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Addis Ababa University
College of Business and Economics
School of Commerce

**The Practices and Challenges of the Public Private Partnership
(PPP) based Project Implementation.**

The case of “Lehulu” Project

By: Samuel Bekele

Advisor: Dr. Solomon Markos

**Project Paper Submitted to Addis Ababa University, School of Commerce in
Partial Fulfillment of the requirements for Master Degree in**

Project Management

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Addis Ababa, Ethiopia

**ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE
DEPARTMENT OF PROJECT MANAGEMENT**

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A Project Work Submitted to Addis Ababa University, School of Commerce in
Partial Fulfillment of the Requirements for the Degree of Masters of Arts in
Project Management

By: Samuel Bekele

Approved by:

Advisor	Signature	Date
Dr. Solomon Markos	_____	_____

Internal Examiner:	Signature	Date
Dr. Abdurezak M.	_____	_____

External Examiner:	Signature	Date
Dr. Raju	_____	_____

DECLARATION

I, Samuel Bekele, declare that this project paper entitled “*The Practices and Challenges of the Public Private Partnership (PPP) based Project Implementation. The case of “Lehulu” Project*” is the work of my own effort and study. All the sources of data used in the paper have been duly acknowledged. I produced the paper independently except for the guidance and suggestions of my advisor. It has not been submitted for any degree to this and any other universities.

Samuel Bekele

Signature

Date

LETTER OF CERTIFICATION

This is to certify that Samuel Bekele has carried out this project work entitled: “The Practices and Challenges of the Public Private Partnership (PPP) based Project Implementation. The case of “Lehulu”, Project” under my supervision.

This work is original and suitable for the submission in partial fulfillment of the requirement for the award of Master of Arts Degree in Project Management.

Advisor: Solomon Markos (PhD)

Signature: _____

Date: _____

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Table of Contents

DECLARATION	iii
LETTER OF CERTIFICATION	iv
ACKNOWLEDGEMENTS	v
<i>ABSTRACT</i>	xi
CHAPTER ONE	1
INTRODUCTION	1
1.1. Background of the Study.....	1
1.2. Statement of the Problem.....	3
1.3. Research Questions	4
1.4. Objectives of the Study	4
1.4.1. General Objective	4
1.4.2. Specific Objective	5
1.4.3. Significance of the Study	5
1.4.4. Scope of the Study	5
1.4.5. Limitation of the study.....	5
1.4.6. Organization of the Study	6
1.4.7. Definitions of Terms	6
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1. Public Private Partnership.....	8
2.2. PPP Project Management.....	12
2.2.1. PPP Project Success Factors	15
2.2.2. Challenges of PPP Project Management.....	17
2.3. Case examples of Success and challenge of PPP.....	18
2.4. Suggestions for Improvement of PPP challenges in the literature.....	20
2.5. Review of literature works on “Lehulu” and related Topic	20
2.6. Conceptual Framework of the Study	23
CHAPTER THREE	25
REASERCH METHODOLOGY.....	25
3.1. Research Approach, Design and Methodology.....	25
3.1.1. Data Types, Sources & Method of Data Collection.....	25

3.1.2.	Validity and Reliability of Instruments.....	26
3.1.3.	Target Population.....	26
3.1.3.	Data Analysis and Presentation.....	27
3.2.	Ethical Considerations	28
CHAPTER FOUR.....		29
DATA PRESENTATION AND INTERPRETATION		29
4.1.	Introduction.....	29
4.1.1.	The Project Objective and the private Partner Responsibility	29
4.1.2.	The “Lehulu” Project Organization and Management Practice of the Private Partner	31
4.1.2.1.	The Project Organization	31
4.1.2.2.	Project Management Practice.....	33
4.1.3.	The Project Organization and Management Practice Effects on project performance	34
4.2.	Success Factors and Challenges of the Private Partner in the Lehulu Project	36
4.2.1.	Summary of Respondents based on Roles in the project and PPP Types	37
4.2.2.	The Major Success Factors considered for the success of Lehulu Project.....	39
4.2.2.	The Major Challenges of the Lehulu Project	40
4.3.	Suggested way-out	41
CHAPTER FIVE		42
SUMMARY, CONCLUSION AND RECOMMENDATION		42
5.1.	Summary of the Findings.....	42
5.2.	Conclusion	44
5.3.	Recommendation	45
5.4.	Limitation of the study and suggestion for future work	46
Appendix I. Letter of Request.....		50
Appendix II. Interview Questions.....		51
Appendix III. Questionnaire		52

List of Figures

<u>Figure</u>	<u>Page</u>
Figure 2. 1. Project as an activated part of the public–private network	13
Figure 2. 2. Public–private partnership as a temporary inter-organizational relationship in two phases	14
Figure 2. 3. Lehulu (UBS) Implementation Model	21
Figure 2. 4. Conceptual Framework of the Study	23
Figure 4.1. High Level Organization of the Lehulu Project by the Private Partner in the PPP	32

List of Tables

<u>Table</u>		<u>Page</u>
Table 1.1.	Type of PPPs and Descriptions	10
Table 2.1.	List of PPP CSFs based on responsibilities	16
Table 3.2.	Target Population of the Study	26
Table 4.1.	Role Based Distribution of Respondent	37
Table 4.2.	Level of Understanding of PPP Variant Forms of PPP by participant	37
Table 4.3.	Perception on why PPP model has been chosen	38
Table 4.4.	Summary of Responses of CSFs ranked	39
Table 4.5.	Summary of Responses on Challenges ranked	40

List of Acronyms

AAWSA	Addis Ababa Water and Sewerage Authority
B2C	Business-to-Citizen
CEO	Chief Executive Officer
CSFs	Critical Success Factors
EICTDA	Ethiopian Information Communication Technology Development Agency
EEPCO	Electric and Power Corporation
ET	ethio-telecom
G2C	Government-to-Citizen
ICT	Information Communication Technology
IOR	inter-organizational relationship
IT	Information Technology
KFT	Kifiya Financial Technology
MCIT	Ministry of Communication and Information Technology
PM	Project Management
PPP	Public Private Partnership
SPSS	Statistical Packages for Social Studies
UBS	Unified Billing System
UK	United Kingdom
UNDP	United Nation Development Program
US	United States

ABSTRACT

This project paper focused on assessing the practices and challenges of the Public Private Partnership (PPP) based project implementation from the private partner's perspective. To this end it used the case of "Lehulu". "Lehulu" was a PPP project implemented through a collaboration of the public partner MCIT and the private partner KFT to improve utility bill collection system of the three publicly owned utility companies. The main objective of the paper was to explore the project organization and PM practice employed in the project along with its effects on cost, time and quality. Besides, the major factors attributed for the project success and the major challenges faced in the course of the project implementation were identified. To achieve its objective, the study employed a mixed research approach that used both qualitative and quantitative data and data analysis method. Accordingly, questioners and structured interviews were administered among 34 technical staff and two officials of the KFT, who have been involved in the project implementation, respectively. Then the resulting information was analyzed using descriptive statistics. In addition to the primary data collected in the mentioned manner, secondary data were collected through review of relevant project documents such as project plan, project reports, etc. and presented through describing the facts of the project. Accordingly, the revision of the project documents and interview input revealed that the project was organized and managed through a consortium formed among three partners KFT, Wipro and TATA consultancy groups. The reason for this form of PM organization and practice was the local private partners' lack of technological ability, PM capacity and the existence of the knowledge gap about the PPP modality among both the public and the private partners. The overall effect of this practice was a moderate delay in project time, favorable cost performance and meeting the quality requirement of the project. The quantitative data analysis substantiated with the interview input attributed the main success factor for the project success was KFT's capabilities of fulfilling the contract while the major challenge was poor banking policies and unavailability of loans to fund such projects as PPP.

Keywords: *Public-Private Partnership (PPP), Lehulu, PM organization and Practice, Success Factors and Challenges*

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Public-Private Partnership (PPP) is defined as “a co-operation between public and private actors with a durable character in which actors develop mutual products and/or services and in which risk, costs, and benefits are shared” (Bult-Spiering & Dewulf, 2006). It is a form of collaboration between Governments and entities in the private sector. Some authors even dated back this form of collaboration to the period of Roman Empire, indicating that it has been around for millennia (Jomo KS, et al, 2016). However, the current PPP trend can be traced back to the 1980s when an outgrowth of government reform and privatization efforts widely undertaken almost all over the world (US Department of Transportation, 2016).

There are a number of definitions for PPP available in the literatures. Depending upon the contents and objectives of individual authors, PPP is defined to fit with specific author’s interest, country experience, sector, and project background definitions tend to be slightly different from one another. As a result, there is no universal definition that has emerged out for the term or concept of PPP which is globally acceptable to all.

However, taking the commonly accepted elements by most of the authors, PPP is described by Bult-Spiering & Dewulf (2006) as a model that works to generate an added value for both the involving parties mainly, the public and private partners. Hence, PPP can be regarded as a model that is efficient and effective to provide public services by forming collaboration between private partners and the Government. However, the formation and implementation of PPP is not simple and straight forward. It require complex legal arrangements that should be designed to enable the sharing and control of risks and rewards of the project among both parties, (Mesfin and R K Shyamasundar, 2010).

In spite of a growing interest in the use of the PPP model around the world, its adoption in Ethiopia remains limited (UNDP, 2015). Among others, this low level PPP adoption in the country is attributed to the low level of awareness of the modalities of the PPP by the public sector (the Government) (A. Asubonteng, 2011). Albeit implementation of some projects in education (Ayenachew,2010) and health sectors (Bikila, 2016), which belongs to the Policy-based partnership, and Information Communication Technology (ICT) sector (Mesfin, 2010), (Mesfin and R K Shyamasundar,2014),(Rahel, 2014),(Daniel &Aklilu, 2016), and (Hafte,2017) they are cases for the project-based partnership. Incidentally, the project based partnership focused on one single project called “Lehulu”, an Amharic word that can be translated as “for everyone” or “for all services”.

According to these authors, Lehulu is a PPP project implemented based on a PPP contract between the Ministry of Communication and Information Technology (MCIT), an Ethiopian ICT Development Agency (EICTDA) on behalf of the public body and Kifiya Financial Technology (KFT), a leading private Information Technology (IT) company in Ethiopia. The PPP contract type was Build-Operate-Transfer (BOT); which is a form of project financing, wherein a private entity receives a concession from the public sector to finance, design, construct, and operate a facility stated in the concession contract and finally transfer by the end of the contract period.

