance. In fact, the bid documents are an important for the implementing agencies that need guidance and important details to do their work. The documents lay out the expectations and the requirements for the bidders. The study also found that the relationship between political

stability and the borrower overall performance is mediated by the bid documents detailing the PPP stages and openness to clarifications of questions.

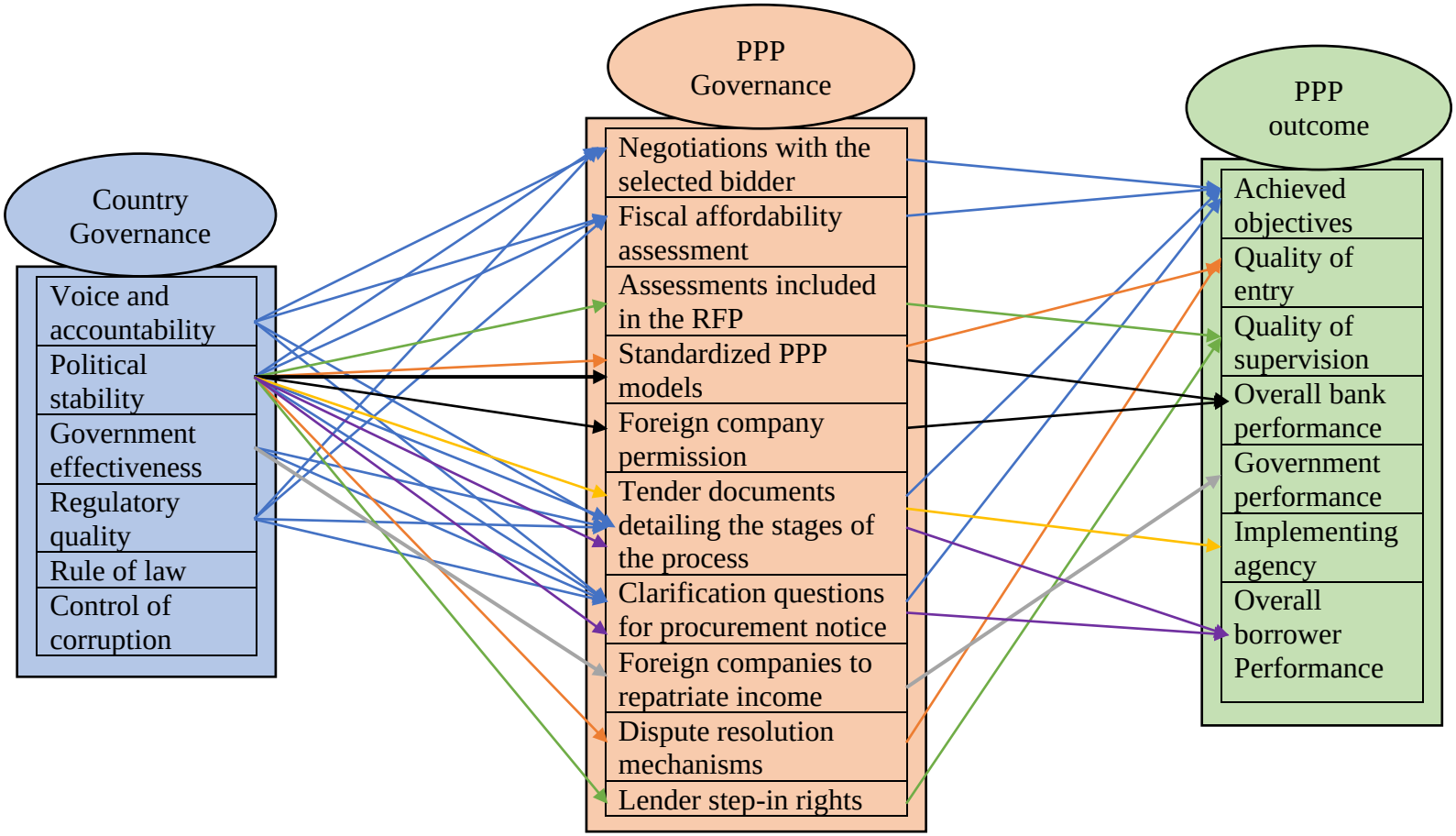
Also important is the finding that negotiation with selected bidders and the fiscal analysis assessment mediate the relationship between voice and accountability, political stability, regulatory quality, and achieved objectives. To achieve their objectives, countries will not only need to have greater voice and accountability, political stability, and regulatory quality, but more importantly ensure that they negotiate with the selected bidders on important terms as well as conduct fiscal assessment with regards to the term of the contracts. Standardized PPP model contracts and the dispute resolution mechanisms mediate the relationship between political stability and quality at entry. For the World Bank to perform well in quality at entry, countries will not only need greater political stability, but also ensure that they have standardized PPP model contracts and dispute resolution mechanisms in place and enforce them. While greater political stability may lead to high performance in quality at entry, the performance is higher when standardized PPP model contracts and dispute resolution mechanisms are enforced. Standardized PPP model contracts and foreign company participation in the bidding process mediate the relationship between political stability and Bank performance. When countries take measures to allow the participation of foreign companies in the PPP bidding process, this increases the overall performance of the Bank. The foreign company income repatriation mediates the relationship between political stability and government performance. This means that recipient countries in addition to political stability need to allow foreign companies to repatriate income generated from their operations in the recipient countries.

The study also found that the inclusion of assessments in the RFPs and bid documents and lender step-in rights mediate the relationship between political stability and quality of supervision. In addition to a stable political situation, there is greater performance in the

supervisory role when countries include their different assessments in the RFPs and allow the lenders to intervene in the process when necessary. That is because the documents provide important information to lenders, which more likely leads to effective decision-making. Allowing the lenders to intervene may also reduce the risks and threats as lenders contribute technical and financial assistance.

Overall, the study found that three practices of the PPP preparation are mediators of the relationships between some variables of country governance and some PPP outcome variables. The practices are the inclusion of assessments in the RFPs, the fiscal analysis assessment, and the standardized PPP model contracts. For PPP procurement, the study found that four practices including bid documents detailing the PPP stages, openness to clarifications of questions, foreign companies' participation in PPP bidding, and negotiations with the selected bidder were mediators of the relationships between country governance and PPP outcome. Three practices of the PPP contract management including the lender step-in rights, the foreign company income repatriation, and the dispute resolution mechanisms were mediators of the relationships between country governance and PPP outcome. The significant mediation relationships are summarized on Figure 9. Rule of law and control of corruption have no lines because there were no significant results.

Figure 9: Significant Mediation Relationships




Mediation of the relationship between the country governance indicators in blue and chieved objectives via the indicators *negotiations with the selected bidder fiscal affordability assessment, bid documents detailing the stages of the PPP process,* and *clarification questions for procurement notice.*


Mediation of the relationship between political stability and quality of supervision via the indicators *assessments included in the RFP* and *lender's step-in rights*.


Mediation of the relationship between political stability and quality at entry via the indicators *standardized PPP models* and *dispute resolution mechanisms*.