The main aim of the project was to unify the bill payment system of the three publicly owned utility companies, namely, Addis Ababa Water and Sewerage Authority (AAWSA), Ethiopian Electric and Power Corporation (EEPCO), and Ethio-telecom (ET). The design and implementation philosophy behind this project was to promote e-governance strategies through availing Government-to-Citizen (G2C) and Business-to-Citizen (B2C) services through a single window of service delivery. As the project unified the payments of the above mentioned three companies’ bills in a single billing system, the project is also called Unified Billing System (UBS).According to the research papers cited above, the deployment of the project was found to improve efficient delivery of public service to the citizens through reduced burden of the project implementation on the public body and increases satisfaction of the service recipients that added value both to the Government and to the citizen.

In this regard, all the above mentioned authors examined this project from the perspective of public service delivery as a way to engage citizens, increase their satisfaction and achieve tangible benefits to both the Governments and the citizens, regardless of the private partner and project management aspects as secondary or no issue of concern at all. This creates a knowledge gap demanding a research work.

Thus, in this paper, an attempt is made to fill this identified gap. Therefore, the case of Lehulu is presented from project management and private partner perspective. In this regard, the project management and performance are examined based on the private partner (the project executioner) experience.

1.2. Statement of the Problem

As it has been already mentioned, the use of PPP is at its infant stage in Ethiopia though some authors argued and believed that it can be developed and promoted by putting in place a partnership framework that will facilitate the pooling of local innovation, efficiency, risk management, cutting edge technology and application of guiding principles (Nega and Kumari, 2016). Although, the existence of the frame work is essential to the formation and operation of the PPP project, its success depends on and conditioned by the efficient implementation of the project. The need to obtain efficient projects implementation, in turn, calls for the need to efficient project management practices. Thus, how effectively the project is managed is a crucial factor in deploying the PPP project.

Similar to all traditional projects, PPP projects are unique in nature and their implementation. As indicated in the previous section, PPPs are complex than their traditional counterparts. According to Bult-Spiering & Dewulf (2006), these projects consist three phases in their life cycle, i.e. development, construction, and operation & maintenance. The development phase of the life cycle constitutes such project activities as Initiation, Definition, Prequalification, Consultation, Tender, Negotiation and Financial close (project award). And the other two phases, i.e. construction, and operation & maintenance phases comprise of the actual project deployment. While the first phase is mostly the responsibility of the public sector, the later phases are mainly the sole responsibility of the private partner (Bult-Spiering and Dewulf, 2006).

It is, thus, imperative to undertake such a research as to how the KFT (the private party) handled the execution of the Lehulu project in carrying out its responsibilities and examine the efficiency of its methods in terms of its performance against the three project management pillars, i.e. cost, time and performance. This enables to draw lessons for other similar ventures, by allowing revisiting the challenges and their corresponding resolutions in project implementation. This is mainly for the reasons that first, KFT is the party that is responsible for the construction and operation of the “Lehulu” project. Second, all the other studies didn’t address the issues related to project management and the private party’s roles in the partnership vividly.

To this end, the research tries to address the following specific research questions.

1.3. Research Questions

The specific questions of the research are stated as follows:

- 1) How were the project organized and the management practice employed by the private partner for the management of this PPP project?
- 2) What were the rationales for adapting the kind of project organization the private partner adapted for managing the PPP?
- 3) What was the PM organization and practice effect on the PPP implementation in terms of cost, time and quality performance?
- 4) What were the major success factors and challenges faced in the PPP implementation of the project?
- 5) What lessons could be drawn for PPP implementation of similar cases in the future?

1.4. Objectives of the Study

1.4.1. General Objective

The main aim of this research is to assess the project management organization and practices that were used in carrying out the project by the private partner of the PPP in the “Lehulu” project that affect the project’s performance along with the success factors and challenges faced in this venture.

1.4.2. Specific Objective

The specific objectives of this research are:

- I. To evaluate the project organization and applied management practices by the private partner in management of the Lehulu project;
- II. To assess the effects of the project organization and management on the project performance in terms of time, cost and quality of the Lehulu project from the private partner perspective;
- III. To assess the major factors accounted for the success of the project;
- IV. To explore the challenges faced during the project execution; and
- V. To draw a recommendation for further improvement.

1.4.3. Significance of the Study

As the research focuses on how the project is managed to success, identifying challenges along with their way out and documenting the lessons drawn with suggested ways for further improvement is important for the KFT for its continuous improvement in PPP projects implementation and undertakings. Moreover, as PPP is a progressively growing trend in project engagements, understanding its modalities, and identifying the practical challenges will help project managers or project management professionals in their future venture of similar projects.

1.4.4. Scope of the Study

Owing to the very limited time availability to conduct this research, the scope of the paper is limited to assessing the project activities (construction, operation and maintenance) that affect the project performance from the private partner's perspective. In this respect, the study scope is bounded to finding out the private partner's project management practice and the challenges met in its endeavor in delivering the Lehulu PPP project. Hence, the scope of the study is limited to KFT's activities in the Lehulu project implementation.

1.4.5. Limitation of the study

Time and cost are the two main constraints of the study that limited the paper to focus only on the private partner that was the main actor in the execution of the project and leaving alone all the other stakeholders. Although recognized their influence on the project execution. Hence, looking from one perspective, that is, from the private partner point of view is the main limitation of this study.

1.4.6. Organization of the Study

Following the customary approach for similar studies, the paper is intended to have five chapters. Accordingly, the first chapter is the introductory part of the study. This part comprises of background of the study, statement of the problem, research questions, and objectives of the study, significance and scope of the study. The second chapter presents review of theories on the PPP and reviews related literature on the subject under consideration. This is followed by the third chapter that focuses on the employed research methodology adopted to carry out the study including research design & methodology, data types, sources & data collection, target population of the study along with sample design, data analysis and presentation. The fourth chapter is intended to present the summarized accounts of the findings of the study through in-depth discussion and interpretations of the findings. The presentation in this chapter begins with giving overview of the project and organization. Finally, the fifth chapter wraps up the paper by way of presenting conclusion and recommendations.

1.4.7. Definitions of Terms

The study used the following main terms as defined here under.

Project Management: is the application of project organization and practice, to achieve the specific tasks indicated in the PPP contract and meet objectives of the “Lehulu” project.

Project Management Performance: is the measure of the effect of organization and practices on the time, cost and quality of the “Lehulu” project.

Success Factors: important facts that is required or attributed for achieving the project desirable end points or objectives.

Challenges: are factors that hinder the smooth execution of the project or attributed to halt execution of the project.

Public Partner: is a government body that is involved in the PPP and the project representing the beneficiaries of the project.

Private Partner: is the party that is responsible to construct/build and operate the project deliverables in accordance with the project requirement.

Consortium: is a legally binding arrangement made among the private partners to deliver the project's deliverables.

Build-Operate-Transfer (BOT): is the specific modality of the PPP used in the Lehulu project.

CHAPTER TWO

LITERATURE REVIEW

2.1. Public Private Partnership

There are a number of different definitions for Public-Private-Partnership (PPP) available in the literature dealing with the PPP. Depending on the contents and objectives, individual authors define and redefine the term suitable to their specific interests, specific country, sector, and project background they tend to investigate. As a result there is ambiguity or no single definition that emerged out for the term or concept of PPP acceptable by all.

Common to all, however, most of the authors tend to agree that the term “Public-Private Partnership” describes a wide range of arrangements whereby government responsibilities are outsourced to private partners, and risk is shared between the public and private sectors to bring about desired outcomes in areas associated with public service delivery. For example, the official definition of PPP by Federal Department of Transportation of the USA appears as:

“A public-private partnership is a contractual agreement formed between public and private sector partners, which allow more private sector participation than is traditional. The agreements usually involve a government agency contracting with a private company to renovate, construct, operate, maintain, and/or manage a facility or system. While the public sector usually retains ownership in the facility or system, the private party will be given additional decision rights in determining how the project or task will be completed” (Transportation Research Board, 2009).

Congruent to the definition, the following basic characters are identified in the literature works of such authors as Jomo KS, et al, 2016. PPP is characterized by the following basic characters:

- i. Usually a long-term agreement between a government entity and a private company, under which the private company provides or contributes to the provision of a public service.

- ii. The private company receives a revenue stream—which may be from government budget allocations, from user charges, or a combination of the two—that is dependent on the availability and quality of the contracted service. The agreement therefore transfers risk from the government entity to the private company, including service availability or demand risk.
- iii. The private company must generally make an investment in the venture, even if it is limited, e.g., to working capital.
- iv. In addition to budget allocations, the government may make further contributions, such as: providing or enabling access to land; contributing existing assets; or providing debt or equity finance to cover capital expenditures. The government may also provide various forms of guarantee that enable risk to be shared effectively between the government and the private company.
- v. At the end of the PPP contract the associated assets revert to government ownership (Jomo KS, et al, February 2016)

PPPs are joint ventures in which business and government co-operate. Ideally this cooperation should allow each partner to rationalize, consolidate and apply their strengths more effectively to develop a project and deliver services faster, better and more efficiently than government could accomplish on its own. Under these over-arching general goals, the practical implementation of PPP projects can take on several variants (Akintoye & Kumaraswamy, 2016).

PPP ventures are only advantageous if they represent the most suitable form/type of public private collaboration for the specific task. Therefore the choice of the mode/type of PPP is dependent on the situation or the specific requirement on hand and subjected to a systematic evaluation of the model's estimated cost-effectiveness compared to the traditional execution of the project (Zimmermann, J.; Eber, W. 2014). Besides, the public and private parties' accountability in the venture varies significantly from type to type.

Accordingly, the authors, Bult-Spiering and Dewulf (2006), based on the legal elements involved in the partnerships, it is classified into two broad categories: policy-based partnerships and project-based partnerships. While policy-based partnerships lay down a set of general rules for private investment and operation through co-operative ventures, project-based partnership focus

on a specific site or circumstance. Policy-based PPPs do not have a definite end-point, while project-based partnerships have a clear end. Moreover, the project-based partnerships are more formal, and involve project-specific efforts to mobilize public and private resources and share proportionate investment risks (Bult-Spiering & Dewulf , 2006).

The most common types of public-private partnerships that are frequently practiced and which are recognized by many authors are depicted in Table I below:

Table 1.1. Type of PPPs and Descriptions

N0	<u>Types</u>	<u>Descriptions</u>
1	Build-own-operate (BOO)	The private sector designs, builds, owns, develops, operates and manages an asset with no obligation to transfer ownership to the government. These are variants of design-build-finance-operate (DBFO) schemes.
2	Build-develop-operate (BDO)	
3	Design-construct-manage-finance (DCMF)	
4	Buy-build-operate (BBO)	The private sector buys or leases an existing asset from the government, renovates, modernizes, and/or expands it, and then operates the asset, again with no obligation to transfer ownership back to the government.
5	Lease-develop-operate (LDO)	
6	Wrap-around addition (WAA)	
7	Build-operate-transfer (BOT)	The private sector designs and builds an asset, operates it, and then transfers it to the government when the operating contract ends, or at some other pre specified time. The private partner may subsequently rent or lease the asset from the government.
8	Build-own-operate-transfer (BOOT)	
9	Build-rent-own-transfer (BROT)	
10	Build-lease-operate-transfer (BLOT)	
11	Build-transfer-operate (BTO)	

Source: International Monetary Fund, Public-Private Partnerships, March 12, 2004

As depicted in the above table the PPPs models 1 to 6 are policy based models that the government grants the right to finance, design, build, operate and maintain ownership by policy

to a private entity. The private entity is not required to transfer the facility back to the government. Such ventures include schools and hospitals which government invites the participations of the private individual in the aim of expanding these services so as to reach the vast majority of its citizens.

The others 7 to 11 are project based which the government let out to the private business to build and operate the public facility for a significant time period. At the end of the time period, the facility ownership is generally transferred to the public. Such projects include in Ethiopian case such projects as express road, light train and the case in hand Lehulu projects.

Literature review reveals that modern variant of public-private-partnership (PPP) is a centuries old form of collaboration between the state governments and private sectors. Some authors even date back the venture to the period of Roman Empire, indicating it has been around for millennia (Jomo KS, et al, 2016). However, the recent PPP trend can be traced to the 1980s as an outgrowth of government reform and privatization efforts widely undertaken almost all over the world (US Department of Transportation, 2016).

Since then, public-private- partnership (PPP) have become a very desirable way of financing the construction, maintenance and operation of public infrastructure projects and provision of public services, activities that traditionally belong to the public sector. To this end various modalities of PPP's are developed and put in practice. The center of all the modalities of PPPs is that the government looks for private resources that are needed to finance public developmental projects. This is mainly attributed to the fact that there is a constant need for improvement of public services delivery on the one hand and there exists acute shortage of funds to deliver them on the hands of the governments on the other. Therefore, PPPs emerges as a viable way of solving the problem of financing the deployment of the projects that improves the quality of the public life through public services delivery enhancement. Hence, looking for private resources that are needed to finance public developmental projects when faced with budget constraints are found to be an ideal form of financing by many governments (Jomo KS, et al, 2016).

Apart from the PPP's desirability to overcome shortage of funds, its ability of combining the strength of the private sector through management efficiency, local innovation, application of cutting edge technology and enhanced financial capacity combined with its improvement of intuitional strength of the public sector (regulatory authority and budget support)for effective and efficient public services delivery are the reasons forwarded to its desirability by international organizations such as UNDP. The major goal of integrating PPPs in the development strategy is to build a society that improves the attainment of the four values, namely – efficiency, equity, sustainability and security. Thus, public-private partnership arrangements are required since they play a vital role in driving economic growth by providing well-planned, well-funded, and well-maintained infrastructure and public services (UNDP, 2015).

Moreover, PPP arrangements promote participations of varies stakeholders that come together to deliver a specific project in project execution. A typical PPP involves the participation of the following stakeholders as identified by Transportation Research Board, (2009) document.

- I. Public sector decision makers (i.e., members of the legislature);
- II. State or public authority (project sponsor);
- III. Equity participants;
- IV. Lenders (e.g., commercial banks);
- V. Design and construction companies; and
- VI. Operating companies (Transportation Research Board, 2009).

2.2. PPP Project Management

The involvements of the interests of a number of stakeholders, special legal requirement, risk allocation mechanisms and financial arrangements make the PPP projects complex than the traditional projects. Nonetheless, projects in PPP literature are defined as similar to the traditional projects are defined. Accordingly Bult-Spiering & Dewulf (2006)in their work adapted the project definition which considers the following characteristics:

- i. A unique, once-in-a-lifetime task;
- ii. With a predetermined date of delivery;
- iii. Being subject to one or several performance goals (such as resource usage and quality);

- iv. Consisting of a number of complex and/or interdependent activities; and
- v. A project is therefore a given, plan-able, and unique task, limited in time, complex in its implementation and subject to evaluation (Bult-Spiering & Dewulf , 2006).

However, considering the relationships of the involved parties (actors in their word, public and private) and hence the differences in the interest of the actors and the structure emanated from the relationship the authors modify the definition to encompass this character and relationship.

Accordingly, they consider a project as:

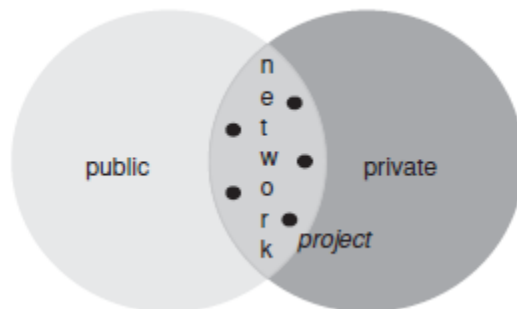
“A project is seen as processes of organizing among actors with different rationalities in terms of goals, time orientation and problem solving, and different and changing power positions in the network” (Bult-Spiering & Dewulf , 2006, P 27).

According to this consideration project in PPP comprises:

- i. Actors (parties – private - public)
- ii. Network
- iii. Project
- iv. Relationship

The interrelation and workings of these elements are depicted by the authors in the following figures and discussions.

Figure 2. 1. Project as an activated part of the public–private network

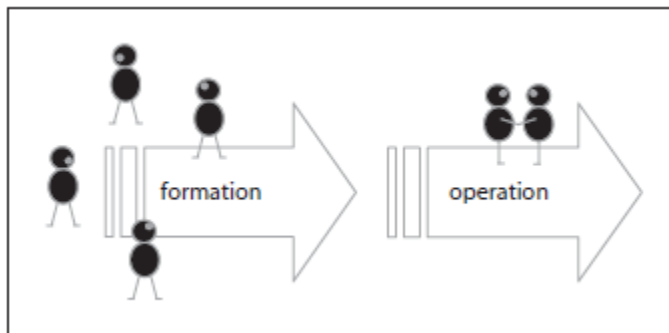


Source: Strategic Issues in Public–Private Partnerships, An international perspective, (MirjamBult- Spiering and Geert Dewulf ,2006, P. 20)

Since the PPP is a co-operative relation formed to establish a specific project, the above figure is considered to represent as the establishment or organizing an inter-organizational relationship (IOR) that can be characterized by temporary or permanent relationship. Since, PPP projects have a definable end-point, the IOR is definitely of a temporary nature (Bult- Spieringand Dewulf , 2006).

According to the authors the co-operation process in temporary IORs is divided into two phases: the formation phase and the operational phase as depicted in the following figure.

Figure 2. 2. Public–private partnership as a temporary inter-organizational relationship in two phases



Source: Strategic Issues in Public–Private Partnerships, An international perspective, (Bult- Spiering and Dewulf, 2006, P. 21)

The creation of an IOR is followed by the actual functioning of the IOR when a distinction is made between economic and sociological aspects that describe and explain the operation. Economic aspects deal with the goal (rationale), type and structure of the partnership, while sociological aspects concern the behavior of the actors in the relationship. And as projects are temporary and aim to achieve clearly defined goals to solve a specific problem; when the project goals have been achieved the project is finished (Bult- Spiering and Dewulf , 2006).

According to Herbert Robinson, et al, (2010) the PPP projects have a three phase- life cycle, namely, planning & design development phase, construction phase, and operation & service delivery phase. The planning and design development phase examines technical and financial

issues such as preparing the business case for the project, invitation and pre-qualification of potential bidders, design solution, evaluation of bids to determine value for money and affordability, selection of the preferred bidder, financial close and developing the full business case for the PPP project. The construction phase focuses on specific issues relating to completing and translating the design into facilities (significant part of the design would have been completed at financial close), resources required for the assembly process, scheduling of key construction activities, phasing of projects and decanting. The operation and service delivery phase focuses on key issues relating to delivering various services, performance monitoring to ensure services are delivered in accordance with the output specification, payments to the private sector and deductions for service failures (Robinson, et al, 2010).

For Robinson, et al, (2010) an appropriate management structure is vital for successful implementation of PPP projects. For them this project management structure is the one that reflect the diversity of teams and professionals involved by type of agreements and relationships between the different participants. It is important that the management structure and various agreements address the concern, needs and responsibility of key stakeholders particularly those directly involved or indirectly affected by the PPP scheme (Robinson, 2010).

2.2.1. PPP Project Success Factors

As there are quite a variety of PPP forms there are different success factors associated with the particular form of the PPP. However, literature review reveals that the difference is more or less on the emphasis made based on the particular country; sector; or project in which the PPP is deployed. Hence this section of the study presents the success factors identified by different authors and applies to most of the PPPs forms.

Critical Success Factors (CSFs) in PPP is defined, by Shi et al (2016), as those characteristics that have a significant impact on project success. This definition is quite similar to the general definition of CSFs which according to Dahiru and Muhammad (2015) are seen as factors that have successfully created and sustained peak performance cultures in an organization (Dahiru and Muhammad, 2015). Nonetheless alike to the definition of the PPP there are no universally accepted applicable list of CSFs that serve across the border. For instance Dahiru and Muhammad (2015) identified CSFs for PPP in infrastructure development, factors such as

economic viability, appropriate risk allocation, sound financial package, reliable concessionaire consortium and favorable investment environment were identified in that order of significance (Dahiru and Muhammad, 2015). Whereas Shi et al (2016), identified about 29 CSFs factors that can be classified into three categories as a responsibility of the public, private, or both parties' responsibilities in the PPP executions as depicted in the table below.