Mediation of the relationship between political stability and overall bank performance via the indicators *standardized PPP models* and *foreign company permission.*

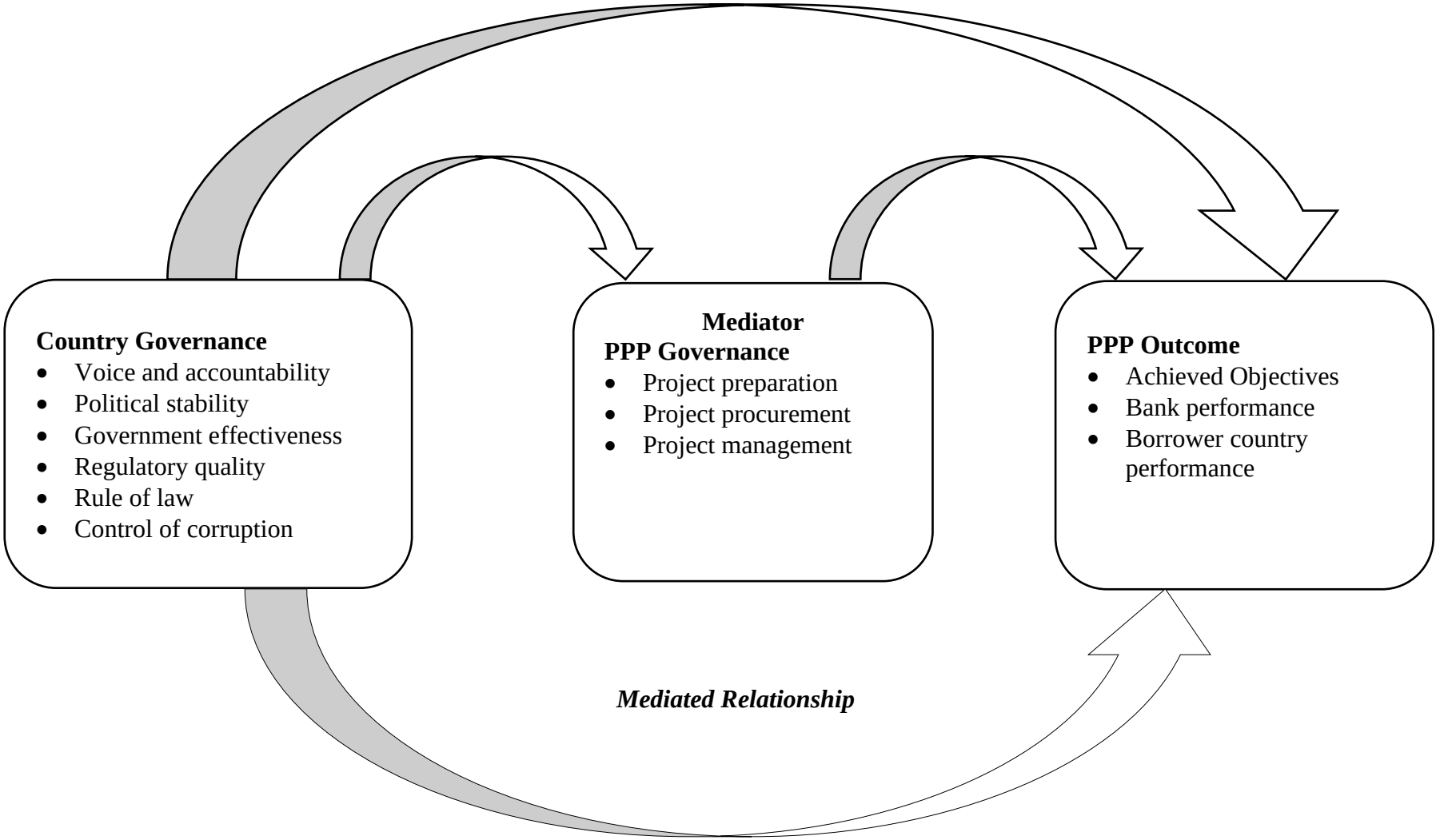

Mediation of the relationship between political stability and implementing agency performance via *tender documents detailing the stages of the PPP process.*


Mediation of the relationship between political stability and overall borrower performance via *bid documents detailing the stages of the PPP process,* and *clarification questions for procurement notice.*


Mediation of the relationship between government effectiveness and government performance via *foreign companies' permission to repatriate income.*

To conclude, the answers to the five research questions led to a new framework for examining the relationships between good governance, PPP governance, and PPP outcome. The framework is shown on Figure 10. The arrows represent the individual relationships between the three concepts. The top longer arrow represents the finding that there is a relationship between good governance and PPP outcome. The short, left arrow represents the finding that there is a relationship between good governance and PPP governance. The short, right arrow represents the finding that there is a relationship between PPP governance and PPP outcome. The bottom arrow represents the finding that PPP governance mediates the relationship between good governance and PPP outcome.

Figure 10: Framework for Understanding Public-Private Partnerships



Concluding Points: Income Level Discussion

Low Income Countries

Low income countries are countries which gross national income per capita is $1,025 or less. To the hypothesis whether country governance had a positive influence on PPP outcome for low income countries, the study found that the hypothesis was supported. When these countries enjoy greater political stability, their implementing agencies are more likely to yield satisfactory performance. This finding is supported by Eberhard and Gratwick (2013) and Lee et al (2018) who found that political uncertainty and internal conflicts in developing countries had a negative impact while Chou et al. (2012) and Osei-Kyei and Chan (2017) found that political stability and the lack of terrorism had a positive impact on PPP outcome. Today, political stability and lack of terrorism are the major determinants of PPP success. The World Bank and its donors or investors believe that technical and financial assistance will be useful only to those countries that can control distracting social, political, and economic conditions. However, this approach may need deeper examination, and if necessary, some individual country level analysis. In other words, investing strategically may help these countries overcome their challenges whereas not investing could mean that these countries can keep sinking deeper into chaos. Brinkerhoff and Brinkerhoff (2011) for example argued that pre-existing institutional and governance shortcomings in developing countries impaired the ability of the partnership to produce desired outcomes. The study found that the regulatory quality did not lead to any satisfactory supervision of the World Bank for low-income country partnerships. In fact, when the quality of the regulations is enhanced, little supervision from the World Bank may be needed or the supervision level is reduced.

The practices of PPP governance were not tested because of the small sample size. For the influence of country governance on PPP governance, the study found that greater

government effectiveness reduced the performance in contract management. This is contrary to past studies that found that good bureaucratic efficiency and independence increased PPP performance (Sabry, 2015; Bota-Avram, 2014).

As far as the influence of the PPP governance on PPP outcome is concerned, the study found that countries with effective PPP preparation yielded an overall satisfactory performance. This is understandable as these countries are more likely to avoid risks and threats at later stages of the process because the preparation stage of PPPs includes risk, fiscal, economic, financial, environmental, and market assessments (Siemonsma et al., 2012; El-Sawalhi and Mansour, 2014; Jacob et al., 2014; Kashi, 2015; Soomro and Zhang, 2015; Opawole and Jagboro, 2017; The World Bank, 2018a; Lee et al, 2018; Osei-Kyei and Chan, 2019). On the other hand, greater PPP contract management had a negative influence on achieved objectives, quality at entry, Bank overall performance, government performance, and the borrowing country overall performance. This means that assigning a global score to the contract management did not provide any useful information on how to improve the outcome of PPP projects including the objectives as well as the Bank's and the recipient countries' performance. However, the influence was close to being positive. Perhaps a closer examination of the composition of the rating will lead to a positive influence; thus, insinuating that more details on contract management rating would improve the PPP outcome for low income countries. Examining the effects of the practices of PPP contract management would have provided more detailed information. However, the practices were not tested because of the small sample size. The study made similar remarks for the influence of the PPP procurement on the Bank overall performance and the implementing agency performance.

Lower-Middle Income Countries

Lower-middle income countries are countries which gross national income per capita ranges from $1,026 to $4,035. To the hypothesis that country governance had a positive influence on PPP outcome for the lower-middle income countries, the study found no significant results. This finding is contrary to past studies which found that good governance led to better PPP outcomes.

To the hypothesis that country governance had a positive influence on PPP governance for lower-middle income countries, the study found that government effectiveness and control of corruption had a large positive influence on PPP preparation. If the governments of these countries are effective in their policies and their control of corruption, especially those towards PPPs, the preparation stage is more likely to be significantly improved. Government effectiveness may improve the preparation of PPPs as the government will have taken steps and measures for improving the preparation of PPPs. The same is true for control of corruption as this means that the government will have taken some measures to reduce or discourage corruption in PPPs. The study found that political stability had a negative influence on PPP procurement. The procurement stage is more concerned with transparency and fairness in the process. The requirement for transparency and fairness are dealt within the agencies and PPP units. Therefore, the decisions may have less to do with whether a country is politically stable. In other words, seeking political stability is a far-fetched condition that may compromise the pursuit of transparency and fairness.

To the hypothesis that PPP governance had a positive influence on PPP outcome for lower-middle income countries, the study found that PPP preparation had negative influence on quality at entry. Countries that are already equipped to prepare their PPPs may not need

further assistance from the Bank. In other words, additional and overlapped requirements would produce the opposite effect.