Table 2.1. List of PPP CSFs based on responsibilities

CSFs	Influencing Partner
Reasonable government supervision; Government willingness; Clear cooperation department ; Government's capabilities of fulfilling the contract; Government's capabilities of administrative execution; Standardization procedure for PPP projects; Favorable legal framework; Stable macro-economic environment; Sound economic policy; Complete PPP guidelines; Clear project scope definition and documentation; Government financial guarantee; Political support; Available financial and capital market; Public opinion;	Public Partner/Government/
Firm's capabilities of fulfilling the contract; Firm's financial abilities; Firm's information disclosure reasonably and timely;	Private Partner

Firm's PPP project experience; Firm's profit expectations; Effective management for cost, time and quality; Reasonable services price;	
Public satisfaction; The level of public recognition; Project complexity; Concession period; Appropriate risk allocation; Effective contract management; Policies and conditions for asset transfer;	Both Public and Private

Source: Shi et al (2016); Examining the Interrelationship among Critical Success Factors of Public Private Partnership Infrastructure Projects, Sustainability 2016, 8, 1313, P. 4 of 20.

While for Shi et al (2016), the responsibilities of the private partner is crucial for successful implementation of PPP, Dahiru and Muhammad (2015), emphasized that risk allocation between public and private sector is central to implementation of PPP system of project and hence it is the most important critical success factor for them. This thus indicate that although there is more or less a general agreement on the list of CSFs, the relative weight or importance depends on the authors perspective from which they examines the particular PPP project which in turn depends on the country, sector and project under consideration or context.

2.2.2. Challenges of PPP Project Management

Alike to the critical success factors there are quite a number of different challenges for specific PPP type depending on the country; sector or project it is deployed on. For instance, according to Ochei, (2008) Build-Operate-Transfer (BOT) faces the challenge of construction risk, operating risk, social, and environment risk. These challenges are typical of the private partner's risk as construction and operation are the main responsibilities of this partner (Ochei, 2008).

In a nutshell the challenges of PPPs in all the countries (both developed and developing) as identified by Azuka, (2016) includes but not limited to the following:-

- i. Lack of Government Commitment;
- ii. Poor Risk Management Policies;
- iii. Poor Banking Policies and Unavailability of Loans;
- iv. Poorly drafted Regulatory and Legal Framework;
- v. Inadequate Mechanism to Attract Foreign Investors and the Local Private partner;
- vi. Sector Participants; and
- vii. Lack of Transparency and Competition (Azuka, 2016)

These factors are more or less similar to the challenges identified by Reim (2009) as design risk, choice of private sector partner, construction risk, financial risk, regulatory/ contractual risk, operational risk, residual risk as well as external risks like political/ legislative risk and environmental/ force majeure risk (Reim, 2009). This indicates that both developed and developing nations shares similar challenges.

2.3. Case examples of Success and challenge of PPP

As literature review reveals that countries experienced the identified challenges or share similar success factors in deploying PPP projects. The following section presents some case examples of different countries situated in different parts of the world and in different levels of development.

Nigeria

According to Ochei (2008) in Nigeria a Public-Private Partnership (PPP) involves the private sector in aspects of the provision of infrastructure assets or new or existing infrastructure assets or of new or existing infrastructure services that have traditionally been provided by the government (Ochei, 2008). According to this author it is because infrastructure assets and services in Nigeria are inadequate and in deplorable conditions. As the author presented the case of a toll road called Lekki Toll Road PPP projects' success is attributed to the following: a well – researched and structured project, backed by credible, experienced players which is able to attract the needed finance. As the author further indicated, this PPP were having a committed sponsor, experienced concession and Project Manager, government support and commitment plus enabling legislation. Besides, viable Financial Structure (Debt/Equity, Tenor and Currency),

Financial Advisors and Arrangers (robust financial model), technical and engineering (feasibility, tolling strategy, surveys and design) and Legal and Regulatory expertise were among the factors that were accounted for the success of the project (Ochei, 2008). However, the absence of long-term funding (local and offshore) at appropriate interest rates to fund required investments was the main challenge faced by the country's PPP undertaking in other areas (Ochei, 2008).

UK

As Reim (2009) reviews, Metronet -London Underground PPP project, partnership relationship is an important success factor that influence the positive outcome. However as the author argued, a partnership relationship can fail because the management of the project is not well organized resulting in delivery delays and cost overruns. Even though partnering is often considered good in itself, not every PPP project may automatically be successful. It is important to keep in mind that there is no universal solution that fits all problems. The lessons from the London Underground PPP show that the parties involved in a PPP need to master several challenges. Although the Metronet PPP failed to meet its targets, as the author argued, some empirical conclusions can be drawn from this case. The first is that it has met its primary objective which is to deliver a better service than either the public or the private sector could do it alone. And second a PPP tends to be more successful when realistic goals are set and the project allows for enough time. Though, time is an important factor and being under time pressure might negatively impact the decision-making. In this context, other factors such as communication, project management and rules for procedures, as an influencing factor should all aim at ensuring an optimal decision-making process (Reim, 2009).

South Africa

For Minnie (2011) risk management is a central aspect of the management arrangements in many PPP partnerships in South Africa (Minnie A, 2011). Risk management is concerned with the assessment and quantification of risk and subsequent processes put in place to either avoid or reduce risk and to mitigate the effects of those risks which cannot be avoided or reduced. One of the options to reduce risk is to transfer it, and it is this risk transfer which is so important to the South African public partner (Minnie A, 2011).

As to the challenges among the many identified by Minnie A (2011), the most important ones in the context of South Africa are organizational, legal / technical, political barriers, i.e. political opposition, the inability or lack of interest of the private companies in providing services at affordable prices and the insufficiency of local private sector management skills to provide services effectively and efficiently as factors in a strong opposition that exists to the increased use of the private sector to provide public services(Minnie A, 2011).

2.4. Suggestions for Improvement of PPP challenges in the literature

In order to overcome the forgoing challenges Ganason, (2016) suggested among others the following two remedial actions:

- i. Having good communication and strong relationship during the beginning of the partnership is important for building trust. Good communication should not be limited to the beginning of the partnership but should cover the duration of the partnership. There should be mutual respect, respecting each other and learning from their mistakes; and
- ii. Prior to approaching the private sector for funding, it is recommended that the public sector consider a systematic and thorough plan on how it would engage with the private sector. Planning how to engage with the private sector should not only be for the negotiations process for a funding stream, but it should cover the life-cycle of the partnership. Such planning should include building capability and resources for fund raising projects (Ganason, 2016) .

2.5. Review of literature works on “Lehulu” and related Topic

As indicated in the previous chapter PPP is a new phenomenon in our country as a whole and the subject under consideration in particular. Accordingly, the presentation in this section is based on the few studies which are accessible to the researcher.

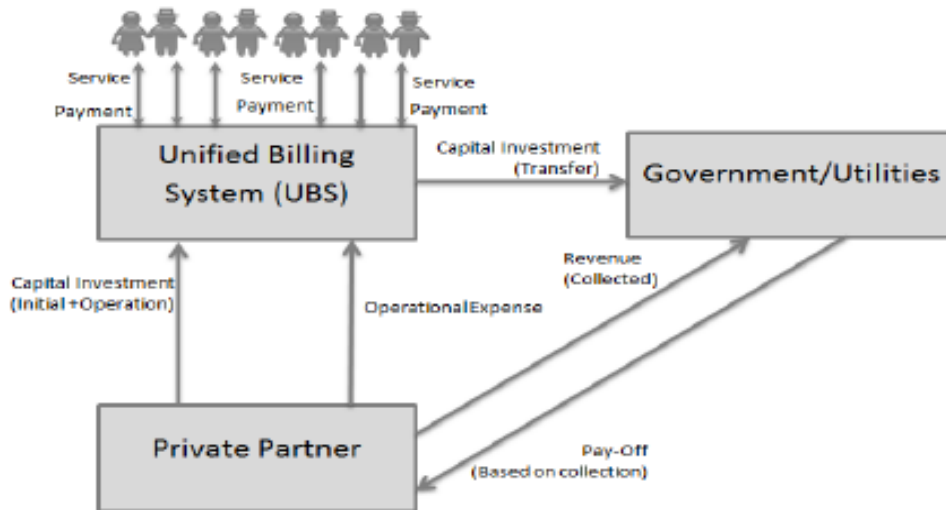
According to Rahel (2014) the initiation of the project dates back to early 1990s when the Government of Ethiopia had embarked up on reforming its service giving organizations with the objective of improving the public sector service delivery system. Accordingly, it had contemplated on the use or adaption of E-governance system which is basically deploying and

employing an ICT system. In this regard, the Lehulu project which is alternatively referred to as UBS project can be considered as an initiative for deploying e-governance in public service deliver that was aimed at improving the service delivery capabilities of the public agencies encompassed as the project beneficiaries (Mesfin&R K Shyamasundar , 2014).

According to Mesfin & R K Shyamasundar (2014) the project’s main focus was on enhancing the quality of service available to citizens through re-defining the way citizens pay their utility bills.

The project’s deployment modality is depicted below:

Figure 2. 3.Lehulu (UBS) Implementation Model



Source: Mesfin Belachewand R K Shyamasundar, 2014, P. 3

As depicted in the above figure, the project unify the bill payment systems of the three governmentally owned utility companies; namely, Addis Ababa Water and Sewerage Authority (AAWSA), Ethiopian Electric and Power Corporation (EEPCO), and ethio-telecom (ET).

The boxes in the figure are explained as:

Government/Utilities – The Government represents the Public Sector part of the partnership. EICTDA is the principal owner of the project, and the Utilities (the above mentioned) are the principal beneficiaries from the public sector side.

Private Partner / Agency – The Private Partner represents KFT the Private Sector part of the partnership. The Private Partner (KFT) is the principal implementers of the project. The implementation includes also the complete operation and maintenance of the system and related components.

Unified Billing System – The Integrated Billing System represents the Billing system, which includes the application, all processes and collection centers. This is the part of the model that interfaces with the citizens.