Upper-Middle Income Countries

Upper-middle income countries are countries which gross national income per capita ranges from $4,036 to $12,475. This level includes Albania, Algeria, Angola, Argentina, Azerbaijan, Bosnia & Herzegovina, Belarus, Botswana, Brazil, Bulgaria, China, Colombia, Costa Rica, Dominican Republic, Ecuador, Gabon, Georgia, Iraq, Jamaica, Jordan, Kazakhstan, Lebanon, Macedonia, FYR Malaysia, Mauritius, Mexico, Montenegro, Panama, Paraguay, Peru, Romania, Russian Federation, Serbia, Thailand, and Turkey (see Table 11).

To the hypothesis that country governance had a positive influence on PPP outcome for upper-middle income countries, the study found that greater political stability was largely indicative of the outcome of PPPs. The study found that countries with greater political stability had a positive influence on all seven PPP outcome variables including achieved objectives, quality of supervision, Bank overall performance, performance of the implementing agency, government performance, quality at entry, and the borrower government overall performance. Chou et al. (2012) had found that political stability was important for attracting the private partners for infrastructure projects. Their findings fell short of discussing outcomes as is done in this study. The study also found that the regulatory quality had an extensive positive influence on achieved objectives, performance of the implementing agency, government performance, and the overall performance of the borrowing country. This finding stood out because it shows that upper-middle income level countries that have effective regulations not only achieve their objectives, but also improve the performance of their agencies. Sabry (2015) argued that regulatory quality was indicative of good performance. This study similarly found that control of corruption had a significant positive influence on achieved objectives, which means that the ability to control corruption

leads to more satisfactory results in terms of objectives (Galilea and Medda, 2009). Asongu (2013) argued that countries engaged in the fight against corruption through institutional reforms had positive results.

Finally, the study found that voice and accountability had a significant positive influence on the Bank overall performance. This means that freedom of expression is more likely to provide useful information to the World Bank in its decision-making, and thus improving its performance. The study found that for upper-middle income countries, government effectiveness and rule of law reduced the likelihood of achieving the objectives. In effect, if those countries per their level of development already have strong institutions and measures with regards to their policies, seeking to reform those institutions may create confusion for the agencies, and therefore create the opposite effect. The study found that the rule of law had a negative influence on the performance both of the recipient countries and the Bank performance especially with regards to the quality at entry, Bank overall performance, performance of the implementing agency, government performance and the borrowing government overall performance. Upper-middle income countries already have strong legal systems. Seeking to reform these systems may create some overlap and confusion for implementing agencies. Therefore, the recipient countries and the World Bank need to carefully examine the intuitional conditions of upper-middle countries when recommending or requiring certain conditions to be met. In short, the finding implies that upper-middle countries already operate under acceptable conditions in the decision-making process.

To the hypothesis that country governance had a positive influence on PPP governance, the study found that for upper-middle income countries, regulatory quality had a positive influence on PPP preparation by about 29.07%. That may be because the regulations provide some guidelines for risk identification, economic assessment, and environmental

impact assessment; and the government enforces those guidelines. Unlike regulatory quality, higher scores in the rule of law reduce the score in PPP preparation.

To the hypothesis that PPP governance had a positive influence on PPP outcome for upper-middle income countries, the study found that PPP procurement had a positive influence on achieved objectives. Fairness, transparency, and competition in the PPP process increase the likelihood of satisfactory results as the bidder emerged from the process and is awarded the contract. The study also found that upper-middle income countries were more likely to increase their implementing agency performance when there were fairness, transparency, and competition. However, when those countries increase their contract management, they could not expect any change in the performance of their implementing agencies.

Low, Lower-Middle, and Upper-Middle Income Countries

The study then combined the three previous levels and left out the high income countries. To the hypothesis that country governance will have a positive influence on PPP outcome for all levels except high level income countries, the study found that political stability had a positive influence on achieved objectives, quality at entry, quality of supervision, Bank overall performance, the performance of the implementing agency, and the overall performance of the borrowing country. This finding was also supported for lower-middle income countries and upper-middle income countries when they were analyzed individually. The negative influence of voice and accountability on achieved objectives is also confirmed for the three levels of income combined. The study found no significant results that country governance will have a positive influence on PPP governance. To the hypothesis that PPP governance will have positive influence on PPP outcome, it found that contract management had a significant negative influence on achieved objectives. In short,

the combination of the three levels does not provide detailed findings of the relationships between country governance, PPP governance, and PPP outcomes.

Sub-Saharan African Countries

The study particularly examined a total of 32 sub-Saharan African countries and found that the hypothesis that country governance had a positive influence on PPP outcome for Sub-Saharan African countries was supported. Ensuring political stability was important for Sub-Saharan African countries to improve their overall and implementing agency performance as well as the Bank overall performance. “Voice and accountability” was also important for them to increase their global scores in PPP procurement. Seeking greater political stability for improving PPP procurement was more likely to produce the opposite effect. The hypothesis that PPP governance had a positive influence on PPP outcome yielded no results.

Beyond the Study: Implications for Coronavirus 2019-Covid-19

With the Covid-19 increasingly affecting the economies of countries, PPPs are experiencing delays in construction schedules and funding sources and disruptions of the operations of PPPs underway. The transportation PPPs are struggling to generate revenues (Baxter, 2020). As a result, the World Bank held sessions with governments to discuss solutions to distressed PPPs by emphasizing attention to best practices, good governance, transparency, and fiscal sustainability (Fakhoury, 2020). Countries needs to enhance their performance in the best practices of PPPs as well as in the good governance factors discussed in this study. In these unprecedented times, some practices of PPP governance such as negotiations and lender step-in rights will have to be used to cope with the financial losses resulting from the Covid-19. As Fakhoury (2020) explained, the World Bank is aware of the disruptions created by the pandemic and is playing its role of financial advice, technical

assistance, and expertise. Koala (2020) suggested that governments and the private partners engage in public-private stewardship to tackle the consequences of Covid-19.

The Covid-19 has also forced many employees to work from home. In other words, telecommuting though existing before the covid-19 now appears as the most copying strategy to the Covid-19. As such, it casts doubt on the future of physical transportation infrastructure facilities for connecting work and home. If the health of people continues to be threatened by the pandemic which is contracted by human contact, more industries and individuals will find it more beneficial and reliable to adopt telecommuting for the tasks that employees could perform from home. In countries with high internet speed, telecommuting can be the best alternative, especially in the short term. However, in developing countries where the formal economic market is smaller than the informal market, and where most industries and individuals could not access high speed internet, telecommuting may not be an effective solution. Those countries will face the dual task of concomitantly developing their transportation infrastructure and promoting access to high speed internet connection.

Recommendations

Political stability and the lack of terrorism and ethnic divisions appeared as the indicator that is the most conducive to better performance both when countries are considered globally and when they are considered by income level or geographically. Unstable political conditions with frequent attacks and arbitrary use of power on operations disturbed the fair, just, and transparent process as well as the implementation of the projects. Political instability leads to unexpected changes of courses of actions, personnel, contractors as well as poor and negligent execution of projects.

The internationally recognized practices must be considered by the World Bank and recipient countries in two perspectives. First, they must be considered by how they are

influenced by good governance indicators, and second by how they influence PPP outcomes. The practices should not be prescribed and isolated. The study recommends studying their relationship with good governance and PPP outcome in order to establish some coherence in the good governance-PPP governance-and PPP outcome chain. By doing so, recipient countries and the World Bank establish well-known and reliable paths towards effectiveness and efficiency in PPP projects. This study has explored, identified, and established those paths.

The World Bank and recipient countries should understand that practices such as bid documents detailing the PPP stages and openness to clarification of questions mediate the relationship between voice and accountability and achieved objectives; between political stability and achieved objectives; between regulatory quality and achieved objectives; and between government effectiveness and achieved objectives. Bid documents detailing the PPP stages and openness to clarification of questions mediate the relationship between political stability and the borrower overall performance. The negotiation with selected bidders and the fiscal analysis assessment mediate the relationship between voice and accountability and achieved objectives; between political stability and achieved objectives; and between regulatory quality and achieved objectives. The permission of foreign company to repatriate income mediates the relationship between political stability and government performance. The standardized PPP model contracts and the dispute resolution mechanisms mediate the relationship between political stability and quality at entry. The standardized PPP model contracts and foreign company participation in the bidding process mediate the relationship between political stability and Bank performance. The inclusion of assessments in the RFPs, bid documents detailing the PPP stages, and lender step-in rights mediate the relationship between political stability and quality of supervision.

On the influence of good governance on the practices of PPP process, some practices need special consideration. Government effectiveness will increase the likelihood of practices such as the consistency between the PPP's prioritization and public investment prioritization, the 60-day minimum period to submit bids, the publication of the public procurement notice of the PPPs, and the dispute resolution mechanisms. The rule of law will increase the likelihood that the publication of the public procurement notice will occur and that the dispute resolution mechanisms are enforced. Greater voice and accountability will increase the likelihood that the dispute resolution mechanisms are in place whereas the opposite is true for the assessment of the RFPs. Countries with greater political stability and rule of law enforce practices such as the permission of foreign companies to repatriate income whereas the opposite is true with voice and accountability and control of corruption. Political stability reduced the likelihood that there will be consistency between the PPP's prioritization and public investment prioritization, the dispute resolution mechanisms, and the publication of award notice. Countries with greater political stability do not meet the 60-day minimum period to submit bids, do not publish the public procurement notice, and do not conduct the environmental impact assessment. Countries with greater regulatory quality do not enforce the dispute resolution mechanisms and do not complete monitoring and evaluation.

Some consideration is also needed on the influence of PPP practices on PPP outcome. The standardized PPP model contracts, fiscal affordability assessment, bid documents detailing the stages of the process, clarification of questions, negotiations with the selected bidder before contract signing increase the likelihood of achieving the objectives whereas holding pre-bid conference and the publication of the public procurement notice of the PPP do not. The standardized PPP model contracts, consistency between PPP prioritization and public investment prioritization, participation of foreign companies in bidding increase the Bank overall performance whereas the publication of award notice and the qualifications of

evaluation committee members do not. The standardized PPP model contracts increase quality at entry whereas risk identification reduces it. Consistency between PPP prioritization, public investment prioritization, bid documents detailing the procurement stages, and openness to clarifications increase the likelihood of greater performance of the implementing agencies whereas the publication of the public procurement notice of the PPPs and of the award notice reduce its likelihood. Bid documents detailing the procurement stages and openness to clarifications increase the overall performance of recipient countries. The environment impact assessment increases the government performance whereas risk identification and the public procurement notice of the PPP do not. Assessment of the request for proposals increases the quality supervision whereas holding a pre-bid conference and the publication of award notice do not.

The study shows that using a global score at the stage level of PPPs is not indicative of the practices needed by countries to improve their performance. The World Bank and member countries must focus on the internationally recognized practices to make recommendations to recipient countries. The study also shows that depending on the income level (lower, lower-middle, upper-middle, and high), the governance conditions are different and so should the solutions proposed to improve their performance in PPPs be. Not all solutions are relevant for improving the performance at all the income levels. Not all good governance indicators contribute to better PPP outcomes for all countries.

In terms of the influence of good governance on PPP outcomes, the study makes specific recommendations based on income level. For example, maintaining political stability is important for low income, upper-middle income, and sub-Saharan African groups whereas no significant results could be found for the lower-middle income group. For upper-middle income countries, regulatory quality, control of corruption, and voice and accountability are

important indicators of satisfactory outcome whereas government effectiveness and rule of law lead to negative results.

Contribution

To Practice

The study presented important information that is relevant to the community of practitioners especially for the World Bank, its donors, and the recipient countries and their implementing agencies. The study explored four important relationships based on the major concepts of good governance, PPP governance and PPP outcomes and discussed the results. First, the influence of country governance on PPP outcome was explored. The results showed that focusing on good governance indicators such as political stability could contribute to higher satisfactory performance.

Second, the influence of country governance on PPP governance was explored to understand whether countries with good governance scores could improve their preparation, procurement, and management score. The study found that when scores are assigned at the stage level of the PPP process, no results could be useful. On the other hand, countries with good governance scores could improve their internationally recognized practices or the practices of the preparation, procurement, and management stages.

Third, the influence of PPP governance on PPP governance was explored to understand whether countries with high scores in the main stages and the recognized practices could improve their PPP outcomes. Assigning scores to the main stages is not useful to countries to understand areas that need improvement. On the other hand, the internationally recognized practices influence the outcome of PPP projects.

Fourth, the study established that the internationally recognized practices for PPPs not only had an influence on PPP outcome, but also mediated the relationship between good governance indicators and PPP outcome indicators. The mediation means that instead of

countries focusing on good governance indicators alone to improve their performance, they could as well do so by improving the practices of the PPP process. In other words, it is less likely that countries will achieve their PPP objectives if they do not enforce these internationally recognized practices.

Good governance was traditionally studied to understand its impact on the macroeconomic development and government programs and policies. There was less focus on the influence of good governance on arrangements such as PPPs. When good governance was studied in relation to PPPs, it consisted of examining the influence of good governance on the level of investments and attracting investors. This study conducted a deeper examination as it studied the relationship with the outcomes of PPP projects. The World Bank and the recipient countries must understand that the factors that attract investments may be different than those that improve outcomes. Furthermore, the focus on income level showed that the improvements needed by countries to improve their capacity and outcome depend on conditions that are specific to their income level.

To Theory

First, the study contributes to theory as it suggested the mediation role between good governance and PPP outcome. According to Ekundayo (2017), good governance mirrors an efficient public service, an independent judicial system and legal framework to enforce contracts, and responsible use of public funds. An implication of the need of good governance theory is that whenever good governance exists in a country, satisfactory results are expected. This study argued that PPP contracts led to better outcomes because established standards are enforced, which maximize the results of PPP projects. The influence of good governance on PPP outcome was too farfetched as the important role of internationally recognized practices had been omitted.

Second, the study contributes to theory because it fills the gap and corrects the mischaracterization of outcomes. Most studies examined the relationship between good governance and the level of investment or the attraction of investments and insinuated in their conclusions that the level of investment is an outcome. This study argued that the level of investment in PPPs could not be considered an outcome resulting from good governance. It is the performance of the recipient governments and their implementing agencies and the World Bank with regards to the PPP process that is more indicative of outcomes.

Third, good governance had not been studied in relation to the internationally recognized practices. Previous studies did not examine the influence of good governance on the practices of PPPs. In other words, the idea that political stability, accountability, rule of law, etc. could lead to the enforcement or non-enforcement of those practices was not explored. This study focused extensively on the practices and the significant results were presented and discussed earlier.

Fourth, the study conceived the internationally recognized practices under the concept of PPP governance; referring to how those practices are enforced and whether they are enforced by countries. In other words, the term "PPP governance" could barely be found in the literature. The successful enforcement of these practices entails governing units and committees in place. The governance starts from the preparation to the implementation and concerned monitoring of progress, changes, integration, and closing of PPP contracts.

Limitations

The sample of100 countries used constitute a smaller sample compared to number of parameters generated during the analyses. The small size of the sample made it impossible to enter all variables at once. That is why the practices of the three stages were run separately. When the analyses were run by income level, the subcategories which had from 10 to 12 variables could not be analyzed. Therefore, even though the study was able to examine the

subcategories for 100 countries, it could not do the same when they were broken down into smaller sample from 23 to 35 countries. Another limitation is that for the PPP outcome data, certain projects for certain countries were not updated. Updated projects would allow not only the use of current scores but also the use of scores over time. The same issue was noticed with the internationally recognized practices because data are available for only 135 countries in 2017. The previous years 2015 and 2016 were limited to ten countries and 82 countries respectively, which would further limit the sample of the study if they were to be considered in the analysis. Despite the limitations, the study remains strong for exploring multiple and new relationships.