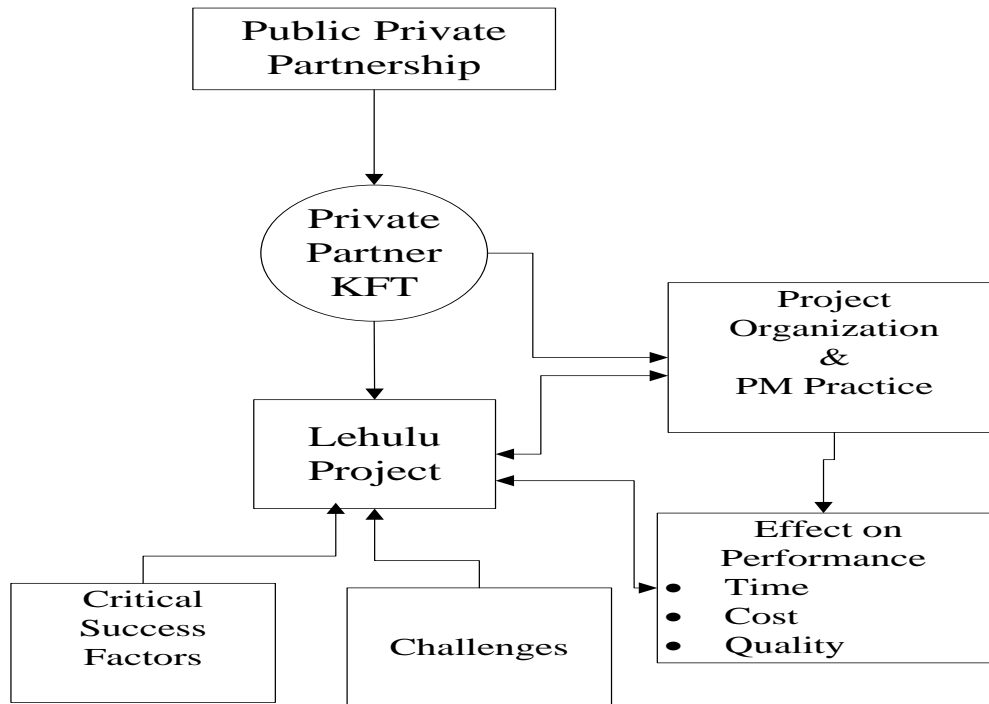
According to the model, the private partner contribute or expend the initial capital investment required to build the system along with the covering the required operational costs or expenses of the deployment. Then, it collects the bill payments from the citizens that are customers of the utilities companies and transfer the collected sums as revenue to each of the companies in accordance with their aggregated bills sums collected. Then after, the utility companies pay off the private partner based on their collection volume a fixed service charge per bill (fixed charge multiplied by volume of bills collected). Finally the system ownership is transferred to the utilities companies upon expiry of the project operational period (Mesfin and R K Shyamasundar, 2014).

According to the assessments made by Rahel (2014) and Daniel & Akililu (2016), and Hafte (2017) based on the different sample UBS centers customers (citizens) and the beneficiaries utility companies as well as the project owner (MCIT) as to the service has brought the intended outcome. They all synonymously concluded that it has met its intended outcome. However, these achievements were not without challenges, and the identified challenges in the studies include such factors as lack of financing sources, governance structure of the PPP project and lack of willingness to support the implementation on the part of the project beneficiary public enterprises takes the lion share (Daniel & Akililu (2016), and Mesfin & R K Shyamasundar, (2014)).

2.6. Conceptual Framework of the Study

Conceptual framework as argued by Svinicki, (2010) is an outline that serves as the basis for understanding the causal or correlation patterns of interconnections across events, ideas, observations, concepts, knowledge, interpretations and other components in the study (Svinicki, 2010). Accordingly, based on the reviewed literatures and the envisaged objectives of the study the conceptual framework for the practices and challenges of the PPP based project implementation in the case of “Lehulu” project is developed and depicted in the following picture.

Figure 2.4. Conceptual Framework of the Study



Source: Review of Literature

Since, the project work idea is emanated from the concepts of PPP, as shown in the figure; the conceptual framework of the study begins with or organized under the PPP model which serves as the study’s umbrella. Then, the private partner (KFT) which is responsible to execute the project along with the “Lehulu” project is the centers of the framework and the study. The other four factors constitute the variables of assessment of the implementation of the project in the study. As shown above the PM organization and practice which is exercised by KFT to carry out its tasks envisaged in the project contract is indicated as an independent variable which have

influence on performance indicators used in the study Cost, Time and quality The others, success factors and challenges, are exogenous factors of the project that affects the project.

CHAPTER THREE

REASERCH METHODOLOGY

3.1. Research Approach, Design and Methodology

Kothari (2004) describes research design as the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. A mixed method of research as described by Saunders et al (2016) is the branch of research method that combines the use of quantitative and qualitative data collection techniques and analytical procedures (Saunders et al 2016).The rational for selecting this research design is that, as Saunders et al (2016) argued, this approach allows both sets of results, qualitative and quantitative, to be interpreted together to provide a richer and more comprehensive response to the research question in comparison to the use of either of the two research design or methods i.e. quantitative or qualitative alone(Saunders et al 2016).Accordingly, the approach that is used in this research is a mixed research approach. Then, the resulting output is presented using descriptive method of presentation, for using descriptive method enables to describe the output by providing the factors in a manner that provides an accurate or appropriate picture of the events or situations (Kothari, 2004).

3.1.1. Data Types, Sources & Method of Data Collection

Qualitative data types are described by Saunders et al (2016) as a data type which are: based on meanings expressed through words (spoken and textual) and images, collection results; in non-standardized data requiring classification into categories; and analysis conducted through the use of conceptualization (Saunders et al, 2016).Quantitative data refer to all such primary and secondary data that are quantifiable using various statistical techniques (Saunders et al, 2016). The mixed data type combines the use of both these two data types in the study as deemed appropriate to use so as to explain the required phenomenon or events. Accordingly, this data types are intended to be collected from the KFT Plc, as both primary and secondary data sources. To gather primary data, the study used interview and structured questionnaire method of data collection. The secondary data are collected through reviewing the project various documents such as the project meeting notes, project reports, project plan documents and the like from the

KFT Plc. Then the gathered data are classified, analyzed and interpreted in the manner described in the sections that follows.

3.1.2. Validity and Reliability of Instruments

Validity refers to the appropriateness of the measures used, accuracy of the analysis of the results and generalisability of the findings (Saunders et al, 2016). Data need not only to be reliable but also true and accurate. If a measurement is valid, it is also reliable (Creswell, 2009). In an attempt to ensure content validity; the questionnaires were developed based on a previous study and a thorough review of the existing literature concerning the area of inquiry and used with a little modification. In addition, the same set of questions was administered to respondents so that responses would be similar to facilitate comparison.

Reliability refers to the consistency or dependability of a measurement technique (Saunders et al, 2016). It is concerned with the consistency or stability of the score obtained from a measure or assessment (Saunders et al, 2016). To ensure reliability, it is important to have an appropriately sized sample to achieve statistically significant and reliable results. Hence, the researcher conducted the study based on a census of consultant staff of the organization to ensure that the data collected was reliable.

3.1.3. Target Population

The target population refers to the entire group of people; event or organizations that a researcher wants to study. For some research questions it is possible to collect data from an entire population as it is of a manageable size (Saunders et al, 2016). In this study the target population size is 34 technical and functional employees of Kifiya Financial Technology who were actively involved in the project from start to end. Hence, all the project participants as indicated in the table below are participated in the research

Table 3.2. Target Population of the Study

Group of Participant	Number	Purpose
Technical Consultants	20	Questioner
Functional Consultants	14	Questioners
Total	34	

Technical consultants refers to programmers, system analysts, hardware engineers and network engineers who were involved in the construction of the solution, while functional consultants refers to those who assures functional conformance and involve in requirement eliciting and refining.

In addition, two respondents that are actively involved in the project management from beginning up to the end of the project implementation from the existing senior management group are selected and used as a respondent for the interview of the study.

3.1.3. Data Analysis and Presentation

Analysis of data in a research project involves summarizing the mass of data collected and presenting the results in a way that communicates the most important features. As indicated in the preceding section both quantitative and qualitative data were collected, organized, classified, analyzed and interpreted in the chapter four of the study to arrive at conclusions. The quantitative data collected through the questionnaires were categorized based on the study's research objectives and finally grouped on the basis of common characteristic. The findings were presented using tables. The data was also be interpreted and analyzed through the use of Statistical Packages for Social Studies (SPSS) version 20 and present using the descriptive analysis method. The justification for the choices of this program is that, these techniques facilitated word processing and data analysis very easily and enable an accurate pictorial presentation. Hence, the research data was be analyzed using descriptive statistics tools and the result of the processed data was interpreted using frequency, percentages, means and standard deviation as a case deems necessary.

According to Saunders et al, (2016) qualitative data analysis process can be done in the form of summarizing (condensation) of meanings; categorization (grouping) of meanings and structuring (ordering) of meanings using narrative as groups in analysis process. Then the analyzed data that allows describing phenomena from different direction through holistic approach can be presented descriptively. Accordingly, in this research it is intended to follow this approach of analyzing interview results through summarizing or condensing of meanings; categorizing or grouping of meanings and structuring or ordering of meanings and present the description.

The combination of the two qualitative and quantitative data in the same phase of research are used in order to compare how these data sets support one another (complement) and triangulation (Saunders et al, 2016). While complementarily seeks to clarify or to illustrate the results obtained with one method applying the other at the same time and triangulation is to achieve a convergence of the results obtained via quantitative and qualitative approaches such that these results are more reliable (Fernandez and Azorin, 2003).

3.2. Ethical Considerations

Before the respondents are asked to fill the questioner or the interview sessions of the study, they were informed as to the purpose of the questioner and interview respectively. Hence, the researcher duly took into account the ethical obligations and elaborately explained and assured to the involved professionals about the input from the research questionnaire and interview was kept confidential and was only be used for academic purposes only. All participants are asked to voluntarily participate in the study. The questioners are filled and the interviews are taken place after the respondents are convinced about their being free of any consequential harm and more importantly their views was used in confidential manner and anonymously. Besides, they were told not to respond or answer any question they considered inappropriate or felt any discomfort. In this respect all ethical considerations are taken into account.

CHAPTER FOUR

DATA PRESENTATION AND INTERPRETATION

In this chapter the data gathered using the project documents review, interview of the representatives of the project management group, and questionnaires response from sampled participants in the project are organized, tabulated, analyzed and presented. The analysis and presentation is made to answer the research questions derived from objectives of the study. Of course, the presentation presupposes provision of background of the project, its objective and the specific tasks of the private partner who is the case of the study. Hence, the presentation begins with acquainting the project.

4.1. Introduction

This chapter presents the collected data from primary and secondary sources. The presentation begins with describing the project objectives and the responsibilities of the private partner in the project along with as to how the project was organized by the private partner (Kifiya Financial Technology). The analysis is made bases the project documents review and interview responses and aimed at addressing organization and the project management practice of the private partner applied in the project along with its rationales. This is, then, followed by presentation of the categorized, tabulated and analyses of gathered information through the questioner. The presentation is made in to three parts where the first part deals with the characteristics of the respondents which is based on their role in the project, followed by the second part which deals with the analysis of the information gathered as to the factors influencing the project performance and challenges consequently. The final part deals with summarized accounts of the respondents' suggestion in the form of comments for improvement.

4.1.1. The Project Objective and the private Partner Responsibility

As indicated in the project's RFP document issued by EICTDA, the main aim of the project was the implementation of a Unified Utility Billing program especially for the indispensable utility bills such as water, electricity and telephone and enhancement of the quality of service to citizens by providing a single transaction facility to citizens for the identified services (EICTDA, 2010).

So as to meet the project goal; The MCIT (public partner) had formed a public private partnership (PPP) with KFT, a leading IT company in Ethiopia. The PPP contract has been implemented under the Build-Operate-Transfer (BOT) model; a form of project financing, wherein a private entity receives a concession from the public sector to finance, design, construct, and operate a facility stated in the concession contract and transfer by the end of the contract period.

Aligned with this modality of the PPP requirements the private partner, which is KFT's responsibilities were identified to be the following main tasks:

1. During Build (Construction) period

- i. Identifying and renovating a selected 41 collections centers from the then existing ones that has been handed over by the utility companies to the KFT;
- ii. Working together with the utility companies to make them ready for the UBS system;
- iii. Setting up monitoring and reporting structure;
- iv. Generating technical design and the operational design for the project implementation;
- v. Modifying the then existing bill payment process based assessment of the process and getting approval from the public partner as a TO-BE processes for the project's subsequent operation;
- vi. Furnishing the necessary infrastructure in the collection centers;
- vii. Preparing a data center and a disaster recovery site;
- viii. Build or Customize the UBS system;
- ix. Setting up of the backend UBS system;
- x. Recruiting and training staff;
- xi. Conducting pre-launch awareness raising strategy development;
- xii. UBS promotion strategy development; and
- xiii. Identifying, assessing and suggesting potential services to be incorporated in the UBS system for future expansion.

2. During Operate period

- i. Registering customers into the new billing system;

- ii. Upload data of utilities to the UBS system;
- iii. Cash collection/bill payment;
- iv. Cash and Data reconciliation;
- v. MIS report generation;
- vi. Grievance handling related to bill payment; and
- vii. launching additional services and make them available;

3. During Transfer period

Upon closure of the project KFT is responsible to:

- i. Transferring Assets to the public partner; and
- ii. Knowledge and information that enables sustainable operation of the system.

4.1.2. The “Lehulu” Project Organization and Management Practice of the Private Partner

This section deals with the organizational aspect of the Lehulu project with its rationale as to adopting this organization in light of the project management practice adopted by the KFT. Accordingly, the project organization is presented along with the management practice through reviewing various project management documents and interview inputs of the project management group.

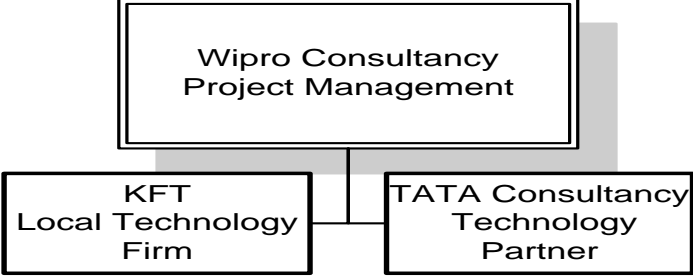
4.1.2.1. The Project Organization

The project organization adopted for management of projects is an important area to consider for the success of projects. Weaknesses in this area of project management lead to poor project performance regardless of organizational facilitators such as senior management commitment and leadership style (Sarfo, 2007). As tried to indicate in the previous chapter of the paper, the PPP is a new phenomenon to Ethiopia in addition to PPP complexity. Besides most if not all of the risks are transferred to the private partner that is responsible for the project execution commencing from construction up to and including operation and maintenance of the project phases. This vital role of the private partner if not substantiated with well-planned preparation, good coordination with the public partner and fit to objective project organization it leads to

failure. In this regard, the first step that the private partner should do is to identify its strength and weakness (what it lacks such as technology, management capacity of the project, knowhow of the technology as well as various requirements involved in the engagement, etc). Through a thoughtful analysis of the situation, the project requirement and its long experience in the field of information communication technology business, the private partner, KFT has done this exactly. Accordingly, it forms a consortium with two reputable and experienced partners in the area of project management or PPP implementation and technology or solution provision.

The three partners in the consortium were KFT, Wipro and Tata Consultancy firms. The following diagram depicts the high level project organization by the consortium.

Figure 4.1. High Level Organization of the Lehulu Project by the Private Partner in the PPP



Source: Review of PM Document and Interview

As indicated above the three partners in the consortium forms the high level Lehulu PPP project implementation organization.

Wipro Consultancy, according to its profile, is a well-established consultancy firm based in Bengaluru, India. Wipro is a global software and technology service provider. The Company's service-offerings include analytics and information management, business application services, business process outsourcing services, cloud services, consulting services, eco-energy services, infrastructure management services, mobility solutions, and product engineering services. Wipro also has a hardware business unit called Wipro Infotech that sells notebooks, desktops and storage devices primarily to government departments and public sector undertakings (PSUs) in India. It has around 162,000 work forces (Wipro Profile). As depicted above its role in the project was as mainly the project management service.

KFT is a local leading information technology providing company. Among others it is known for providing hardware, software systems and introducing new financial solutions in the country. Among its attribution of technological and system introduction, Woredanet and the first vendors of ATM machines and its corresponding system in Ethiopia are worth of mentioning. It has more than 900 workers (KFT Profile). Being the local company KFT was the main private partner of the project.

TATA Consultancy, Tata Consultancy Services Limited (TCS) is an Indian multinational Information Technology (IT) service, consulting and business solutions company headquartered in Mumbai, India. It is a subsidiary of the Tata Group and operates in 46 countries. It is among the pioneers of the single window service provision concept and implementation system developer. . The Group has more than 160, 000workers around the world (TATA Profile). It is the technological and implementation partner for the KFT in the project.

4.1.2.2. Project Management Practice

Project Management (PM) Practices are how the day-to-day activities and administrative decisions are carried out as functions of all parties involved in the management of a project from the building to operation and maintenance of the project for the purpose of achieving satisfactory project performance (Sarfo, 2007). According to the project documentation review and as noted from the interview of the project management team of the KFT, the consortium members' project activities are summarized as follows. Albeit, there is an overlapping activity, the consortium members carried out their tasks in collaborative and harmonized manner rather than competing with each other.

Wipro

Wipro consulting provided project and program management services and resources required for the project. There was lack of knowledge in the part of the public partner as to the depth of the project and its real requirement. Hence, coordinating the requirement clarification and refinement process and documentation (such as AS-IS and TO BE process) were the first task that required the experience and expertise of specialized company in the project. The project planning and coordinating activities among the other consortium members and the public partner was the biggest task undertaken by Wipro Consulting. Moreover, in collaboration with the local

partner, KFT, it had developed and delivered a number of manuals that are crucial for operation and management of the system.

TATA

TATA consulting expertise in the area of single window service was what initiated the local partner to undertake this PPP project. Hence, TATA consulting provided the initial software framework deployed in the project. Then, interfacing with the local partner the project's software requirement document was developed which was the bases for customizing the initial software supplied by the TATA. The two technology companies, TATA and KFT, together customized the software to incorporate the specific needs of the public partner. In this process the local partner has gained a lot in the form of knowledge and technology transfer. Besides, technical document development, change control and quality assurances were the project management tasks carried out in collaboration with KFT.

KFT

Representing KFT, the role of the CEO of Kifiya in the project management of the Lehulu project was immense. Among others weekly project meeting with MCIT, the public partner, that monitor the project and responsible for facilitating project execution requirements were some of his tasks in the project.

4.1.3. The Project Organization and Management Practice Effects on project performance

As Sarfo (2007), argued project management performance is a measure of the extent to which a substantially completed project achieved its Time, Cost and Quality targets as a whole (Sarfo, 2007). According to this argument the project performance is the result of the project organization and management practiced in the project implementation. As this is a case the effects of the PM organization and practice of the "Lehulu" project on the cost, time, and quality based on the interview input from the project management team members and document review of the Lehulu project is presented here in under.

Time (Schedule) Performance

The Lehulu project was a three year project commencing from December 2010. According to the interview respondent the project execution was lagged by at least by one year. This was attributed for the time spent in forming and norming the consortium. Nonetheless, comparing to other projects this lag may not seem too much. However, the time performance of a project being measured by:

$$= \frac{\text{Planned contract Period}}{\text{Actual project construction and operation period}}$$

Rated at $\frac{3}{4} = 0.75$ or 75%. This schedule lags other reasons according to the interview respondent were:

- PPP was a newly introduced phenomenon in the country and knowledge gap on the concept of PPP by the team involving in the project highly affected the project management;
- Intervention of the MCIT on the project management process;
- Intervention of the CEO and other Chiefs of KFT on the Project management process;
- Team sometimes unable to clearly know the roles, responsibilities and expected deliverables;
- Project team members resignation before the completion of the project and start of the operations;
- Lack of knowledge on the management group including the CEO on how to operate LEHULU upon completion of the project or (Poor readiness of Kifiya management to operate/run LEHULU). (Source: Interview Response)

Cost Performance

There is a problem of secrecy to measure the exact cost performance of the project. Hence, the cost performance of the project is done based on the subjective assessment of the interview respondents. According to the response, opposing views reflected between the interviewees. While one of the respondents assessed the cost performance as escalated many folds as compared to the initial expected cost as it involved foreign compatriots in the project organization and

management. The other respondent assessed the performance more than favorable due to cost reeducations owing to KFT and the other consortium members special discount privilege on acquisition of hardware and software from vendors on the projects' required equipments and other purchases. This suppresses the cost significantly to over pass the increase in consortium formation.

Quality Performance

Measuring quality objectively is a difficult task. However, based on the subjective judgment of the interview respondents the quality performance objective of the project was 100% attained. This is attributed mainly to the quality of the services provided by the members of the consortium in building, operating and maintaining the Lehulu project. This assessment conclusion much with the views of the other authors assessed the Lehulu project from the public partner and service delivery stand point.