Generalizability

The study used a sample of 100 countries out of possible 200 or more countries or entities. The sample is a mix of low, middle, and high income countries. That sample is representative of the population of countries. The measurement validity including convergent validity and discriminant validity as well as content validity of the exogenous, endogenous, and control variables were discussed earlier in the dissertation. The measurement validity showed that there was validity and reliability in the data, hence the argument that external validity to a greater extent is achieved. However, it could not be stated that countries are equally represented in terms of their influence on the overall results, hence this study could not defend the achievement of internal validity. To account for that issue, the study approached countries based on their income level characterized by the size of the national gross income per capita, which more likely led to strong internal validity except that the use of the GNI to classify the country remained debatable. In the income-based analysis, the results of one level could not be generalized to another.

Future Studies and Publication

This study explores the multiple possible relationships between good governance, PPP governance, and PPP outcome. These relationships can be more deeply examined in future studies. The availability of updated data will make those studies relevant for understanding the factors that influence the outcomes of PPP projects. The role of PPP governance for achieving such outcomes should be particularly researched. The findings in this study can serve as a basis for conducting specific studies based on regions or groups of countries as all regions and countries are not covered in this study for lack of data. They can also pick and study the internationally recognized practices by focusing on one or on all three PPP stages. The main concern in previous studies was the problematic definition of PPP outcome. As scholars conduct more studies, they need to be specific about whether it is PPP output or outcome that is being studied. Finally, scholars should aim at fitting the framework provided with new findings either based on income, geographical, or other considerations.

Future studies can also use the conceptual framework examine PPPs at the miso/ micro level of governments. Local governments also enter PPP contracts for the construction of infrastructure. For these governments, good governance and good practices are necessary. Therefore, the framework can be applied to the PPP projects at the local level. The studies at the local level may be focus on transportation PPPs as well as PPPs in departments where contracts are frequently used such as the Department of Defense.

The next step is to publish the results of this research in peer-review journals and eventually put together a book. The results of this research will be presented at conferences and practitioners' forums. The hope is that this research will open the door to grant opportunities for further research for the World Bank and its stakeholders. Furthermore, the skills developed throughout this process can contribute to the World Bank through consulting. Considering a career in the general field of public administration and policy,

pursuing the study of PPPs in relation to good governance and good practices is of special interest.

REFERENCES

Abednego, M. P., & Ogunlana, S. O. (2006). Good project governance for proper risk allocation in public–private partnerships in Indonesia. *International Journal of Project Management, 24*(7), 622-634.

Acemoglu, D., & Robinson, J. (2010). The role of institutions in growth and development. *Leadership and Growth, 135*.

Acock, A. C. (2013). Discovering structural equation modeling using Stata. *Stata Press Books*.

Adcock, R., & Collier, D. (2001). Measurement validity: A shared standard for qualitative and quantitative research. *American Political Science Review, 95*(3), 529-546. Doi:10.1017/S0003055401003100

Adrian M. T, & Mabel S. A. (2016). Good governance as perceived by Dabawenyos. *University of Mindanao International Multidisciplinary Research Journal, 1*(2), 108-116.

Agnafors, M. (2013). Quality of government: Toward a more complex definition. *The American Political Science Review, 107*(3), 433-445. doi:http://dx.doi.org.proxy.lib.odu.edu/10.1017/S0003055413000191

Ahmad, E., Ullah, M. A., & Arfeen, M. I. (2012). Does corruption affect economic growth? *Latin American Journal of Economics*, *49*(2), 277-305.

Aisen, A., & Veiga, F. J. (2013). How does political instability affect economic growth? *European Journal of Political Economy*, *29*, 151-167.

Alam, M. R., Kiterage, E., & Bizuayehu, B. (2017). Government effectiveness and economic growth. *Economic Bulletin, 37*(1), 222-227.

Alemu, A. (2018). The effects of corruption control, political stability, and tax level on illicit financial flows from African countries. *International Journal of Global Business,11*(2), 1-8.

Allan, T. R. (2003). *Constitutional justice: A liberal theory of the rule of law*. Oxford University Press on Demand.

Anonymous. (2000). Good governance. *African Business*, (250), 24-25.

Anonymous. (2015). How good governance can curb illicit financial flows out of Africa. *International Tax Review*, N/a.

Anoruo, E., & Braha, H. (2005). Corruption and economic growth: the African experience. *Journal of Sustainable Development in Africa, 7*(1), 43-55.

Asongu, S. A. (2013). Fighting corruption in Africa: Do existing corruption-control levels matter? *International Journal of Development Issues, 12*(1), 36-52.

Asongu, S. A., & Nwachukwu, J. C. (2017). The impact of terrorism on governance in African countries. *World Development*, *99*, 253-270.

Axelrod, R. (1984). *The Evolution of co-operation.* New York, Basic Books; and London, Penguin (1990).

Baker, N. B. (2016). Transaction costs in public–private partnerships: The weight of institutional quality in developing countries revisited. *Public Performance & Management Review*, *40*(2), 431-455.

Bansal, P. C. (2003, January). Privatization and public-private partnerships by E. S. Savas. *Indian Journal of Industrial Relations*, *38*(3), pp. 381-385.

Bao, F., Chan, A. P., Chen, C., & Darko, A. (2018). Review of public–private partnership literature from a project lifecycle perspective. *Journal of Infrastructure Systems*, *24*(3), 04018008.

Baron, R. & Kenny, A. D. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*. *51*(6), 1173.

Baxter, D. (2020, March 10). How will coronavirus affect public-private partnerships? https://blogs.worldbank.org/ppps/how-will-coronavirus-affect-public-private-partnerships

Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods & Research*, *16*(1), 78-117.

Bojović, V. (2006) "Public private partnership as a last resort for traditional public procurement", *Panoeconomicus*, *53*(3), pp.299-311.

Bota-Avram, C. (2014). Good governance and doing business: Evidence from a cross-country survey. *Transylvanian Review of Administrative Sciences,* (41E), 27-45.

Brinkerhoff, D. W., and Brinkerhoff, J. M. (2011). Public-private partnerships: perspectives on purposes, publicness, and good governance, *Public Administration and Development*, 31*(1)*, pp. 2-14.

Broadbent, J., & Laughlin, R. (2003). Public private partnerships: an introduction. *Accounting, Auditing & Accountability Journal*, *16*(3), 332-341.

Brown-Shafii, S., & ProQuest. (2011). *Promoting good governance, development, and accountability [e-book] implementation and the WTO*.

Byman, D. (2018, 7 February). Why the United States won't do "governance." https://www.brookings.edu/blog/order-from-chaos/2018/02/07/why-the-united-states-wont-do-governance/

Carrillo, P., Robinson, H., Foale, P., Anumba, C., & Bouchlaghem, D. (2008). Participation, barriers, and opportunities in PFI: The United Kingdom experience. *Journal of Management in Engineering*, *24*(3), 138-145.

Casady, C. B., Eriksson, K., Levitt, R. E., & Scott, W. R. (2019). (Re) defining public-private partnerships (PPPs) in the new public governance (NPG) paradigm: An institutional maturity perspective. *Public Management Review*, 1-23.

Celik, H. E., & Yilmaz, V. (2013). Structural Equation Modeling with LISREL 9.1, Basic Concepts–Applications–Programming. *Ankara: Ani Yayincilik.*

Chalmers, S., & Pahuja, S. (2019). (Economic) Development and the rule of law. *The Cambridge Companion to the Rule of Law (Cambridge University Press, forthcoming).*

Chen, C., & Doloi, H. (2008). BOT application in China: Driving and impeding factors. *International Journal of Project Management*, *26*(4), 388-398.

Chen, C., Wang, Q., & Fang, R. Y. (2014). An Empirical analysis of private participation in infrastructure (PPI) projects in the renewable energy sector of China. In *Advanced Materials Research* (Vol. 869, pp. 488-494). Trans Tech Publications.

Cheung, E., Chan, A. P., & Kajewski, S. (2012). Factors contributing to successful public private partnership projects: Comparing Hong Kong with Australia and the United Kingdom. *Journal of Facilities Management*, *10*(1), 45-58.

Chou, J. S., Tserng, H. P., Lin, C., & Yeh, C. P. (2012). Critical factors and risk allocation for PPP policy: Comparison between HSR and general infrastructure projects. *Transport Policy*, *22*, 36-48.

Cronbach, L., & Meehl, P. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52*(4), 281-302.

Cruz, C. O., Marques, R. C., & Cardoso, P. (2014). Empirical evidence for renegotiation of PPP contracts in the road sector. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, *7*(2), 05014003.

Custos, D., & Reitz, J. (2010). Public-private partnerships. *American Journal of Comparative Law*, *58*(SS), 555-584.

D' Agostino, R. B., Belanger, A., & D'Agostino Jr, R. B. (1990). A suggestion for using powerful and informative tests of normality. *The American Statistician*, *44*(4), 316-321.

Das, K., & Quirk, T. (2016). Which institutions promote growth? Revisiting the evidence. *Economic Papers: A Journal of Applied Economics and Policy*, *35*(1), 37-58.

De Clerck, D., & Demeulemeester, E. (2014). Towards a more competitive PPP procurement market: A game-theoretical analysis. *Available at SSRN 2464054.*

Diaz, V. (2007). Analysis of the effect of remittances on economic growth using path analysis. *University of Texas-Pan American. www. worldbank. org www. cisstat. org http://armstat. am/am/www. imf. org http://europeandcis. undp. org/data*

Doing business with the United Nations Secretariat (2015). *United Nations Procurement Division*.

Dridi, M. (2013). Corruption and economic growth: The transmission channels, *Journal of Business Studies Quarterly, 4*(4), 121-152.

Durakoğlu, S. M. (2011). Political institutions of electricity regulation: The case of Turkey. *Energy Policy*, *39*(9), 5578-5587.

Easterly, W., & Levine, R. (1997). Africa's growth tragedy: policies and ethnic divisions. *The Quarterly Journal of Economics*, *112*(4), 1203-1250.

Easterly, W., Ritzen, J., & Woolcock, M. (2006). Social cohesion, institutions, and growth. *Economics & Politics*, *18*(2), 103-120.

Eberhard, A., & Gratwick, K. (2013). Investment Power in Africa: Where from and where to? *Georgetown Journal of International Affairs, 14*(1), 39-46. Retrieved from http://www.jstor.org/stable/43134383

Economist Intelligence Unit (EIU) (2015). "Evaluating the environment for public–private partnerships in Asia-Pacific: The 2014 Infrascope." http://www.adb.org/publications/evaluatingenvironmentppp-asia-pacific-2014-infrascope

Ekundayo, W. (2017). Good governance theory and the quest for good governance in Nigeria. *International Journal of Humanities and Social Science, 7*(5), 154-161.

El-Sawalhi, N. I., & Mansour, M. A. (2014). Preparation critical success factors for Public private partnership (PPP) projects in Palestine, *1*(2).

Estache, A., & Iimi, A. (2011). (Un) bundling infrastructure procurement: Evidence from water supply and sewage projects. *Utilities Policy*, *19*(2), 104-114.

Fakhoury N, I. (2020, June 10). How the World Bank is looking at COVID-19 and public-private partnerships, right now and post-crisis. https://blogs.worldbank.org/ppps/how-world-bank-looking-covid-19-and-public-private-partnerships-right-now-and-post-crisis

Flinders, M. (2005). The politics of public–private partnerships. *The British Journal of Politics and International Relations*, *7*(2), 215-239

Forrer, J., Kee, J. E., Newcomer, K. E. and Boyer, E. (2010) "Public-private partnerships and the public accountability question", *Public Administration Review*, *70*(3), pp.475-484.

Freckleton, M., Wright, A., & Craigwell, R. (2012). Economic growth, foreign direct investment, and corruption in developed and developing countries. *Journal of Economic Studies, 39*(6), 639-652.

Freedom House (2017) Freedom in the world 2017: Table of country scores. Retrieved 29th April 2019 from https://freedomhouse.org/report/fiw-2017-table-country-scores

Galilea, A., & Medda, F. (2009). Analyzing the influence of national political and economic factors on the success of public-private partnerships in transport. *Ingeniería y Desarrollo*, (25), 1-24

Gberevbie, D. E., Oyeyemi, A. I., & Excellence-Oluye, N. (2014). The Challenges of good governance, accountability of governmental agencies and development in Nigeria. *ACTA UNIVERSITATIS DANUBIUS, 6*(2), 80-97.

Graham, J., Plumptre, T. W., & Amos, B. (2003). *Principles for good governance in the 21st century*. Ottawa: Institute on governance.

Greve, C., & Hodge, G. (Eds.). (2013). *Rethinking public-private partnerships: strategies for turbulent times*. Routledge.

Guasch, J. L., Benitez, D., Portabales, I., & Flor, L. (2016). The renegotiation of public private partnerships contracts (PPP): An Overview of its recent evolution in Latin America. *Revista Chilena de Economía y Sociedad, 10*(1).

Hart, O. (2003). "Incomplete contracts and public ownership: remarks, and an application to public-private partnerships", *The Economic Journal, 113*(486), pp. 69-76.

Hayllar, M. R., & Wettenhall, R. (2010). Public-private partnerships: Promises, politics and pitfalls. *Australian Journal of Public Administration, 69*(s1), S1-S7.

Langbein, L., & Knack, S. (2010). The Worldwide governance indicators: six, one, or none? *Journal of Development Studies, 46*(2), 350–370. https://doi.org/http://www.tandfonline.com/loi/fjds20

Hoppe, E. I., Kusterer, D. J., & Schmitz, P. W. (2013). Public–private partnerships versus traditional procurement: An experimental investigation. *Journal of Economic Behavior & Organization, 89*, 145-166.

Houdhary, A. B., & Reksulak, M. (2019). Reducing the impact of ethnic tensions on economic growth: economic or political institutions? In *Economic and Political Institutions and Development* (pp. 167-182). Springer, Cham.

Huber, C. (2013). "generalized structural equation modeling in stata." *IDEAS Working Paper Series from RePEc* (2013): IDEAS Working Paper Series from RePEc, 2013. Web.

Huber, C. (2014, November 19). Introduction to structural equation modeling using Stata. StataCorp: California Association for Institutional Research.

https://www.cair.org/wp-content/uploads/sites/474/2015/07/HuberC-SEMWorkshop.pdf

Hudon, P. A. (2011). A critique of public-private partnerships in Quebec: Democratic deficiencies and unethical procurement. *Public Integrity*, *13*(3), 257-274.

Hueskes, M., Verhoest, K., & Block, T. (2017). Governing public–private partnerships for sustainability: An analysis of procurement and governance practices of PPP infrastructure projects. *International Journal of Project Management*, *35*(6), 1184-1195.

Iacobucci, D. (2008). *Mediation analysis* (Quantitative applications in the social sciences; no. 07-156). Los Angeles: Sage.

Independent Evaluation Group (IEG). (2019a). IEG data and ratings. Retrieved 23rd April 2019 from http://ieg.worldbankgroup.org/data#

Institute on Governance. Defining Gov-ern-ance. Retrieved 23rd March 2020 from https://iog.ca/what-is-governance/

International Bank for Reconstruction and Development (IBRD) (1994, May). Development in practice: The World Bank's experience in governance. Retrieved 29th April 2019 from (http://documents.worldbank.org/curated/en/711471468765285964/pdf/multi0page.pdf

International Bank for Reconstruction and Development (IBRD). (1992, April). Governance and Development. Retrieved 29th April 2019 http://documents.worldbank.org/curated/en/604951468739447676/pdf/multi-page.pdf

International Bank for Reconstruction and Development/the World Bank (IBRD). (2015). The Benchmarking public-private partnerships procurement 2015: A Pilot of 10 Economies.

International Trade Centre. (1999). Conference on Public Procurement in Africa, *International Trade Forum* - Issue 1/1999. http://www.tradeforum.org/Conference-on-Public-Procurement-in-Africa/

Ismail, S., & Harris, F. A. (2014). Challenges in implementing public-private partnership (PPP) in Malaysia. *Procedia-Social and Behavioral Sciences*, *164*, 5-10.