4.2. Success Factors and Challenges of the Private Partner in the Lehulu Project

In this section the success and challenges of the private partner is presented based on the categorization, tabulation and analyses of gathered information through the questioner and interview notes. The presentation is made in to three parts where the first part deals with the characteristics of the respondents which is based on their role in the project, followed by the second part which deals with the analysis of the information gathered as to the factors influencing the project performance and challenges consequently. The final part deals with summarized accounts of the respondents' suggestion in the form of comments for improvement.

4.2.1. Summary of Respondents based on Roles in the project and PPP Types

The following table presents the respondents' role based distribution in the project.

Table 4.1. Role Based Distribution of Respondent

Role in the project	Frequency	Percent	Valid Percent	Cumulative Percent
Senior Technical Consultant	14	41.2	41.2	41.2
Senior Functional Consultant	8	23.5	23.5	64.7
Junior Technical Consultant	4	11.8	11.8	76.5
Junior Functional Consultant	6	17.6	17.6	94.1
Other	2	5.9	5.9	100.0
Total	34	100.0	100.0	

Source: Analysis by SPSS V.20

As depicted in the table the respondent rate of the study is 100%. Indicating that the entire questioner distributed fro respondent has been duly filled and returned back. 53% of the respondents constitute the technical consultants (41.2% Senior and 11.8% Junior). While 41.1% forms functional consultants (23.5% Senior and 17.6% Junior). The remaining 5.9% are others who have been in the project as the functional and technical team coordination activities.

The respondents were selected purposively, prior knowledge of the respondents were checked. Accordingly, the responses of the respondent as to their prior knowledge of the variant forms of PPP, all of the respondents, as indicated below, have prior knowledge on the subject, although their understanding varies from well read and deeply understood the concept to understand the concepts from practice.

Table 4.2. Level of Understanding of PPP Variant Forms of PPP by participant

Level of Understanding of PPP Variant Forms	Frequency	Percent	Valid Percent
Deeply understood concepts of PPP	14	41.2	41.2
Narrowly understood the concepts of PPP	12	35.3	35.3
Understood throw practice	8	23.5	23.5
Total	34	100.0	100.0

Source: Analysis by SPSS V.20

According to most of the consultants and the interview respondents the project performance is affected by the project organization and management practice the KFT follows. The reason given by them is summarized in the table below.

Table 4.3. Perception on why PPP model has been chosen

Reason given by respondent		Frequency	Percent	Valid Percent
Valid	Due to the ability of the organization and PM practices' to accelerate Proj. goal achievement	11	32.4	34.4
	Due to KFT's ease of caring out the PM practice	11	32.4	34.4
	Due to Consultant co. and KFT familiarity with the PM practice	6	17.6	18.8
	Due to KFT's ability to facilitate client goals	4	11.8	12.5
	Total	32	94.1	100.0
Missing	System	2	5.9	
Total		34	100.0	

Source: Analysis by SPSS V.20 Output

As depicted above the three factors that are: the ability of the organization and PM practices' to accelerate Proj. Goal achievement, KFT's ease of caring out the PM practice , and consultant co. and KFT familiarity with the PM practice in their order are considered as the reason for making change.

4.2.2. The Major Success Factors considered for the success of Lehulu Project

On a questionnaire survey a list of 24 of the 31 critical success factors which were identified and indicated in the literature review part of this paper were used to be rated by the respondents. The respondents were required to 'rate their levels of the success factor rate on a '5 point Likert-scale where 4= Very High, 3 = High, 2 = Moderate, 1= Low and 0= Very Low. The mean scores were quantified and each success factors was ranked accordingly as seen in the following table.

Table 4.4. Summary of Responses of CSFs ranked

Critical Success Factors (CSFs)	N	Mean	Std. Deviation	Rank
KFT's capabilities of fulfilling the contract;	34	3.00	.739	1
Understanding of government PPP concept	34	2.88	1.094	2
Government willingness to work with KFT	34	2.85	.821	3
Ability of KFT's information disclosure reasonably and timely;	34	2.79	.978	4
Reasonable government supervision	34	2.65	.812	5
KFT's financial abilities;	34	2.65	.981	5
Clear project scope definition and documentation;	34	2.62	1.074	7
The level of public recognition;	34	2.62	.779	7
Effective management for cost, time and quality;	34	2.62	1.045	7
Project complexity;	34	2.59	.657	10
Appropriate risk allocation;	34	2.56	.927	11
Effective contract management;	34	2.53	.961	12
The existence of Standardized procedure for PPP projects;	34	2.32	.945	13
KFT's PPP project experience;	34	2.29	.871	14
Reasonable services price;	34	2.26	1.214	15
Government's capabilities of fulfilling the contract requirements;	34	2.24	1.046	16
KFT's profit expectations;	34	2.24	.890	17
Government financial guarantee;	33	2.18	.882	18
Availability of Complete PPP guidelines;	34	2.18	1.086	18
Favorable legal framework;	34	2.06	1.043	20
Government's capabilities of administrative execution;	34	2.00	.888	21
Political support;	34	1.94	1.153	22
Stable macro-economic environment;	34	1.94	.919	22
Availability of financial support	34	1.50	1.108	24
Valid N (list wise)	33			

Source: Analysis by SPSS V.20 Output

As could be infer from the above table, according to the respondents rating, the top five ranked CSFs are

- i. KFT’s capabilities of fulfilling the contract;
- ii. Understanding of government PPP concept;
- iii. Government willingness to work with KFT;
- iv. Ability of KFT’s information disclosure reasonably and timely;
- v. Reasonable government supervision; and
- vi. KFT’s financial abilities.

in their order of rank. As seen above most of the factors are influenced by the private partner. These accords with the interview result which is quoted as saying “On the project organizational structure there were various teams formed here at Kifiya and TATA India system developer which were led by fulltime Project Manager hired from Indian company named, Wipro. The role of the CEO of Kifiya in the project was immense. Weekly meeting was made with MCIT, government entity that monitor the project.”

4.2.2. The Major Challenges of the Lehulu Project

On a questionnaire survey a list of 6 challenges which were identified and indicated in the literature review part of this paper were used to be rated by the respondents. The respondents were required to 'rate their levels of the challenge factor rate on a '5 point Likert-scale where:- 0= Very High, 1 = High, 2 = Moderate, 3= Low and 4= Very Low. The mean scores were quantified and each challenge was ranked accordingly as seen in the following table.

Table 4.5. Summary of Responses on Challenges ranked

Challenges	N	Mean	Std. Deviation	Rank
Poor Banking Policies and Unavailability of Loans	34	1.09	1.055	1
Poorly drafted Regulatory and Legal Framework	34	1.24	.923	2
Lack of Government Commitment	34	1.59	.821	3
In adequacy of the public partner Participation	34	1.62	.779	4
Poor Risk Management Policies	34	1.76	.654	5
Lack of Transparency and Competition	34	2.06	.851	6
Valid N (listwise)	34			

Source: Analysis by SPSS V.20 Output

As shown above poor banking policy and unavailability of loans is the first ranked challenge by the questioner respondent it was also the main hindrance that hampers the smooth execution of the project according to the interview respondents. For both the respondents lack of fund for the project implementation was the biggest delaying factor. And the absence of Bank policy to fund PPP project, which is a usual and customary way of PPP project funding for it will certain to generate a revenue that is capable of repaying the debt, for a mere reason of looking for collateral to secure loan shows how the concept is not understood even by the relative modern sector in the country. The additional challenges identified by the interview respondent peculiar to the Lehulu project were:

- a) The public partner inability to clearly define the project deliverables. That makes the scope of the requirements was vague for both Kifiya and MCIT; and
- b) The system was developed at India by the company called TATA. There was misinterpretation of the requirements by TATA development team and the system developed test was found wrong. Even the requirement description given by the KFT team was sometimes misleading the development team.

4.3. Suggested way-out

Summary of the questioner and interview respondent suggestions indicated the following way outs that overcomes the challenges faced in this project for future similar endeavors.

1. Both party ‘private and government entity’ must understand the scope and complexity of the project. The expected deliverables must be clearly defined;
2. The government entity should facilitate loan from bank(s) by giving guarantee for the project;
3. Educate project team members on the purpose and scope of the PPP project;’
4. Unnecessary intervention should be stopped by both parties;
5. Banks poor lending policy should be revised to address PPP projects financing;
6. Government entity should know device PPP project management methodology to be used by both parties; and
7. Private party should have clearly defined risks management and change Control policy.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

This part of the study provides the summarized account of the findings in chapter 4 and draws a conclusion that leads to a recommendation of the study. The section is classified into five parts. The first part presents the summary of chapter 4. Followed by the second section, which is intended to, provide the conclusion reached by the writer and the third the recommendation of the study. The final section is intended to identify and indicate limitation of this study by way of suggesting for future work to be undertaken.

5.1. Summary of the Findings

“Lehulu” was a public private partnership project undertaken between mainly MCIT, the public partner, and KFT, the private party commencing from December 2010 for three years. The main objective of the project was the implementation of a Unified Utility Billing program especially aimed at improving the service delivery with respect to bill collection of the three public owned utility companies, namely AAWSA, EEPCO and ET. The project was implemented under the BOT form of the PPP. Under this form of the PPP the private partner was responsible for the required investment outlay for building the project, operating it during which period it is expected to recover its investment and then transfer the project to the public partner upon expiry of the agreed upon project period.

The project implementation was complex for two main reasons.

- 1) The forms of (PPP) and its respective project implementation was new for both the public and private parties and both the parties were not clear about the scope and the specific requirements of the project; and
- 2) In availability of technology and knowhow required to deploy the project in terms of project management and technical skills were the challenges that felt from the beginning.

This has led the private partner, KFT to organize itself in consortium with reputable technological and project management service providing companies, Wipro and TATA consultants which are rich both in technical and project management skills required for managing similar ventures. Accordingly, this consortium forms the project management

organization to execute the project management practice expected to deliver the UBS that is the project's deliverable. The rationale for adapting this form of project organization and project management practice were:

- I. Overcoming the local private partner's technical and project management inability to execute the project so as to deliver the project deliverables;
- II. Clarifying the unclearly defined requirement that was expressed as the existence of a knowledge gap between the public and private partners with respect to the real requirement of the project and the PPP operation at large. This has involved clearly analyzing and documenting the AS-IS process (the existing process); and
- III. The need to rework the AS-IS process into a TO-BE process and guide its implementation.