Jacob, D., Kochendörfer, B., von Drygalski, M., & Hilbig, C. (2014). Ten years of PPP in Germany: experiences and perspectives. *Proceedings of the Institution of Civil Engineers-Management, Procurement and Law*, *167*(4), 180-188.

Jamali, D. (2004). Success and failure mechanisms of public private partnerships (PPPs) in developing countries: Insights from the Lebanese context. *International Journal of Public Sector Management*, *17*(5), 414-430.

Jandhyala, S. (2016). International organizations and political risk: The case of multilateral development banks in infrastructure projects.

Johnston, J., & Gudergan, S. P. (2007). Governance of public-private partnerships: lessons learnt from an Australian case? *International Review of Administrative Sciences*, *73*(4), 569-582.

Karnane, P., & Quinn, M. A. (2019). Political instability, ethnic fractionalization, and economic growth. *International Economics and Economic Policy, 16*(2), 435-461.

Kashi, B. (2015). Risk management and the stated investment costs by independent power producers. *Energy Economics*, *49*, 660-668.

Kaufmann, D. (2009). Aid effectiveness and governance: the good, the bad and the ugly. *Development Outreach*, *11*(1), 26-29.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). The Worldwide governance indicators: A summary of methodology, data, and analytical issues. *World Bank Policy Research Working Paper No. 5430.*

Kenny, D. (2018, September 25). Mediation. Retrieved from http://davidakenny.net/cm/mediate.htm.

Keping, Y. (2018). Governance and good governance: A new framework for political analysis. *Fudan Journal of the Humanities and Social Sciences, 11*(1), 1-8.

Kirkpatrick, C., Parker, D., & Zhang, Y. F. (2006). Foreign direct investment in infrastructure in developing countries: does regulation make a difference? *Transnational corporations*, *15*(1), 143-172.

Koala, K. (2020). Evidence of Public-Private Stewardship in the Fight to Eradicate the COVID-19 Pandemic. PA Times. https://patimes.org/evidence-of-public-private-stewardship-in-the-fight-to-eradicate-the-covid-19-pandemic/

Koppenjan, J. (2005). The formation of public-private partnerships: lessons from nine transport infrastructure projects in the Netherlands. *Public Administration*, 83(1): 135-157.

Kotze, R., Ferguson, A., & Leigland, J. (1999). Nelspruit and Dolphin Coast: Lessons from the first concession contracts. *Development Southern Africa, 16*(4), 623-648.

Lee, M., Han, X., Quising, P., & Villaruel, M. L. (2018). Hazard analysis on public–private partnership projects in developing Asia. *Asian Development Bank Economics Working Paper Series*, (548).

Linder, S. (1999). "Coming to terms with the public-private partnership: a grammar of multiple meanings", *The American Behavioral Scientist*, Vol. 43 No. 1, pp. 35-51.

Liu, J., Love, P. E., Smith, J., Regan, M., & Davis, P. R. (2015). Life cycle critical success factors for public-private partnership infrastructure projects. *Journal of Management in Engineering*, *31*(5), 04014073.

Loxley, J. (2013). Are public–private partnerships (PPPs) the answer to Africa's infrastructure needs? *Review of African Political Economy*, *40*(137), 485-495.

Lynn Jr, L. E., Heinrich, C. J., & Hill, C. J. (2001). *Improving governance: A new logic for empirical research*. Georgetown University Press.

Maktabi, T. (2014) "Reducing risks in public private partnerships." https://dukespace.lib.duke.edu/ dspace/bitstream/handle/10161/8610/Tayeba%20Maktabi%20Reducing%20Risks%20in%20P PPs.pdf?sequence=1

Marques, R. C., & Berg, S. (2010). Revisiting the strengths and limitations of regulatory contracts in infrastructure industries. *Journal of Infrastructure Systems*, *16*(4), 334-342.

Marques, R. C., & Berg, S. (2011). Risks, contracts, and private-sector participation in infrastructure. *Journal of Construction Engineering and Management*, *137*(11), 925-932.

Matos C. J., Dewulf, G. P. M. R., & Mahalingam, A. (2012, July). The complex interplay between the institutional context and PPP project outcomes. In *Proceedings of the Engineering Project Organization Conference* (pp. 10-12).

McQuaid, R. W. (2000). "The Theory of partnerships: Why have partnerships?" In Osborne, S. P. (Ed.), *Managing public-private partnerships for public service: An international perspective*. Routledge, London, pp. 9-35.

McQuaid, R. W., and Sherrer, W. (2010). "Changing reasons for public-private partnerships (PPPs)". *Public Money & Management*, *30*(1), pp. 27-34.

Moszoro, M. W., Araya, G., Ruiz Nunez, F., & Schwartz, J. (2015). Institutional and political determinants of private participation in infrastructure. *Available at SSRN 2508474*.

Mudassaar, K., Khan, R. E. A., & Aziz, B. (2019). Corruption and economic growth nexus: Do institutions matter? *Pakistan Journal of Social Sciences (PJSS)*, *39*(2).

Muchdie (2017), "Economic growth and happiness: A Cross-nations path analysis model", *International Journal of Science and Research (IJSR)*, *6*(1), 1899 – 1908. https://www.ijsr.net/search_index_results_paperid.php?id=ART20164527

PNDES-National Plan for Economic and Social Development (PNDES 2016/2020). (2016, October). Public-private partnership in Burkina Faso. http://www.pndes2020.com/pdf/03-en.pdf

Nokelainen, P (2002). Structural equation modeling school of education. University of Tampere, Finland. Ppt.

Nose, Manabu. 2014. "Triggers of contract breach: Contract design, shocks, or institutions?" *The World Bank Policy Research Working Paper 6738*. Washington, DC: World Bank.

Organization for Economic Co-operation Development (OECD) (2019). The Paris Declaration on aid effectiveness and the Accra agenda for action. https://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm

Opawole, A., & Jagboro, G. O. (2017). Factors affecting the performance of private party in concession-based PPP projects in Nigeria. *Journal of Engineering, Design and Technology*, *15*(1), 44-57.

Organization for Economic Co-operation Development (OECD). (2014). *Accountability and democratic governance orientations and principles for development*.

Osborne, D., & Gaebler, T. (1993). *Reinventing government how the entrepreneurial spirit is transforming the public sector*. New York, NY: Plume.

Osei-Kyei, R., & Chan, A. (2017). Factors attracting private sector investments in public–private partnerships in developing countries. *Journal of Financial Management of Property and Construction*, *22*(1), 92-111.

Osei-Kyei, R., & Chan, A. P. (2015). Review of studies on the critical success factors for public–private partnership (PPP) projects from 1990 to 2013. *International Journal of Project Management*, *33*(6), 1335-1346.

Osei–Kyei, R., & Chan, A. P. (2016). Developing transport infrastructure in Sub-Saharan Africa through public–private partnerships: policy practice and implications. *Transport Reviews*, *36*(2), 170-186.

Osei-Kyei, R., & Chan, A. P. (2019). Model for predicting the success of public–private partnership infrastructure projects in developing countries: a case of Ghana. *Architectural Engineering and Design Management*, *15*(3), 213-232.

Panayides, P. M., Parola, F., & Lam, J. S. L. (2015). The effect of institutional factors on public–private partnership success in ports. *Transportation Research Part A: Policy and Practice*, *71*, 110-127.

Parry, M. & Hughes, J. (2018). *Accounting governments: From budget to audit: How governments plan, raise, spend, and then account their use of citizens' money in the 21st century.* PFM Training Limited: UK.

Percoco, M. (2014). Quality of institutions and private participation in transport infrastructure investment: Evidence from developing countries. *Transportation Research Part A: Policy and Practice*, *70*, 50-58.

Pérez-D'Oleo, J., Castro, C., Herraiz, I., & Carpintero, S. (2015). The influence of the institutional environment on public–private partnership transport projects. *WIT Transactions on the Built Environment*, *146*, 399-410.

Pusok, K. (2016). Public-private partnerships and corruption in the water and sanitation sectors in developing countries. *Political Research Quarterly, 69*(4), 678-691.

Queiroz, C., Vajdic, N., & Mladenovic, G. (2013). Public–private partnerships in roads and government support: Trends in transition and developing economies. *Transportation Planning and Technology*, *36*(3), 231-243.

Ranasinghe, A., & Restuccia, D. (2018). Financial frictions and the rule of law. *Journal of Development Economics*, *134*, 248-271.

Reyes-Tagle, G., & Garbacik, K. (2016). *Policymakers' decisions on public-private partnership use: The role of institutions and fiscal constraints*. Inter-American Development Bank.

Reynaers, A. M. (2014). Public values in public–private partnerships. *Public Administration Review*, *74*(1), 41-50.

Rosenau J (1992). Governance, order, and change in world politics. In: Rosenau J et al (eds) *Governance without government: order and change in world politics*. Cambridge University Press, Cambridge.

Rothstein, B. (2014). What is the opposite of corruption? *Third World Quarterly, 35*(5), 737-752.

Sabry, M. (2015). Good governance, institutions, and performance of public private partnerships. *International Journal of Public Sector Management, 28*(7), 566-582.

Salevao, I. (2005). *Rule of law, legitimate governance & development in the Pacific [e-book]*.

Sanni, A. O., & Hashim, M. (2014). Building infrastructure through public private partnerships in sub-Saharan Africa: Lessons from South Africa. *Procedia-Social and Behavioral Sciences*, *143*, 133-138.

Santos, A. (2012). The World Bank's uses of the "rule of law" promise in economic development. *The New Law and Economic Development: A Critical Appraisal*, 253-300.

Scharle, P. (2002). Public-private partnerships (PPP) as a social game. Innovation: *The European Journal of Social Science Research*, 15(3): 227-252.

Siemiatycki, M. (2013). The global production of transportation public–private partnerships. *International Journal of Urban and Regional Research, 37*(4), 1254-1272.

Siemonsma, H., Van Nus, W., & Uyttendaele, P. (2012). Awarding of port PPP contracts: the added value of a competitive dialogue procedure. *Maritime Policy & Management*, *39*(1), 63-78.

Somma, E., & Rubino, A. (2016). Public-private participation in energy infrastructure in Middle East and North African Countries: The role of institutions for renewable energy sources diffusion. *International Journal of Energy Economics and Policy*, *6*(3), N/a.

Soomro, M. A., & Zhang, X. (2013). Vulnerability in the transportation public-private partnerships. *University of Central Lancashire (UCLAN) Preston, UK 18–20 March 2013*, 89.

Soomro, M. A., & Zhang, X. (2015). Evaluation of the functions of public sector partners in transportation public-private partnerships failures. *Journal of Management in Engineering*, *32*(1), 04015027.

Soomro, M. A., and Zhang, X. Q. (2016). The role of private-sector partners in transportation public private partnerships. Journal of Management in Engineering, 32(1). DOI: 10.1061/(ASCE)ME.1943-5479.0000387. 1-11.

StataCorp (2019). Stata structural equation modeling reference manual. In StataCorp (2019) Stata: Release 16. Statistical Software. College Station, TX: StataCorp LLC. https://www.stata.com/manuals/sem.pdf

Statistics Solutions. (2020). Assumptions of Logistic Regression. https://www.statisticssolutions.com/assumptions-of-logistic-regression/

Sultana, S. (2012). Bureaucratic accountability towards good governance. *International Journal of Computer Applications in Engineering Sciences*, *2*(Special issue), 186.

Tan, J. (2011). Infrastructure privatization: Oversold, misunderstood, and inappropriate. *Development Policy Review*, *29*(1), 47-74.

The National Audit Office (NAO) (2017, August 19). Assessing value for money. Retrived from https://www.nao.org.uk/successful-commissioning/general-principles/value-for-money/assessing-value-for-money/#

The World Bank (2007). Public-private partnership units: Lessons for their design and use infrastructure. Washington, DC.

The World Bank. (2018a). Procuring infrastructure public-private partnerships. Retrieved 23rd April 2019 from http://documents.worldbank.org/curated/en/891171523343989736/pdf/9-4-2018-10-37-4-ProcuringInfrastructurePublicPrivatePartnerships.pdf

The World Bank. (2018b, September 27). Organization. Retrieved 25rd April 2019 http://www.worldbank.org/en/about/leadership

The World Bank. (2019a). 2018 private participation in infrastructure (PPI): Annual Report. Retrieved 23rd April 2019 from https://ppi.worldbank.org/~/media/GIAWB/PPI/Documents/Global-Notes/PPI_2018_AnnualReport.pdf

The World Bank. (2019b). Worldwide governance indicators. https://datacatalog.worldbank.org/dataset/worldwide-governance-indicators

The World Bank Group (2020). Data: Why use GNI per capita to classify economies into income groupings? https://datahelpdesk.worldbank.org/knowledgebase/articles/378831-why-use-gni-per-capita-to-classify-economies-into

Torchia, M., & Calabrò, A. (2018). Increasing the governance standards of public-private partnerships in healthcare. Evidence from Italy. *Public Organization Review, 18*(1), 93-110.

Trujillo, L., Inchausti-Sintes, F., Campos, J., & Marique-de-Lara-Peñate, C. A. (2018). Explaining success and failures in PPP transport projects: An economics approach. *European Journal of Transport and Infrastructure Research*.

Unit, E. I. (2011). Evaluating the environment for public private partnerships in Asia-Pacific: The 2011 Infrascope: Findings and methodology. *Economist Intelligence Units and ADB*.

Unit, E.I. (2014). Evaluating the environment for public-private partnerships in Latin America and the Caribbean: The 2014 Infrascope. https://infrascope.eiu.com/wp-content/uploads/2017/02/Latin-America_Infrascope_Report_-2014_English.pdf

Vining, A. R., & Boardman, A. E. (2008). Public-private partnerships in Canada: Theory and evidence. *Canadian Public Administration, 51*(1), 9-44.

Wang, H., Liu, Y., Xiong, W., & Song, J. (2019). The moderating role of governance environment on the relationship between risk allocation and private investment in PPP markets: Evidence from developing countries. *International Journal of Project Management, 37*(1), 117-130.

Wibowo, A., & Alfen, H. W. (2015). Benchmarking the efficiencies of Indonesia's municipal water utilities using Stackelberg data envelopment analysis. *Benchmarking: An International Journal.*

VITA

Kouliga Koala

School of Public Service
2084 Constant Hall
Old Dominion University
Norfolk, VA – 23529

EDUCATION

Ph.D. in Public Administration and Policy, Old Dominion University, August 2016-Present.
Dissertation title: "Governance Impact on Public-Private Partnerships for Member Countries of the World Bank Group."

Master of Public Administration, Minnesota State University, Mankato, Minnesota, 2016

Bachelor of Arts in International Relations and History, Canisius College, Buffalo, New York, 2012

ACADEMIC EMPLOYMENT

Graduate Teaching Assistant, Old Dominion University, Fall 2019-Spring 2020

Graduate Research Assistant, Old Dominion University, Fall 2016-Spring 2019

Graduate Assistant, Department of Government, and President's Commission on Diversity,

Minnesota State University, Mankato, Fall 2014-July 2016

PUBLICATIONS

Koala, K. (2020). Evidence of Public-Private Stewardship in the Fight to Eradicate the COVID-19 Pandemic. *PA Times Online.*

Steinfeld, J., Koala, K., and Carlee, R. (2019). Contracting for public stewardship in public-private partnerships. *International Journal of Procurement Management, 12*(2), 135-155.

Koala, K., and Steinfeld, J. (2019). Infrastructure Development in Burkina Faso: The Story of Public Capital Budgeting. In *Capital Management and Budgeting in the Public Sector* (pp. 181-205). IGI Global.

Steinfeld, J., Carlee, R., and Koala, K. (2018). DBFOM Contracting and Public Stewardship in the Norfolk-Portsmouth Elizabeth River Tunnel Public-Private Partnership. *Public Organization Review*, 1-26.

Koala, K., & Steinfeld, J. (2018). Theory building in public procurement. *Journal of Public Procurement, 18*(4), 282-305.