The gap was filled with the expertise and technical assistance gained from the other private partners of the consortium which forms the project management organization and practice. The effect of this project organization and management performance on the three project management measures, i.e. Time, Cost and Quality were rated to be:

- i. Time performance 75% which was reasonably fair;
- ii. Cost performance rated as favorable; and
- iii. Quality performance rated as satisfactory meeting 100% of the envisaged quality requirement.

The critical success and major challenges of the private company was assessed using a questionnaire and an interview of purposively selected participant. In this regard a pre-identified 24 CSFs and 6 challenges in the literatures of PPP were administered in the form of a questionnaire to 34 technical and functional consultants that were participated in the Lehulu project implementation. This was substantiated with the interview of two management respondents who participated in the interview. All the questionnaire and interview respondents' voluntarily participated in the study and returned the questionnaire and interview calls. According to the summary made using SPSS from 5 point Likert-scale questionnaires five, which are six actually, out of twenty four predefined CSFs were identified based on the respondents ranking. The success factors in their order of ranking are:

1. The private partners' capabilities of fulfilling the contract;
2. Understanding of the public partner of the PPP concept;
3. The public partner's willingness to work with KFT;
4. Ability of KFT's information disclosure reasonably and timely;
5. Reasonable government supervision; and
6. KFT's financial abilities.

Similarly the main challenges of the project according to the study respondents were identified and indicated to be:

- Poor Banking Policies and Unavailability of Loans.

to fund the PPP projects.

In order to improve performances of future ventures among others the interview and the questioner participants suggested the following in the study:

- i. Both parties 'private and government entity' must understand the scope and complexity of the project before involving in project implementation;
- ii. Deliverables must be clearly defined;
- iii. The government entity should facilitate funding of the project from bank(s) by giving guarantee for the project; and
- iv. Raise participation of project team members through clarifying the purpose and scope of the PPP project before and in the course of project execution.

5.2. Conclusion

The practices and challenges of the Public Private Partnership (PPP) based project implementation in the case of "Lehulu" project was a project work aimed at exploring the project management organization and practices of the private partner KFT and its impact on the project management performance measures of time, cost and quality of deliverable. Along with this objective the major factors which were considered to attribute for the project success and major challenges were tried to be identified.

In order to achieve its objective, the study employed a mixed research approach that used both qualitative and quantitative data and data analysis method. Accordingly, questioners and structured interviews were administered among 34 technical staff and two officials of the KFT, who have been involved in the project implementation from the beginning up to the end of the project, respectively.

Based on the responses of the questioners and interview the PPP model of the BOT is successfully implanted in the Lehulu project. This is attributed to the capability of the private partner KFT to organize a consortium that enables it to overcome its technical and project management inabilities. The performance effect of the project management organization and practice was encouraging. The major success factor that attributed for the successful implementation was its convection to fulfill its contractual obligation. This was apparently showed by its ability to identify what it lacks in the light of the project's modality and the projects technical and soft skill requirements to make it practical. However, lack of fund and funding institution that was willing to finance the project hinders its smooth execution. For further improvement considering what was suggested in the study which includes the points indicated as suggestion for wards. Among the points the suggestion for both the parties 'private and government entity' must understand the scope and complexity of the project, so as to come up with clear view of the project output; and the public partner required to identify and device PPP project management methodology to be used by both parties are worth of pondering.

5.3. Recommendation

As indicated in the study PPP represents a special and complex form of project management. Its peculiarity calls for specially attention from the parties or stakeholders involved in its deployment. For its benefits are enormous for both the parties involved in its formation and execution. As it relieved the public partner from the limited resource under its disposal and lets the private partner use its resources and capabilities to exercise in socially useful venture. However, the low level of awareness that excited among the public and the private partners in Ethiopia seems to slow down its wide application. To this end the following are recommended as a point of improvement for future expansion of the modality.

- ❖ The public partner should create awareness among the potential private partners as to the variant forms of the PPP and the framework along with the benefits for the involved parties in the venture and its contribution of the development of the country at large;
- ❖ The public partner should encourage financiers of PPP's to participate in the venture through relaxing their funding requirement and developing a new lending policy of assets requirements to secure loans and encompass project viability and ensured revenue generation as worthy undertaking;
- ❖ The private partner should improve its capacity in terms of knowledge and resources required to undertake such projects successfully;
- ❖ The formation of the PPP should be based on thorough analysis of the project execution capacities of the private partner and the private partner should truly assess its capability before involving in such ventures and come up with viable solution; and
- ❖ Both the public and the private partners should base the partnership on a thorough and refined requirement description which is important to avoid or minimize implementation challenges and close every possible excuses for delays in project implementation.

5.4. Limitation of the study and suggestion for future work

This study was limited by its scope, time and cost considerations which were the challenges of the researcher in carrying out the study. Hence, the study was limited to looking at the side of the PPP from one perspective of the matter only, from the private partner. In this respect future work which should encompass both the partners is suggested as a future work believing that it will provide a holistic picture of the matters involved.

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Appendix I. Letter of Request

**ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE
DEPARTMENT OF PROJECT MANAGEMENT**

Dear Madam/Sir;

My name is Samuel Bekele. I am a graduate student of Addis Ababa University School of Commerce in the Department of Project Management. I am currently working on my project entitled “Practices & Challenges of the Private Partner in the Private Public Partnership (PPP) Modal in the Case of “Lehulu” Project”. My project work is in partial fulfillment of the requirements for the award of the Degree of Masters of Art in Project Management.

In order to address the issues involved in the topic, I felt the necessity of incorporating the practical experiences of the experts who are involved in the mentioned project such as you. Accordingly, I came up with the enclosed questioner. The purpose of the questioner is simply to gather information for the study and incorporate your expertise view that may enable to generate a viable output. In this regard your cooperation to fill the questioner and participation in the study is of a paramount importance for its success. Of course, your participation in the study is entirely voluntary.

This is thus to kindly request your precious time to fill the questioner. As your input is indispensable to the study, you are humbly requested to return back the duly filled questioner at your earliest convenient time.

At this juncture I would like to inform and assure you that all the information you provide is used only for academic purpose and completely kept anonymously.

I would also like to thank you in advance for your kind cooperation and dedication to fill the questioner. I am really indebted in all due respect.

With Regards;

Samuel Bekele

For any further inquiry you may contact me via – 0910513451 or 0930100601.

Appendix II. Interview Questions

Terms for clarification:

i) **Project Management (PM) Practices** are how the day-to-day activities and administrative decisions are carried out as functions of all parties (i. e. the Public partner, Project Beneficiary and Construction and operation parties (your organization)) involved in the management of a project from award to completion for the purpose of achieving satisfactory PPP project performance.

ii) **Project Performance** is a measure of the extent to which a substantially completed project achieved its Time, Cost and Quality targets as a whole.

2. In which of the following management status did you participated in the Lehulu project?

(a) Senior Manager [] (b) Project Manager [] Team Leader []

3. How do you describe a PPP Project?

4. Are you familiar with the PPP variant types? If yes? Please describe some.

5. How do you describe the PM practice employed in the Lehulu PPP project by your organization?

6. Within your organization why would a PM practice affect the performance of a given project more significantly than another PM practice would?

7. What were the major challenges you faced in the Lehulu PPP project?

8. How do you rate the project performance in the Lehulu project in terms of cost, time and quality?

- Cost performance being

= Initial (estimated project cost)/Final Project cost

- Time Performance being

= Planned contract Period/Actual project construction and operation period

- Quality Performance being

- The extent to which the quality of the project deviated from what was expected (in your estimation from 100%).

9. What you suggest for future improvement?

NB: This questioner is adapted from the questioner used by Sarfo Mensah

Source: The Effect of PM Practices on Building Project Performance: the case of three Organization by Sarfo Mensah, 2007

Appendix III. Questionnaire

10. In which of the following status did you participated in the Lehulu project?

- (b) Senior Technical Consultant []
- (b) Senior Functional Consultant []
- (c) Junior Technical Consultant []
- (d) Junior Functional consultant []
- (d) Other [], please specify_____

11. Are you familiar with the PPP variant types? If “yes” please select one or more of the below.

- a. Had read and understood concepts deeply []
- b. Had read but understood concepts narrowly []
- c. Had not read but understands concepts from practice []
- d. Never heard of before this project []

12. In your opinion, why would a PM practice affect the performance of a given project more significantly than another PM practice would?

- a. Due to ability of PM practice to accelerate achievement of set project objectives []
- b. Due to the KFT's ease of carrying out the PM practice []
- c. Due to consultant and your organization (KFT) being commonly familiar with the PM practice []
- d. Due to ability of the PM practice of KFT to facilitate achievement of client’s own goals []
- e. Please state if other reason

.....

13. How do you rate the following Critical Success Factors for the success of Lehulu Project?

No.	CSFs	Factor Effect Rating				
		Very High	High	Moderate	Low	Very Low
1.	Understanding of government PPP concept					
2.	Reasonable government supervision					
3.	Government willingness to work with KFT					

No.	CSFs	Factor Effect Rating				
		Very High	High	Moderate	Low	Very Low
4	Government's capabilities of fulfilling the contract requirements;					
5	Government's capabilities of administrative execution;					
6	The existence of Standardized procedure for PPP projects;					
7	Favorable legal framework;					
8	Stable macro-economic environment;					
9	Availability of Complete PPP guidelines;					
10	Clear project scope definition and documentation;					
11	Government financial guarantee;					
12	Political support;					
13	Availability of financial support					
14	KFT's capabilities of fulfilling the contract;					
15	KFT's financial abilities;					
16	Ability of KFT's information disclosure reasonably and timely;					
17	KFT's PPP project experience;					
18	KFT's profit expectations;					
19	Effective management for cost, time and quality;					
20	Reasonable services price;					
21	The level of public recognition;					
22	Appropriate risk allocation;					
23	Effective contract management;					
24	Project complexity;					

14. How do you rate the following challenges in the Lehulu project?

No.	Challenges	Challenge effect Rating				
		Very High	High	Moderate	Low	Very Low
1	Lack of Government Commitment					
2	Poor Risk Management Policies					
3	Poor Banking Policies and Unavailability of Loans					
4	Poorly drafted Regulatory and Legal Framework					
5	In adequacy of the public partner Participation					
6	Lack of Transparency and Competition					

15. What do you suggest for improvement of future similar undertakings?

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